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REPORT

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Youth CareerConnect: Evolution of Implementation over Time

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DISCLAIMER

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EXECUTIVE SUMMARY

Many young people in the United States have difficulty completing high school, advancing into training, and finding career path employment. At the same time, when skilled domestic workers are not available, many employers in high-demand industries rely on the H-1B visa program to hire foreign workers to fill job vacancies. Providing high school students with a rigorous college and career curriculum has emerged as one promising approach for addressing the dual challenges of youth unemployment and a shortage of skilled workers. In 2014 the U.S. Department of Labor (DOL) awarded $107 million in four-year grants to 24 applicants to implement the high-school based Youth CareerConnect (YCC) initiative, which blended academic and career-focused learning to better prepare students for both college and careers.

YCC grantees included a diverse array of organizations located in 18 states and Puerto Rico. Sixteen of the 24 grantees were local education agencies, and others included nonprofit organizations (5), local workforce entities (2), and an institution of higher education. YCC programs were organized into three program components: preparing students for both college and career, connecting students with career-track employment, and offering academic and nonacademic supports. Programs were designed to bring together multiple partners—high schools, school districts, institutions of higher education (IHE), employers, workforce development system agencies, and support service organizations—to prepare students for college and careers in medium- to high-skilled industries and occupations.

To learn about the implementation and effectiveness of the YCC program, DOL's Employment and Training Administration, in collaboration with the Chief Evaluation Office, contracted with Mathematica Policy Research and its subcontractor, Social Policy Research Associates, to conduct an evaluation that began alongside the YCC initiative in 2014. The evaluation consists of two distinct but interrelated studies: an *implementation* study, which examines how YCC programs developed over the grant period, and an *impact* study, which consists of a randomized controlled trial conducted in 4 school districts, with students randomized into YCC programs in the 2016-17 school year, and a quasi-experimental design conducted in up to 16 districts, with students enrolled during the 2014-15 through 2016-17 school years. The impact study evaluated the impact of YCC participation on students' success in high school, with outcomes measured in 2017-18.

The first report from the implementation study explored the implementation of YCC programs through the 2015-16 school year, after two years of YCC funding (Maxwell et al. 2017). This report, the second of the project's implementation study, examines the evolution of YCC program implementation, and focuses on the third and fourth years of the grant, when grant funding was scheduled to end. It also examines grantee approaches to sustainability of YCC activities and services as they approached the end of grant funding. Analyses drew data from three distinct sources: (1) a survey of all 24 YCC grantees that gathered information about YCC activities and services offered in one of each grantee's high schools and was fielded from May to September 2015, between the first and second years of the grant, and June to July 2017, between the third and fourth years of the grant; (2) discussions with YCC program, school, and partner staff for 10 grantees during three rounds of site visits and telephone interviews from 2015-16 through 2017-18; and (3) data from a participant-tracking system (PTS) that captured characteristics and service receipt for students enrolled in the YCC program across 23 of the 24

YCC grantees in Spring 2016, the end of the second year of the grant, and Spring 2018, the end of the fourth year of the grant.[1]

YCC enrollment grew throughout the grant period, with more than 27,000 students receiving services across 23 grantees by spring 2018. The characteristics of students remained relatively stable over time. By 2018, YCC students could be described as:

- **Enrolled mostly in higher grades.** The proportion of students in higher grades increased as students progressed through school. Most programs began enrolling YCC students in 9th and 10th grade, but by 2018, over 70 percent were in grades 11 or higher, with about 20 percent remaining enrolled after grade 12.
- **Diverse.** Students represented a diverse set of needs and backgrounds. About 45 percent were Hispanic, 22 percent were black, 45 percent were female, 50 percent were eligible for free or reduced-price lunch, 12 percent were English-language learners, and 7 percent had a physical or mental disability.
- **Prepared for entry-level work in high-demand industries.** Nearly two-thirds (63 percent) chose a career focus in the fields of health care and social assistance, professional services (for example, drafting, computer systems design, financial services, and marketing), information technology, or manufacturing sectors or industries.

As enrollment grew and students aged through high school, YCC programs evolved to meet students' changing needs. The implementation study identified three key changes in implementation over time during the latter two years of grant funding:

1. **An increasing number of YCC schools offered college preparatory services and work-based experiences as they continued to prepare students for both college and career.** In 2015, virtually all schools offered YCC students integrated coursework, and the percentage remained stable in 2017. Other activities and services that integrated college preparation and career readiness were increasingly offered, as were postsecondary education support activities (college visits, postsecondary preparatory coursework, postsecondary financial assistance, etc.), and work readiness training. Notably, the percentage of grantees reporting that schools offered internships increased by nearly 38 percentage points. Despite the increase in service offerings, student participation in YCC activities and services varied, which suggests that not all enrolled students received the full array of services their schools offered through the YCC program. For example, between 2016 and 2018, the percentage of students taking industry-specific courses rose from 71 to 77 percent. At the same time, the proportion participating in internships grew from 14 to 18 percent and the number of interns increased from about 1,800 to 4,800 (outpacing the enrollment growth of 13,000 to 27,000).
2. **Employer and IHE partnerships grew stronger, which may have allowed schools to offer more intensive college preparation and career readiness activities.** Between 2015 and 2017, YCC schools either increased or maintained the number of employer and IHE partners. Furthermore, 75 percent of schools reported high involvement among employer and

[1] Because one of the 24 YCC grantees did not have a Memorandum of Understanding in place with DOL at the time of data analysis, we cannot provide enrollment of service counts for this grantee.

IHE partners, and 83 percent reported that partnerships with these groups grew stronger over the final two years of the grant program. School staff viewed these partnerships as critical to expanding more intensive college preparation and career readiness services and work experiences. Staff also viewed dedicated partner liaisons, typically supported by YCC grant funding, as essential to growing and maintaining these partnerships.

3. **An increasing number of YCC schools offered academic and nonacademic supports.** Schools generally offered small learning communities and support services to help YCC students with academics, finances, health and well-being, and special needs. Of note, between the beginning of the second year of the grant in 2015 and the beginning of the fourth year of the grant in 2017, more schools reported offering individualized counseling services. PTS information on students' activities shows that more students engaged in these activities. Between Spring 2016, the end of the second year of the grant, and Spring 2018, the end of the fourth year of the grant, the proportion of students completing an individual development plan grew from 43 to 50 percent, and the proportion receiving some form of support service through the YCC program grew from 35 to 45 percent. Over 80 percent of students had received career and academic counseling in 2018, a slight decrease from 84 percent in 2016.

About one year before the grants were due to end, schools were engaged in sustainability planning, though it was still incomplete: planning for some key program components had yet to begin in about 20 percent of schools. This status could reflect a range of possibilities, from some schools being uninterested in continuing the program to others not knowing quite how to get started with the process, or because some grantees received grant extensions. [2] Schools that had made progress toward sustainability seemed to have developed three distinct strategies to sustaining YCC activities and services: (1) demonstrating its evidence of effectiveness, (2) integrating program elements into preexisting school or district services, and (3) promoting the YCC program locally to partners and the community and to state and national constituencies. Despite these efforts, some grantee and school staff still anticipated challenges in sustaining YCC-funded activities, services, and staff positions.

The experiences of grantees as they implemented the YCC program suggest several key practices that appear to support development of college preparation and career readiness programs. First, YCC program staff reported that building strong relationships with employer and IHE partners was critical in developing activities and services (such as dual enrollment and internships) designed to build college and career success. Importantly, a dedicated staff liaison position helped to foster these partnerships, and such positions might be difficult to sustain without YCC funding. Second, YCC services had to evolve over time to align service offerings with student enrollment patterns. Specifically, the college preparation and career readiness needs of students in higher grades differ from those of students in lower grades. As a result, schools shifted their focus to more intensive work-based experiences and college preparation as YCC students aged through high school. And third, most YCC grantees began preparing for sustainability early by developing buy-in from colleagues, partners, and other local stakeholders about the value of the YCC program to gain support and funds for efforts beyond the grant.

[2] At the time of this writing, 6 of the 24 YCC grantees ended their YCC grants as scheduled in September 2018, 2 were scheduled to end in March 2019, 9 in June or July 2019, and 7 in September 2019.

I. INTRODUCTION

In April 2014, the U.S. Department of Labor (DOL), Employment Training Administration, Division of Strategic Investments, awarded $107 million to 24 applicants to implement the Youth CareerConnect (YCC) initiative, a high school–based program that blended academic and career-focused learning to better prepare students for both college and careers. With YCC, DOL intended to address two important issues: (1) the inability of many young people to gain the education, training, skills, and experience necessary to find and retain career pathways to employment; and (2) the shortage of skilled workers needed to fill vacancies in fast-growing industries such as health care, advanced manufacturing, and financial services.

In 2016, the high school dropout rate—the percentage of 16- to 24-year-olds who are not enrolled in school and have not earned a high school credential—stood at 5.8 percent, with higher rates for blacks (7.0), Hispanics (9.1), Pacific Islanders (6.9), and American Indians/Alaskan Natives (11.0) (Cui et al. 2018). These youth have higher rates of unemployment than high school graduates and earn between $400,000 and $1 million less over their lifetimes.[3] Even youth who complete high school and earn a diploma can struggle without postsecondary education. Between 1979 and 2017, median wages for workers with only a high school education fell by 14 percent. In comparison, workers with a bachelor's or advanced degree saw their wages increase by 15 percent during this period (Donovan and Bradley 2018). The reduction in wages for workers with only a high school diploma is due, in part, to a growing mismatch between the skills of high school–educated youth and the needs of employers (Holzer et al. 2011).

At the same time, the United States was experiencing a shortage of skilled domestic workers to fill vacancies in fast-growing industries. To fill vacancies, employers in high-demand industries often rely on the H-1B visa program, which permits companies to hire foreign workers when skilled domestic workers are not available. In 2017, employers submitted requests for more than 330,000 H-1B visas (U.S. Citizenship and Immigration Services 2017). DOL's Division of Strategic Investments is developing efforts to address this shortage and has implemented sector-based grant programs and special initiatives to train American workers to compete in the changing global economy and prepare for work in high-growth, high-skilled industries and occupations that often rely on the H-1B visa program.

A. Youth CareerConnect

The YCC initiative provides a promising approach to address the needs of students who may drop out of high school and employers with worker shortages. It provides high school students with a rigorous curriculum and an opportunity to earn postsecondary credits while combining academics and technical training, specific in-demand industry coursework, and academic and career counseling. The YCC approach is to unfold within a small learning community (SLC) environment, defined as one that provides students and teachers with a personalized learning and teaching environment. The research literature provides evidence that interventions aligned with

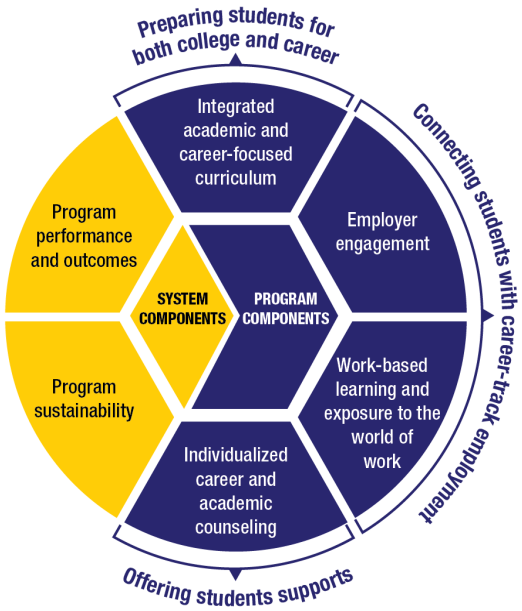
[3] Although the difference in lifetime earnings between those with a diploma or credential and those without varies, research shows that the number is high. Three different reports put the total at $400,000 (Kena et al. 2014), $670,000 (Stark and Noel 2015), and $1 million (Doland 2001).

the YCC approach have been successful in engaging students in school and improving educational outcomes (U.S. Department of Education 2016).

DOL issued 24 four-year YCC grants, ranging in size from $2.25 to $7 million (Appendix A), for a new program grounded in this strategy. Grantees included a diverse array of organizations located in 18 states and Puerto Rico. Sixteen of the 24 YCC grantees were local education agencies, and others included nonprofit organizations (5), local workforce entities (2), and an institution of higher education. Through their YCC program, grantees were to bring together community partners—including local education agencies (schools, districts, or both), institutions of higher education (IHE), employers, workforce development system agencies (called workforce agencies in this report) or American Job Centers (AJCs), and support service organizations—to deliver at least two years of career-focused training and support to participants that was tailored to each local employment market. Grantees had a five-month planning period starting in April 2014, with program implementation starting in the fall of the 2014–2015 school year and extending for four years. Many grantees negotiated extensions to spend down their grants; at the time of this writing, 6 of the 24 YCC grantees ended their YCC grants as scheduled in September 2018, 2 were scheduled to end in March 2019, 9 in June or July 2019, and 7 in September 2019.

With the goal of improving students' success in college and career, grantees were required to implement six core elements, which can be grouped as either YCC program or systems components (sidebar). The three YCC program components are:

Six DOL-required core elements



1. **Preparing students for both college and career.** Students received an integrated academic and career-focused curriculum aligned with the state's college and career-readiness standards, postsecondary education supports to help with placement into higher education and training, and work readiness training. These services were designed to provide youth with a career focus in selected high-growth H-1B industries or occupations in the local labor market.
2. **Connecting students with career-track employment.** Students received exposure to the world of work at school and the workplace through hands-on career development experiences that connected classroom instruction to work and career opportunities. Students—particularly those in higher grades—participated in work-based learning activities like mentoring and internships.
3. **Offering students academic and nonacademic supports.** To support student success, grantees offered individualized career and academic counseling, including developing and maintaining an Individual Development Plan (IDP), and other personalized supports. In addition schools implemented YCC within a SLC and provided students with academic (for

example, tutoring and homework assistance) and nonacademic supports (for example, assistance to help students with academics, finances, health and well-being, and special needs) (Maxwell et al. 2017).

YCC grantees were also required to undertake activities at a systems level. Program sustainability, discussed as part of this report, and program performance and outcomes comprise the final core components. In addition, grantees were required to provide professional development to teachers and other staff. The training would build the knowledge and skills needed to develop the core curricula and support services that guide students to a career in their chosen focus.

B. The YCC evaluation

To learn about the implementation and effectiveness of the YCC initiative, DOL's Employment and Training Administration, in collaboration with the Chief Evaluation Office, contracted with Mathematica Policy Research and its subcontractor, Social Policy Research Associates, to conduct an evaluation that began alongside YCC grants in 2014. The evaluation consists of two distinct but interrelated studies: *an implementation study,* which examines how the YCC program developed over the grant period, and *an impact study*, which will consists of a randomized controlled trial (RCT) conducted in 4 school districts and a quasi-experimental design that will be conducted in 16 districts.

This report, in combination with the initial implementation report (Maxwell et al. 2017) and a report on employer and workforce agency partnerships (Dillon, 2019), presents findings from the implementation study. The initial implementation report described the YCC initiative during its first two years of implementation. Key findings from that report included:

- The YCC program could be distinguished by activities and services in each of the three program components (Figure I.1). Although some of the activities and services were unique to the YCC program, others were more broadly available to students in participating schools.
- Employer partners were engaged in developing program strategy and curriculum design, but some partnerships were still developing.
- Activities and services that required coordination with external partners or that focused on students in higher grades (for example, internships and dual-credit courses) were slower to develop.

Figure I.1. Activities and services that distinguish YCC

Preparing for college and career

- Increased instruction in work readiness or occupational skills
- Coursework structured in ways that lead to articulation to a two- or four-year college program or an industry-recognized credential
- Emphasis on active learning pedagogies

Connecting to career-track employment

- Work-based learning

Offering academic and nonacademic supports

- Small learning communities
- Individual development plans

Source: Maxwell et al. (2017).

- Limited staff capacity impeded efforts to implement activities and services.
- The rigor and challenge of YCC courses left some students struggling and caused them to question their commitment to stay in the program.

This report builds on the findings from the initial implementation report by examining implementation during the final two years of the original grant period, and informs the interpretation of findings from the study of the impact of YCC participation on student success in high school (see evaluation findings sidebar). Using data collected throughout the implementation of the grant, it describes how schools and partners evolved to meet students' changing needs as they approached the end of high school and addressed implementation challenges, and how grantees planned for sustaining their YCC program after the grant ended. The research draws on a mix of quantitative and qualitative data from three sources that bring together information at different time points (Figure I.2). Details of the data collection efforts are in Appendix B but briefly described below:

Evaluation findings about the YCC program

Summary of all results

- *Brief.* Summarizes the findings of the evaluation's impact and implementation studies (Maxwell and Dillon forthcoming).

Implementation study results

- *Early years.* Explores implementation of the YCC program through the 2015-16 school year, after two years of YCC funding (Maxwell et al. 2017).
- *Implementation.* Explores the evolution of YCC program implementation through the 2017-18 school year, and the approaches grantees planned for sustaining the YCC program after grant funding ended (this report).
- *Employer and workforce agency partnerships.* Examines YCC programs' partnerships with employers and local workforce development system agencies (Dillon 2019).

Impact study results

- *Impact findings.* Examines the impact of participation in the YCC program on student success during high school. (Maxwell et al. 2019).
- *Technical documentation.* Provides a technical discussion about the data, samples, and analysis that underlie the estimated impacts presented in the impact findings report (Burkander et al. forthcoming).

1. **Two rounds of the grantee survey.** The first round was administered in May to September 2015, between the first and second year of the grant, and the second in June and July 2017, between the third and fourth year of the grant. These surveys provided information on service delivery models, staffing, staff development, partnerships, and implementation of the program components for the one grantee school with the largest planned YCC enrollment in the earliest grade. [4] In both years, the survey directed respondents to answer questions for only one high school implementing the YCC program. To ensure that the survey yielded information for a consistently defined set of schools, the research team worked with grantees that offered the YCC program in several schools to select the school for which questions would be answered in both years. YCC grantees were instructed to identify the school with the earliest program start grade (usually grade 9). If

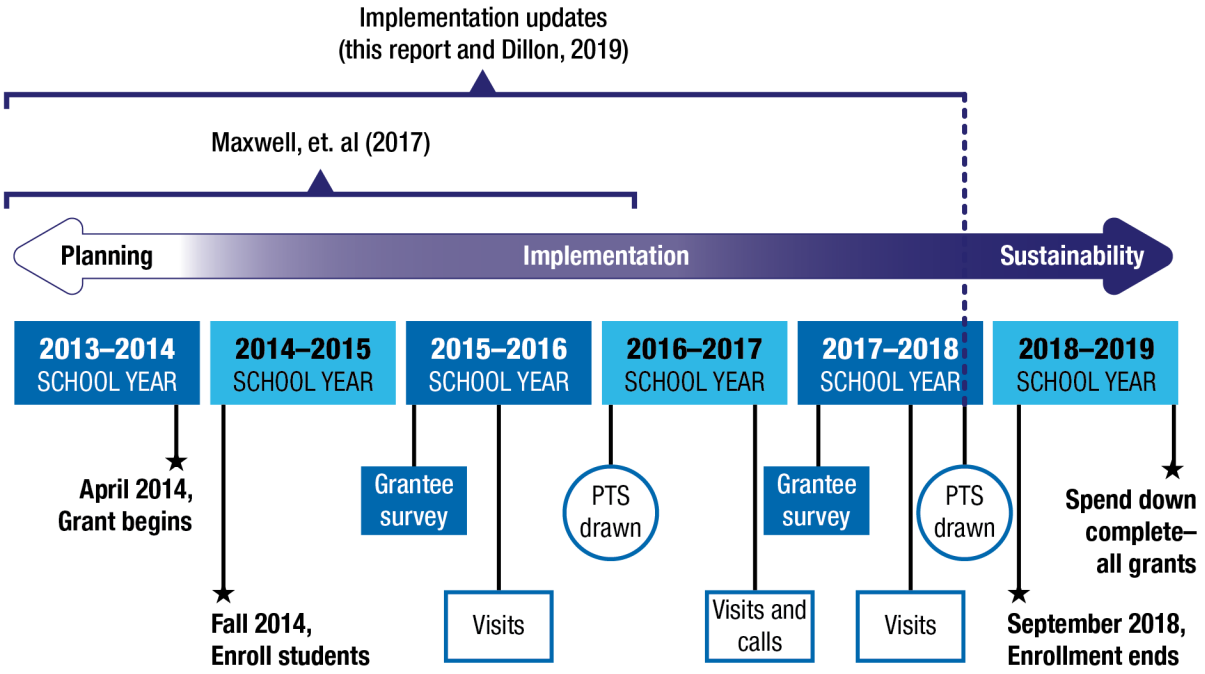
[4] The grantee survey also asked respondents about the extent to which students not in YCC received similar services and activities. Response rates for these items were too low to produce meaningful analysis.

multiple schools offered the YCC program beginning in that grade, the research team asked the grantee to select the school from that pool with the largest YCC enrollment.

1. **Site visits and telephone interviews.** In the second, third, and fourth years of grant implementation, from 2015–2016 to 2017–2018, the research team visited or called the 10 YCC grantees considered for inclusion in the RCT. These grantees were selected because the team believed they met two conditions in at least one of their schools: oversubscription into the YCC program and considerable contrast with other (non-YCC) programs. Grantees included three non-profit organizations, one workforce entity, and six school districts. These grantees implemented their YCC program in a single school (3 grantees), multiple schools within one school district (3 grantees) and multiple schools across multiple districts (4 grantees). Among the three grantees that implemented their YCC program at a single school, that school was the focus of the visit. Among the remaining seven grantees that implemented their YCC program in multiple schools, between one and four schools were included in each visit; for one grantee, the schools visited were located in different districts. Visits and telephone calls included interviews with grantee staff, school and/or district staff, students, and staff at partner organizations, including employer and workforce agency partners. These efforts provided in-depth qualitative information from schools with respect to the planning, design, and implementation of YCC programs, and the process for mobilizing key partners and sustaining the activities and services after the grant ends. The information also included YCC activities, challenges encountered, and solutions identified.
2. **Records from the participant tracking system (PTS), which was used by all grantees to record their program performance data for DOL.** These data provided information on all YCC participants and the YCC activities and services they received through a given time period. Data presented in this report includes information all students enrolled through spring 2016, the end of the second year of the grant, and all students enrolled through spring 2018, the end of the fourth year of the grant, for 23 of the 24 YCC grantees.[5]

[5] Because one of the 24 YCC grantees did not have a Memorandum of Understanding in place with DOL at the time of data analysis, its PTS data are not included in this report.

Figure I.2. Timeline for data collection



PTS = Participant Tracking System

C. Structure of the report

The remaining sections of this report discuss implementation of YCC through spring 2018, with an emphasis on changes that occurred since the first two years of implementation (Section II), efforts that were occurring to sustain YCC activities and services after the grant funding ends (Section III), and key YCC practices that appear to support implementation of college preparation and career readiness programs (Section IV). Two appendices follow. Appendix A contains a table that describes the 24 YCC grants awarded, and Appendix B describes the methods used to collect and analyze the data from each source as well as data tables for the grantee survey and PTS.

II. ONGOING IMPLEMENTATION OF THE YCC PROGRAM

During the first two years of the grant, YCC schools implemented activities and services in each of the three program components: preparing students for college and career, connecting students to career-track employment, and offering academic and nonacademic supports (Maxwell et al. 2017). The nature of those activities and services changed as the program matured, enrolled students progressed through high school, and new students enrolled. This section examines changes over time in the composition of YCC students, and the types of YCC activities and services offered by schools and grantees and received by students.

A. Growth in enrollment reflected aging students and new entrants

The YCC initiative experienced two main shifts in student enrollment. First, the overall population of enrolled students increased. The overall number of students involved in program services had steadily increased over time. As of spring 2018, more than 27,000 students had received YCC services, more than twice the number of students (over 13,000) as of spring 2016. By spring 2018, about a third of students had graduated or left the program for other reasons, with the remainder still enrolled (Table B.4, Appendix B). Second, the proportion of students in higher grades increased as students progressed through school. In 2018, over 70 percent of YCC students were in grades 11 or higher, with about 20 percent remaining enrolled after grade 12. Two years earlier, the reverse was true: 60 percent were in grades 9 and 10, and none were enrolled beyond grade 12.

Typical career focus for YCC students, 2018

Industry	
Health and social assistance	24%
Professional services	19%
Information technology	11%
Manufacturing	9%
Other	19%
Occupation	
Architecture and engineering	20%
Computer and math	16%
Health care practitioners and technicians	13%
Health care support	6%
Business and financial	5%

Source: PTS, 2018 draw, Table B.5, Appendix B.

Note: Because grantees could report on a student's industry and/or occupation and 9 percent had not selected a focus, percentages do not add to 100.

Despite changes in the distribution across grades, the characteristics of participants stayed relatively constant, with the program serving a diverse group of youth. In spring 2018, 45 percent of students participating in the YCC program were female (44 percent in 2016), 45 percent Hispanic (44 percent in 2016), 58 percent white (52 percent in 2016), and 22 percent black (unchanged). About 50 percent were eligible for free or reduced-price lunch (43 percent in 2016), 7 percent had a physical or mental disability (unchanged), and 12 percent were English-language learners (9 percent in 2016).

The career focus of YCC enrollees also remained relatively constant over time, reflecting DOL's intent to prepare students for college and work in industries and occupations that tend to use the H-1B visa program to fill positions (see sidebar). In spring 2018, nearly two-thirds (63 percent) of YCC participants had enrolled in an industry focus in health care and social assistance, professional services (for example, drafting, computer systems design, financial services, and marketing), information technology, and manufacturing. About 60 percent had selected an occupational focus in architecture and engineering, computer and math, health care practitioner, health care support, or business and financial operations.

B. More schools provided college preparatory and work experience activities and services

As the YCC program matured, the proportion of schools offering YCC activities and services in each of the three components increased (Table B.1, Appendix B). Some of the increases might reflect the growth in the proportion of students in higher grades, with efforts focused on preparing them for the transition after high school. This section discusses the growth in activities and services designed to increase preparation in college and career and to connect students with career track employment, the first two YCC program components.

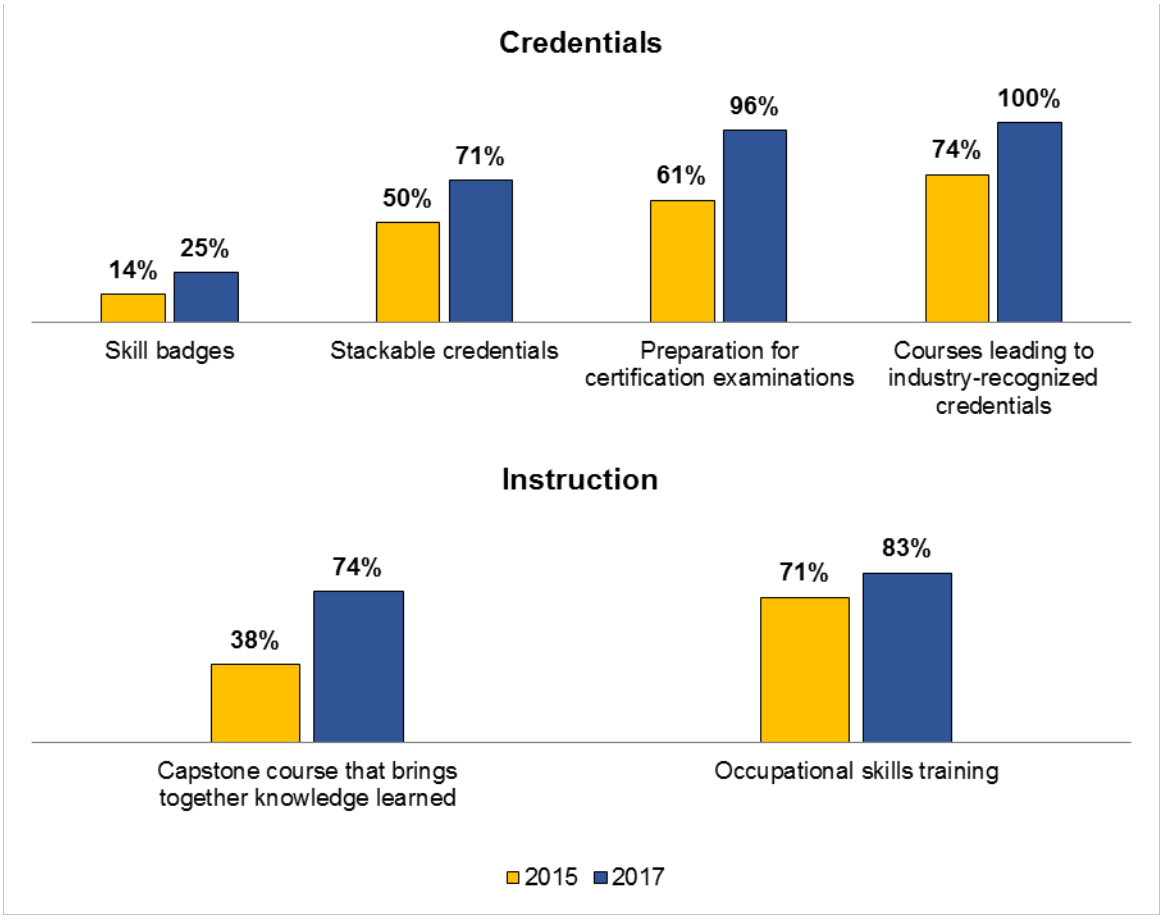
1. Preparing students for college and career

To prepare students for both college and career, YCC grantees aimed to provide students with both academic and work-readiness skills that enable them to navigate the workplace successfully. Within the context of the YCC initiative, this means that schools integrated academic and career-focused coursework, provided postsecondary education supports, and provided work readiness training (Maxwell et al. 2017).

Integrated academic and career-focused coursework and skill building includes academic coursework that meets standards, career and technical education courses, curriculum (and course) integration, and demonstrated skill building through (for example) capstone coursework or industry-recognized credentials. The grantee survey indicates that virtually all schools offered YCC students integrated coursework by 2015, and the percentage remained stable in 2017 (Table B.1, Appendix B). Still, schools increasingly offered a few activities and services to integrate academics and career. Figure II.1 highlights areas in which the grantee survey reports that the proportion of YCC schools offering services and activities increased by at least 10 percentage points.[6] Some evidence suggests that increased *availability* of services may have translated into increasing student *participation* in them. For example, from 2015 to 2017, schools offering courses leading to an industry-recognized credential increased by 26 percentage points (Figure II.1). From 2016 to 2018, the number of students with industry-recognized credentials increased from 131 to 3,875, translating into growth in the rate at which YCC students earned industry-recognized credentials from 2 to 13 percent of participants (calculations taken from PTS and not shown in report).

[6] The PTS does not break down specific types of integrated coursework, but it does reflect that the proportion of YCC students who actually took industry-specific courses rose from 71 percent in 2016 to 77 percent in 2018 (Table B.6, Appendix B).

Figure II.1. Integrated academic and career-focus, 2015 and 2017 (percentage of grantees reporting that their selected school offered each service)

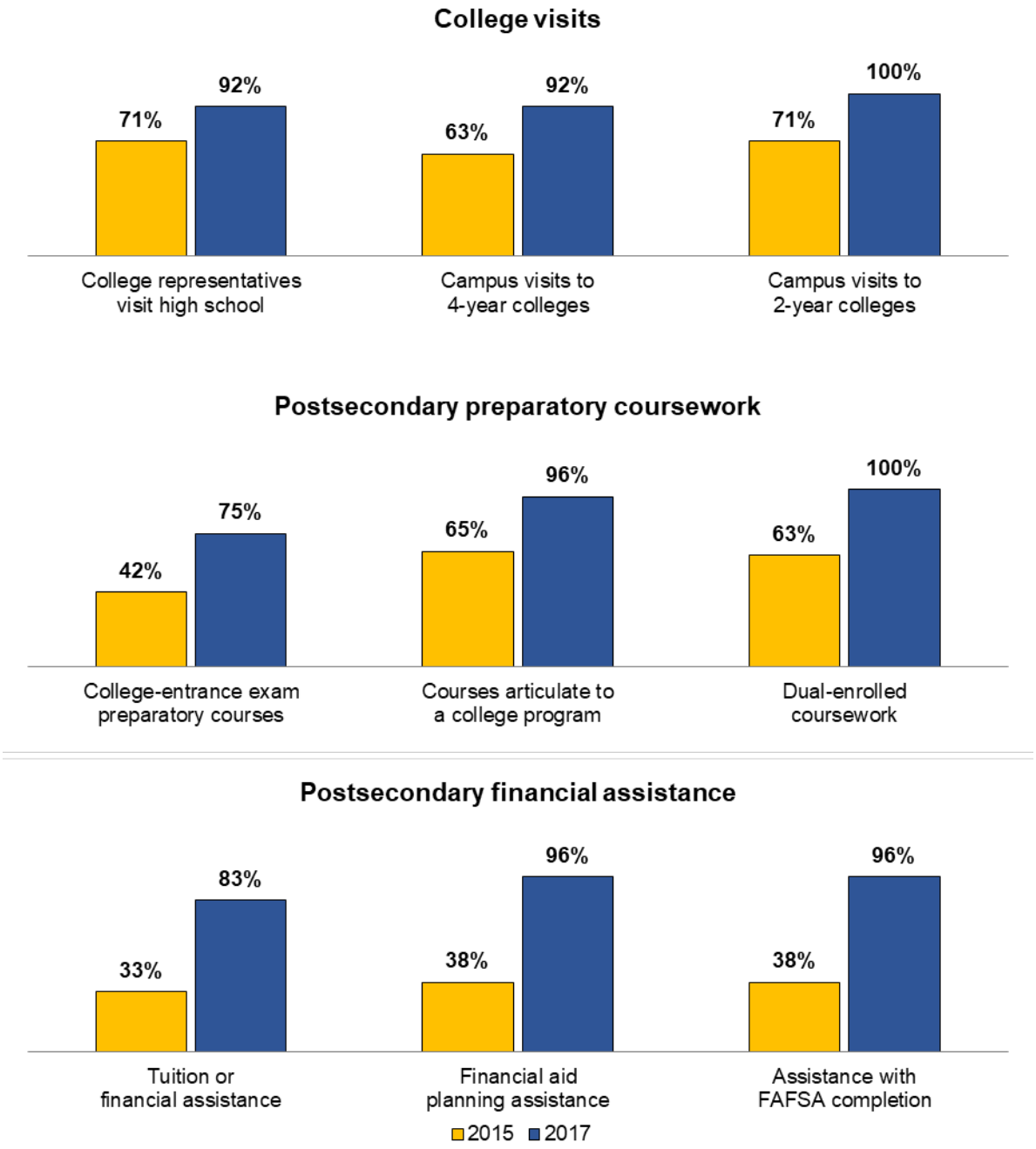


Source: Grantee surveys, 2015 and 2017, Table B.1, Appendix B.

Notes: Survey respondents answered questions for one school in each of the 24 YCC grantees, though item-specific nonresponse lowered the number of respondents in some categories.

Postsecondary education supports include activities and services such as college visits, postsecondary preparatory coursework, and postsecondary financial assistance. In 2017, all schools offered some form of these activities/services to YCC students (Table B.1, Appendix B), with some increasing by more than 10 percentage points from 2015 (Figure II.2).

Figure II.2. Postsecondary education supports, 2015 and 2017 (percentage of grantees reporting that their selected school offered each service)



Source: Grantee surveys, 2015 and 2017, Table B.1, Appendix B.

Notes: Survey respondents answered questions for one school in each of the 24 YCC grantees, though item-specific nonresponse lowered the number of respondents in some categories.

Work readiness training includes services related to assessments for workplace skills, competencies, or aptitudes, soft skills training, workplace behavioral expectations, workplace culture and communication, and workplace performance expectations. While more than 90 percent of schools offered YCC students most types of work readiness training by 2015, there was still growth in these offerings by 2017 (Table B.1, Appendix B). Most notably, 65 to 70 percent of schools offered YCC students different types of soft skills training by 2015, with the percentage generally increasing to above 80 percent by 2017. Soft skills training included work readiness assessments, community service learning, and training in citizenship, decision making, priority setting, peer mentoring or tutoring, and organizational and teamwork.

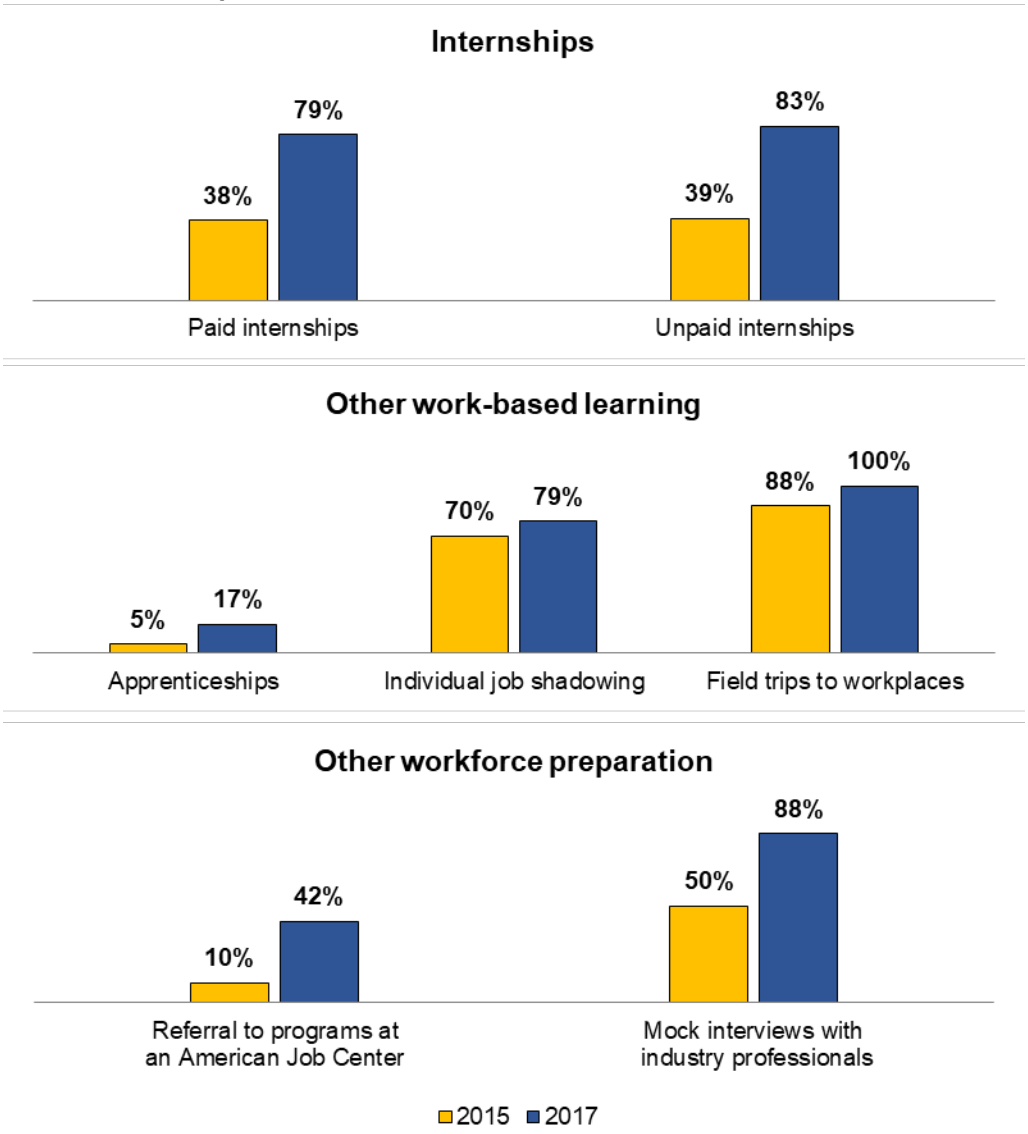
2. Connecting students with career track employment

Schools could connect YCC students to career-track employment through either school-based career activities or work-based learning activities. School-based activities connect students to employers at the school site and often include the use of employer mentors for students in either a one-on-one or a group setting, as well as guest speakers from local employers who discuss their industry and career options. The grantee survey indicates that connecting students to mentoring saw gains over time, with the percentage of schools offering it rising from 87 percent in 2015 to 100 percent in 2017 (Table B.1, Appendix B). The proportion of students receiving mentoring based on PTS data rose from 30 to 34 percent from 2016 to 2018. The proportion of schools offering other school-based workforce readiness activities, including resume-writing workshops and mock interviews, also increased over time.

Work-based learning activities connect students to employers in the workplace. Key activities include internships, field trips, and job shadowing. The proportion of schools offering these activities increased dramatically between 2015 and 2017 (Table B.1, Appendix B), with some critical activities and services increasing by more than 10 percentage points (Figure II.3). For example, the percentage of schools offering internships—both paid and unpaid—increased by nearly 38 percentage points, from about 58 to 96 percent, with the percentage offering paid internships increasing from 38 to 79 percent. The percentage offering group job shadowing and individual job shadowing increased from 60 and 70 percent, respectively, to 80 percent each. There were also increases in the percentage of schools connecting students to other job training programs, offering referrals to programs at the AJC, and offering apprenticeships.

> ***"It's important to show the students what a machinist looks like and does since many of them have probably never even met a machinist"***
>
> **—Employer**

Figure II.3. Work-based learning and other workforce readiness activities, 2015 and 2017 (percentage of grantees reporting that their selected school offered each service)



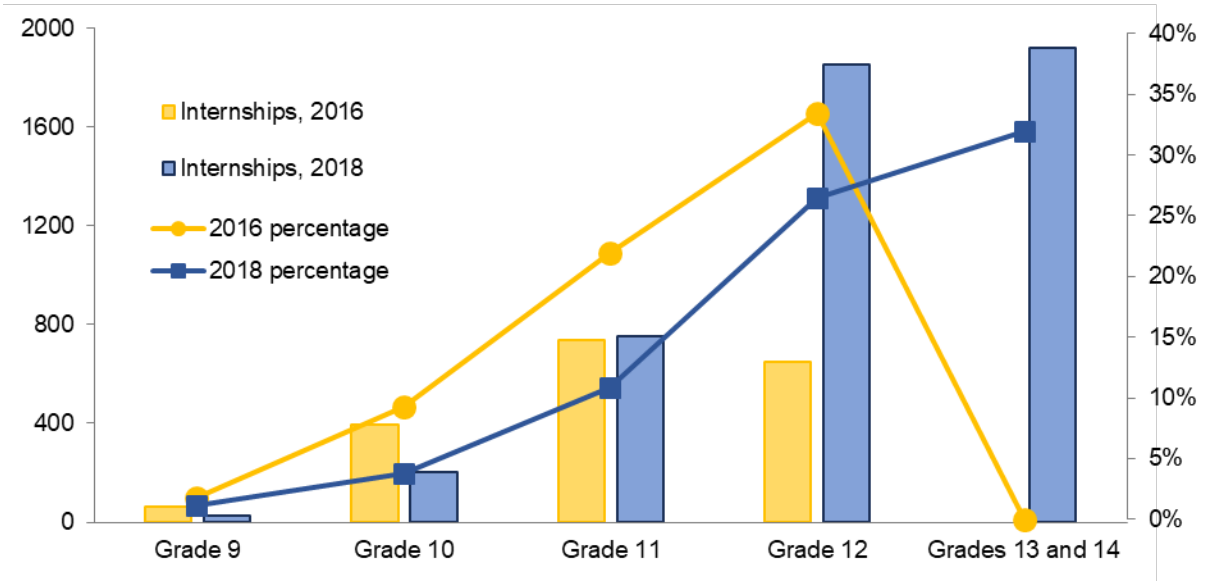
Source: Grantee surveys, 2015 and 2017, Table B.1, Appendix B.

Notes: Survey respondents answered questions for one school in each of the 24 YCC grantees, though item-specific nonresponse lowered the number of respondents in some categories.

The increase in the *availability* of work-based learning opportunities that is shown in the results from the grantee survey may have helped create an increase in the proportion of students receiving these services. Most of the grantees that did not offer internships in 2015 had specifically designed their YCC programs so that internships were not offered until later years of the grant when enrolled students had aged into higher grade levels. Information in the PTS shows that the proportion of students *participating* in internships increased from 14 percent in 2016 to 18 percent in 2018, which translates to an increase in the number of interns from about 1,800 to 4,800 (Figure II.4). Of note, the increase was driven primarily by the number of students

participating in internships in grades 12 and above; the number participating in lower grades generally decreased.

Figure II.4. Participation in internships by grade, 2016 and 2018 (percentage of YCC students)



Source: PTS, 2016 and 2018, Table B.7, Appendix B.

Note: The bars represent the number of students participating in internships in each grade through spring 2016 (yellow) and through spring 2018 (blue). The lines represent the percentage of students that participated in internships in each grade.

Despite the growth in the number of students participating in internships over time, the actual percentage participating was small. Discussions with staff during the 2017 and 2018 visits and telephone interviews suggest that several barriers exist to students participating in internships, including age restrictions on working in certain industries and occupations, the inability of schools to find enough employer hosts, scheduling conflicts between employers and schools, and transportation difficulties in getting to work sites (Dillon 2019 provides details).

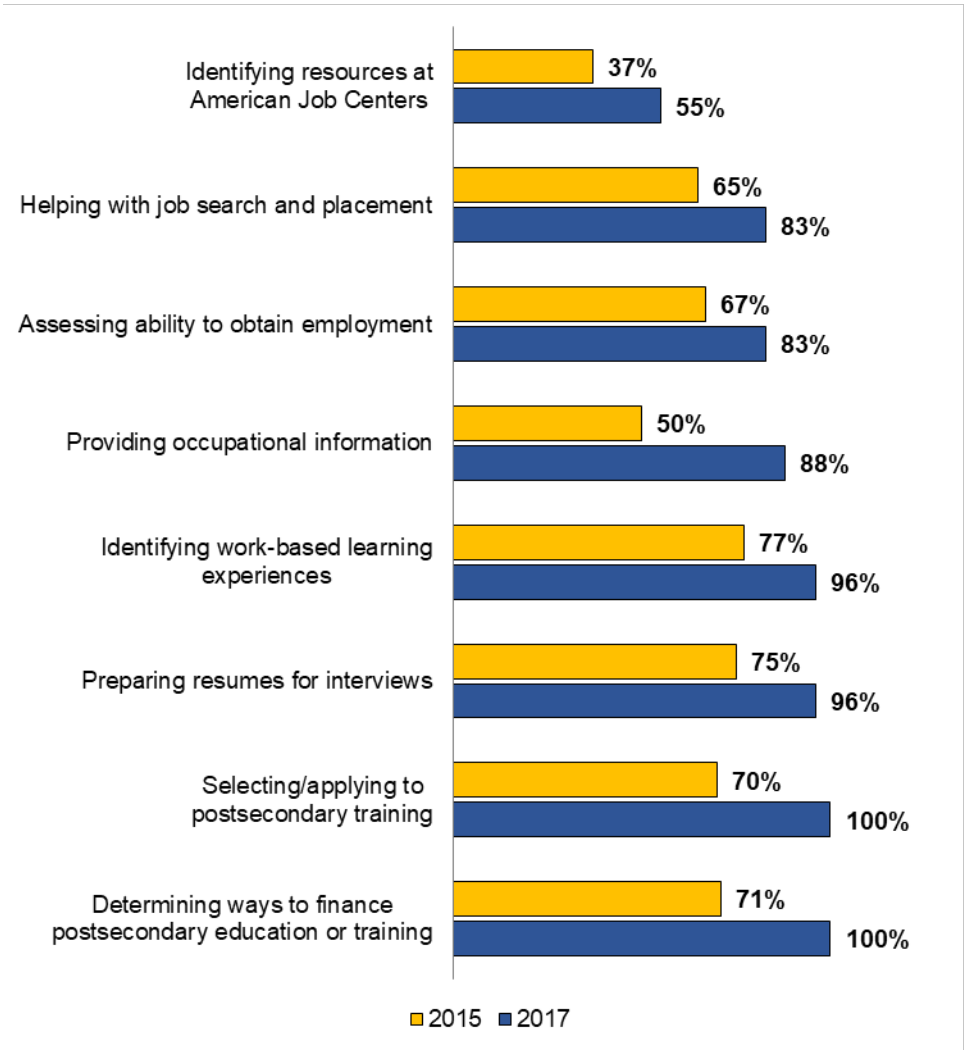
C. Schools increased the availability of academic and nonacademic supports

Over time, more schools reported offering academic and nonacademic supports, the third YCC program component. These supports were intended to promote student engagement and success in school. Information from the grantee surveys tracked this growth in three areas: SLCs, individual counseling, and other personalized supports.

- **SLCs** aim to provide students and teachers with a personalized learning and teaching environment. Such an environment could be built by structuring the YCC program as a school-within-a-school or as a separate small school. Alternatively, it could be structured with students taking classes together as a cohort at each grade level, teachers working with a specific group of students, or teachers having a regularly scheduled common planning period. Responses from the grantee surveys suggest that the YCC program created SLCs for students and teachers in about 90 percent of schools in both 2015 and 2017 (Table B.1, Appendix B).

- **Individualized counseling services** include working with students to develop and review an IDP; assessing, setting, and monitoring education and career goals; and engaging in education and career planning and preparation as well as supporting special populations in their unique needs. Availability of counseling services was high in both 2015 and 2017 according to the grantee surveys. Indeed, virtually all schools offered services within these broad categories in both years (Table B.1, Appendix B). Still, as we show in Figure II.5, information gathered from the grantee survey suggests that all types of services offered in these categories tended to increase over time. PTS data suggest that the proportion of students completing the IDP grew from 43 to 50 percent from 2016 to 2018, but the proportion receiving career and academic counseling decreased slightly, from 84 to 80 percent (Table B.8, Appendix B).

Figure II.5. Counseling services for YCC students, 2015 and 2017 (percentage of grantees reporting that their selected school offered each service)



Source: Grantee surveys, 2015 and 2017, Table B.8, Appendix B.

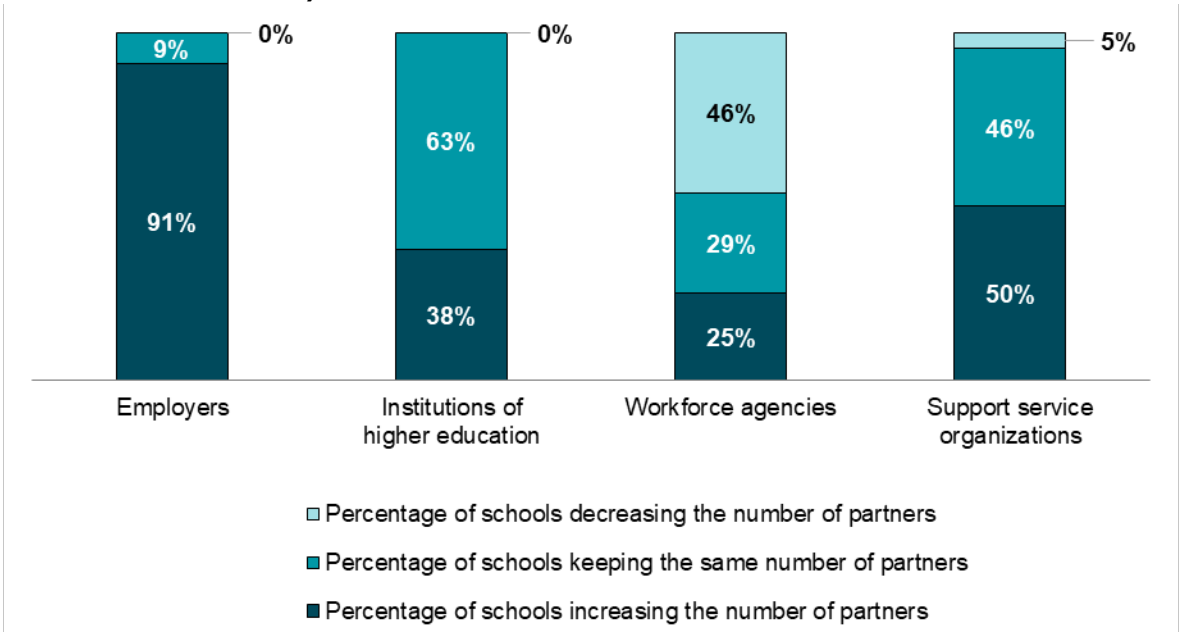
Notes: Survey respondents answered questions for one school in each of the 24 YCC grantees, though item-specific nonresponse lowered the number of respondents in some categories.

- **Other personalized supports** include services to help students with academics, finances, health and well-being, and special needs. The responses from the grantee surveys suggest that YCC schools offered students these supports at relatively high rates (Table B.1, Appendix B). Over 80 percent of schools reported offering academic and financial supports in 2015, with all schools offering them in 2017. About 75 percent of schools reported offering health and well-being support in 2015, a number that fell to about 66 percent by 2017. About 80 percent of schools offered services for special populations in both years. Based on PTS data, the proportion of students who ultimately received some form of support service through their YCC program grew from 35 to 45 percent from 2016 to 2018.

D. Partnerships may have facilitated growth in college preparatory and work experience services but not support services

DOL designed the YCC initiative to be a partnership between schools and four different entities: employers, IHE, the workforce development system agencies (including workforce development boards and American Job Centers), and support service organizations. The grantee survey responses suggest that schools prioritized partnerships with employers and IHEs. By 2015, all schools included in the survey had IHE partners, 91 percent had partnerships with employers and workforce agencies, and 74 percent had support service partners (Maxwell et al. 2017). By 2017, 91 percent of schools had increased the number of employer partners, and 38 percent had increased the number of IHE partners. In contrast, 5 percent saw a decrease in the number of support service partners, and 46 percent saw a decrease in the number of workforce agency partners. In the following sections, we summarize the challenges and successes grantees faced when working with each type of partner.

Figure II.6. Changes in the number of YCC partners, by partner type (percentage of grantees reporting on the change in the number of partners at their selected school)



Source: Grantee surveys, 2015 and 2017, Table B.1, Appendix B.

Notes: Survey respondents answered questions for one school in each of the 24 YCC grantees, though item-specific nonresponse lowered the number of respondents in some categories.

Employer partners. Employers were viewed as integral to the design, sustainability, and success of YCC, according to discussions with YCC staff and employers (see quotes for examples). The 2017 grantee survey also reveals that schools increasingly integrated employers into the YCC program: 79 percent of the survey schools described the level of their employer partners' involvement as high, and 83 percent reported that their relationships with employer partners had strengthened since 2015 (Figure II.7).

"As educators, we teach—we tell people things—but it was when we started listening and asking the employers what we could do for them that it all turned around."

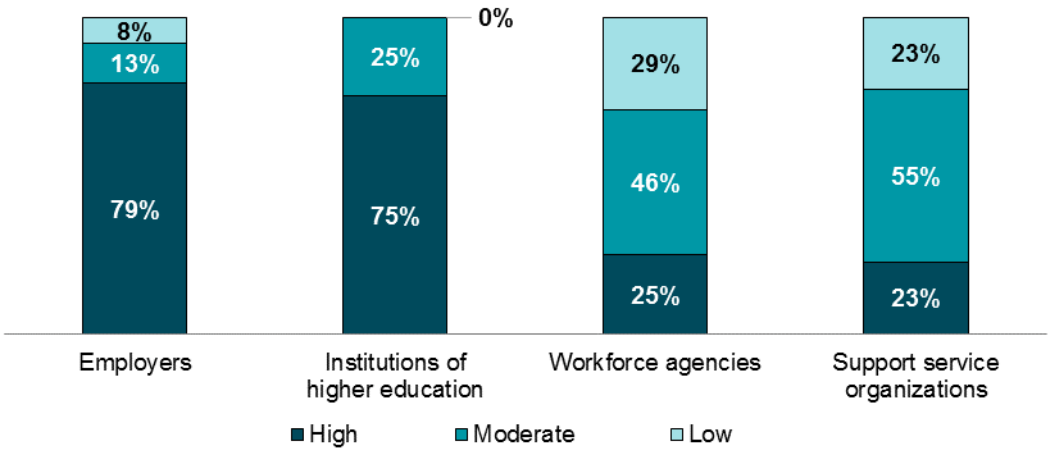
—YCC teacher

"We now ask employers how we can align our curriculum for the job positions that are available."

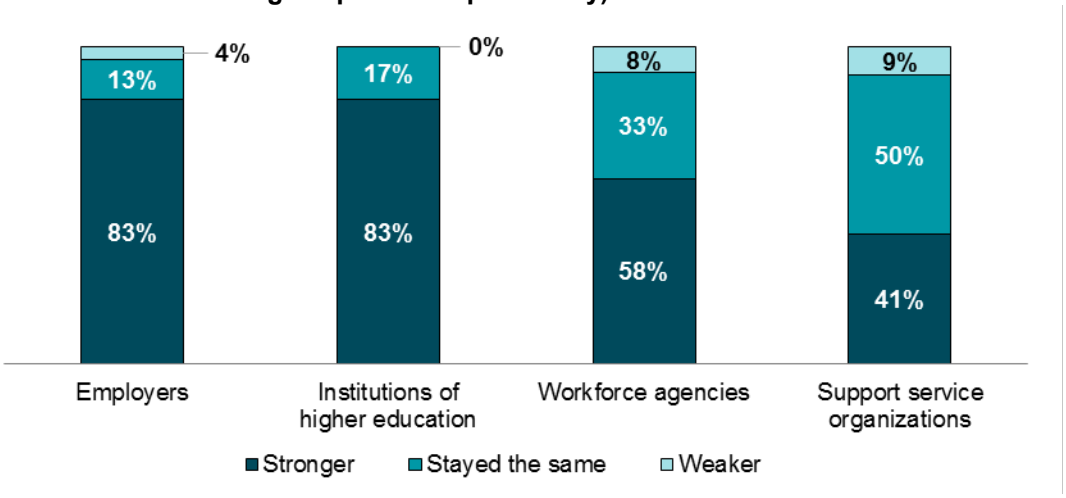
—YCC teacher

Figure II.7. Attributes of partners, 2017

A. Level of typical partner involvement, 2017 (percentage of grantees reporting on their selected schools' partner involvement)



B. Change in partnership intensity between 2015 and 2017 (percentage of grantees reporting on their selected schools' change in partnership intensity)



Source: Grantee surveys, 2015 and 2017, Table B.1, Appendix B.

Notes: Only schools that had partnerships of the type specified are included in the bars.

The ability to grow and strengthen employer partnerships was reported to be due in large part to the efforts of work-based learning coordinators. During the first two years of implementation, people in this role were reported as instrumental to YCC program operations by managing, coordinating, and conducting all outreach to employers (Maxwell et al. 2017). Duties included recruiting employer partners, identifying mentors with employer partners, and identifying potential internships. Discussions during 2017 and 2018 visits and telephone interviews reiterated the importance of this position in engaging employer partners over time as programs matured and the number of older students positioned for work-based learning opportunities grew (Dillon, 2019 provides details).

Working with an employer partner on work-based learning experiences in health care

One school developed a partnership with a hospital to expose students to the health care field. For students in grade 9, the hospital sends residents and technicians to speak with students in their classes. Once students turn 16, they can volunteer at the hospital to learn more about the health care system. Students who complete 100 hours of volunteering can become a summer intern for 8 weeks where they work alongside hospital professionals. Hospitals also assign a mentor to meet monthly with students in grade 11. Students in grade 12 can participate in an 8-week paid internship during the school year to work with internal medicine physicians in clinical and hospital settings.

Institutions of higher education. High schools and IHE share a mission focused on student educational success, and high schools are a natural pipeline into IHE programs. Perhaps because of this alliance, during the first two years of implementation, IHE helped YCC schools align curricula to state standards and offered (1) dual-credit enrollment programs, and (2) articulated credit courses (Maxwell et al. 2017). As discussed during 2017 and 2018 visits and telephone interviews, dual-credit programs allowed YCC students not only to earn college credit, but sometimes to take advantage of on-campus resources (such as tutoring and library services). Through articulation agreements, IHE guided development of high school courses so that students could potentially "test out" of some college courses. Importantly, over time, 83 percent of schools reported in the 2017 grantee survey that high school and IHE partnerships were becoming stronger (Figure II.7), with the typical IHE partner reported as highly involved by 75 percent of YCC schools.

Discussions also indicated that buy-in and relationships between staff at high schools and IHE partners are critical to strengthening the partnership. For example, as one IHE partner noted, having the high school principal involved and supportive of the partnership was a big factor in making it a success. Several respondents also noted that partnerships were strengthened through a dedicated liaison position, either at the college or at the school or district.

Workforce agencies. DOL intended that workforce agencies partner with the YCC program to provide additional support for establishing employer partners, understanding local workforce needs, and assisting with work readiness services and identifying work experiences. Information gathered in the 2017 grantee survey suggests that such partnerships were not as strong as partnerships between schools and their employer and IHE partners. Schools reported that the typical workforce agency partner had only a moderate or low level of involvement in the YCC program at 75 percent of schools, though 58 percent indicated that these partnerships had grown stronger since 2015 (Figure II.7).

At most of the YCC grantees visited in 2018, YCC staff reported challenges with engaging and working with the workforce agency partners, including staff turnover at the workforce agency and school system regulations. YCC staff noted that a key challenge was that workforce agencies do not typically engage with in-school youth because of a legislative mandate to focus primarily on out-of-school youth, which made it difficult for agencies to adapt their services to meet the YCC program needs. Despite these difficulties, some grantees were able to successfully partner with a workforce agency. At these grantees, workforce agency partners provided information on the local economy and labor market, helped recruit employers, and provided student services such as work readiness training and career counseling. Having staff at the YCC program or workforce agency who were responsible for the partnership seemed to help the school and the agency find a way to provide such services. A companion report, *Youth CareerConnect: Engaging Employers and Workforce Agency Partners,* Dillon (2019) provides further details on workforce agency partnerships.

Support service organizations. Support services for YCC students included services such a transportation, child care, work clothes, and tutoring, the delivery of which was often managed by YCC counselors. Although DOL did not require that grantees partner with organizations to provide these services, many did: 74 percent of schools reported in 2015 that they had developed such partnerships. However, these partnerships weakened over time: by 2017, half the schools reported decreased involvement (Figure II.6), and about 75 percent of schools indicated that their partners had only a low or moderate level of involvement with the YCC program. Visits and telephone interviews did not provide insights into reasons for the decline, but do suggest that these partnerships may have been less formal than other types of partnerships, often involving referrals to community agencies and organizations rather than involving regular meetings between partner and YCC staff or any kind of formal agreement.

III. SUSTAINING YCC ACTIVITIES AND SERVICES: PROGRESS AND NEEDS

YCC program leaders, staff, and students discussed how the YCC program brought value to schools and students during visits and telephone interviews. One staff member told how people initially thought the YCC program would be a short-term, unsustainable program that would do harm in the long term when it went away. Ultimately, however, the staff member agreed that the YCC program provided benefit to all high schools in the district and had a ripple effect on the middle and elementary schools. Other staff confirmed that the YCC program helped to change views about career and technical education or built a newfound interest in it.

"I recommend YCC because it's really fun, and you get to learn about things you never knew you'd be interested in. It helps prepare you for college and your career."

—YCC student

"If your teachers are enthusiastic advocates and you have a branded awareness of what a program has to offer in a vertical way, through the middle school and subsequently down through the elementary schools, it's something that is going to be of great value to the school for a long time."

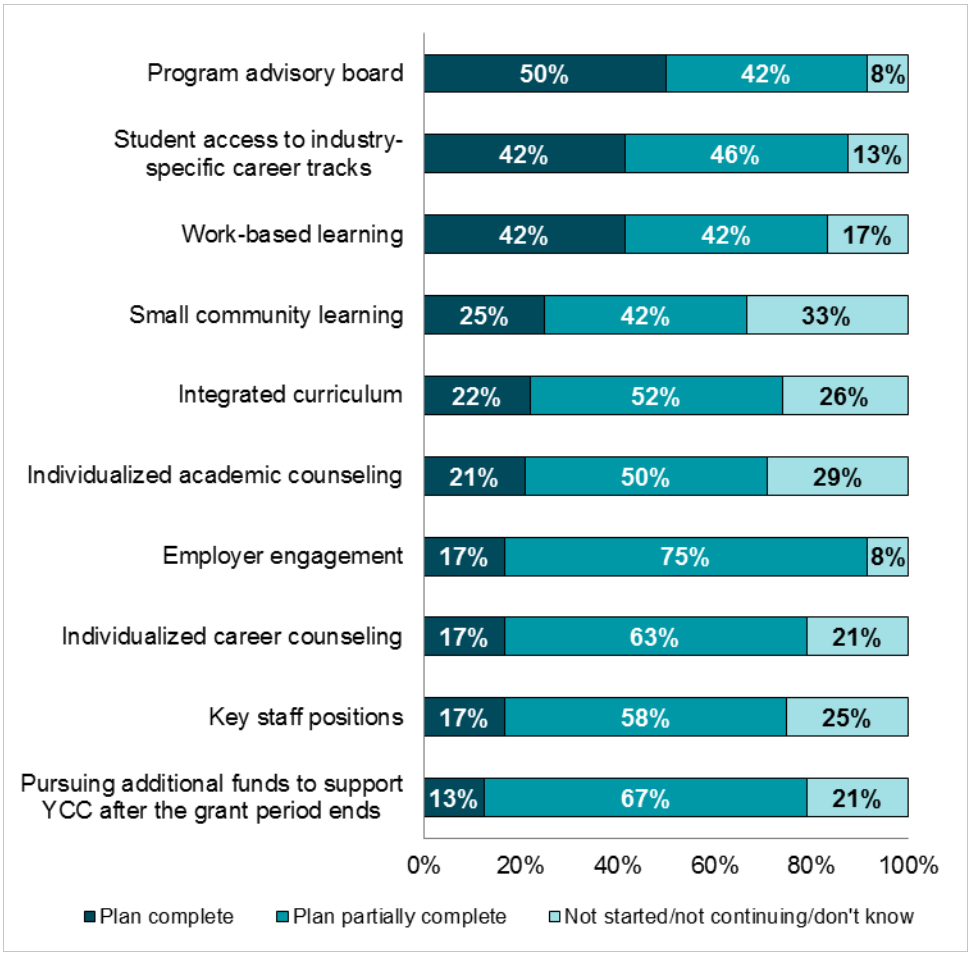
—YCC staff

Given this perceived value, it is not surprising that grantees generally expressed a desire to sustain YCC activities and services beyond the end of the grants. This section explores grantees early efforts to plan for sustainability of YCC-funded activities and services.

A. Partners and staff helped plan for sustaining YCC activities and services

Most schools had started to plan for sustaining YCC program activities and services at least a year before the grants were expected to end. By summer 2017, at least two-thirds of all grantees reported in the grantee survey that they had at least partially completed sustainability planning in each of 10 areas related to managing and operating the YCC program (Figure III.1). One-third of the schools had not started planning for—or did not plan to continue—SLCs, and one-fourth had not started planning for continuation of an integrated academic and career-focused curriculum. About 20 percent had not started planning for individualized counseling or work-based learning.

Figure III.1. Planning for continuation of YCC, 2017 (percentage of grantees reporting progress on sustainability planning at their selected school)



Source: Grantee survey, 2017, Table B.1, Appendix B.

Notes: Survey respondents answered questions for one school in each of the 24 YCC grantees, though item-specific nonresponse lowered the number of respondents in some categories.

B. A variety of strategies emerged for sustaining activities and services

During discussions in 2017 and 2018, schools reported that they used several strategies to solicit funding or in-kind support to sustain YCC activities and services. In addition to seeking funding from a range of sources (side bar), grantees highlighted three distinct strategies for sustainability planning: (1) demonstrating evidence of effectiveness, (2) integrating YCC activities into existing services, and (3) promoting the YCC program among stakeholders.

Potential funding sources identified for sustaining the YCC program

- Existing partners
- Foundations
- Perkins grants
- Unions
- Workforce system agencies
- Local school dollars

Source: 2017 and 2018 visits and telephone Interviews.

YCC activities reported as requiring funding for sustainability

Integrated curriculum

- Specialized integrated curriculum (for example, Project Lead the Way)
- Dual-enrollment programs
- Guest speakers

Work-based learning

- Internships
- Field trips

Supports

- Counselors

Professional development

Source: 2017 and 2018 visits and telephone interviews.

Efforts to demonstrate evidence of effectiveness. Program leaders in 4 of the 10 grantee schools visited in 2018 had worked to gather evidence of effectiveness to justify additional funding and the need for YCC services. One interviewee explained how the grantee had used the YCC grant as a "proof of concept" to help position the organization as the expert in the local area for delivering college and career services. Interview respondents for two other grantees spoke about how they had been gathering evidence about the changes brought about through implementation, such as how, as a result of cohort teaching, students now performed better on their exams and had lower failure rates, as well as how teachers had increased collaboration. Finally, one respondent for the fourth grantee spoke about having a local external evaluator present at YCC advisory council discussions on sustainability. The evaluator brought a deep understanding of the YCC program and presented research on the resulting systems changes and improved student outcomes. All four of these grantees intended to leverage the evidence they were able to collect to gain buy-in and solicit funding for activities that could not be sustained without additional resources (side bar).

Integration of YCC activities and services with preexisting school or district services. Discussion during 5 of the 10 visits indicated that schools planned to incorporate YCC services into the districts' existing programs and services. Even though, in the first two years of grant funding, differences had emerged between the YCC program and other programs that students could have elected (Maxwell et al. 2017), staff saw this "mainstreaming" of YCC services as an option to sustain the program. For example, four grantees planned to incorporate YCC services into the districts' existing career and technical education programs, keeping much of the YCC program structure but making modest changes in the consolidation process (such as switching from dual credit to articulated credit or eliminating certain staff positions). Another grantee considered mainstreaming YCC students such that they would be part of a distinct cohort for their first two years and then transition to a non-YCC group

of classes, with the exception of some work-based learning activities, rather than continue to exist as a separate cohort. One of these five grantees was also exploring the possibility of opening a center to provide integrated curriculum support to all schools within the district.

Promotion of the YCC program locally, statewide, or nationally. Sustainability efforts often started with grantees tapping into partnerships and program staff. In particular, discussions suggested that sustainability discussions typically began with advisory boards, a wide array of school and district officials (such as superintendents, school board members, principals, and teachers), parents, and students. YCC program leaders then attempted to build program support beyond the school. Examples include:

- Educating the community on manufacturing opportunities (the YCC career focus) and showing how the YCC program was much more than an education or training program.
- Building strong industry partnerships to help ensure the longevity of the program.
- Presenting at a conference to support efforts of the state governor to release funding that could help with the continuation of the YCC program.
- Meeting regularly with the state's department of education to set up statewide career development specialists that school staff would then help train.

C. Staffing challenges emerged to sustaining activities and services

As discussed earlier, most schools and districts hired or assigned existing staff to a liaison position during early YCC program implementation (Maxwell et al. 2017). These positions were typically described as an industry liaison or work-based learning coordinator dedicated to developing and maintaining employer partnerships and work-based learning activities. Not uncommonly, liaisons also built partnerships with IHE to facilitate dual-enrollment and articulation agreements. The partnerships and opportunities that resulted from their efforts were reported as critical for building program components that differentiated the YCC program from other existing programs.

By 2017, YCC staffing appeared to have increased. In the grantee survey, 48 percent of schools reported an increase in career-technical education teachers, 44 percent reported an increase for career-only counselors, and 30 percent reported an increase among academic-only counselors. As enrollment in the YCC program grew, increases in the staffing of career technical-education teachers may have enabled the expansion in integrated academic and career-focused learning, and increases in the staffing of counselors may have enabled the expansion of counseling activities. However, with the YCC grant approaching its end, schools anticipated upcoming challenges with maintaining staffing levels. Discussion during the 2018 visits indicated that YCC positions typically paid through grant funding, such as counselors, coordinators, and industry liaisons, were more likely to be cut than teachers, who were typically partially or fully paid through other school or district funding. At least two schools had already planned to dissolve coordinator positions and shift administrative responsibility for managing the YCC program to teachers or other staff.

Discussions at 5 of the 10 visits also highlighted the concern about the likely loss of YCC staff positions, which were crucial for building and maintaining partnerships and working with students. Respondents from two grantees, for example, expressed concerns about losing work-based learning counselors or program coordinators who broker partnerships with employers or advisory groups, noting that while they might retain a staff member in this role, that person would no longer be assigned only to YCC students. Similarly, respondents for three other grantees discussed how their schools might be losing YCC program-specific counselors, citing how, prior to the end of the grant, many of these staff were already looking for new positions.

IV. KEY YCC PRACTICES THAT APPEAR TO SUPPORT IMPLEMENTATION OF COLLEGE PREPARATION AND CAREER READINESS PROGRAMS

The YCC implementation study looked back over the full course of implementation to examine how grantee experiences evolved from early to later years. Although information collected for this report, as well as Maxwell et al. (2017), uncovered many successes and challenges during the grant period, three key practices appeared critical in supporting implementation of intensive, multifaceted programs to prepare students for college and the workforce in medium- to high-skilled industries and occupations.

1. **Strong employer and IHE partnerships were critical for implementation, and cultivating them required the help of a dedicated partner liaison.** Schools quickly built both employer and IHE partners in the first two years of implementation and continued to cultivate these partnerships into later implementation. Employer partnerships provided (1) exposure to work, (2) information for prospective employees, (3) internships, (4) mentors, and (5) technical input on curriculum design. YCC grantees considered all these contributions to be critical to the YCC program design and implementation. IHE partners also provided important services, including dual enrollment, guidance on developing high school classes to improve college readiness, and opportunities to expose students to higher-education opportunities available to them after school. To build robust relationships with these partners, most schools hired (or assigned existing staff to) a liaison position (known typically as an "industry liaison" or a "work-based learning coordinator") dedicated to developing and maintaining partnerships. Liaisons usually focused on employer partnerships, but high schools sometimes relied on liaisons to help build IHE partnerships as well. Maintaining these positions after grant funds ended was a top concern for many grantees, highlighting the value of these partnerships and the importance of having a dedicated partner liaison. Whether similar liaison roles could help bolster workforce system and supportive service partnerships may be an area for further exploration by YCC grantees.

2. **YCC program services evolved to meet changing needs as youth aged.** The college preparation and career readiness needs of students in higher grades differ from those of students in lower grades. During early implementation, grantees focused on developing services such as integrated academic and career-related courses, academic supports such as SLCs, and work readiness activities (Maxwell et al. 2017). As students aged and the proportion of YCC students in older grades increased, schools shifted their focus to providing internships, college visits, postsecondary preparatory coursework, postsecondary financial assistance, courses leading to certification and credential attainment, and counseling support related to employment. In addition to this natural progression of services as participating students matured, grantees also recognized that many students were struggling with the more rigorous YCC program coursework and responded by increasing academic supports over time.

3. **Most grantees anticipated challenges with sustainability, but many had begun to implement strategies to support ongoing partnerships and services.** With a year remaining in the official grant period, even though staff and students appeared to have found value in YCC, sustainability planning was incomplete. By 2017, planning for some key program components had not yet begun in about 20 percent of schools. Although some

schools might not have been interested in continuing some program components, and some might not have known how to get started planning for their continuation, the two-thirds that had begun sustainability planning were working with advisory councils or partners to plan for program sustainability, integrating YCC program activities into existing school services to make them less reliant on grant funds, building buy-in from school and local stakeholders, and setting up mechanisms to gather evidence on program effectiveness to promote the program. Although many of these efforts were still ongoing, they suggest that grantees value continuation of the student college preparation and career readiness activities implemented under the YCC grant.

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APPENDIX A: DESCRIPTION OF YCC GRANTS

Table A.1. Description of YCC Grants

Grantee	Location	Lead applicant organization type	Funding
Academia de Directores Médicos de Puerto Rico, Inc.	San Juan, PR	Nonprofit	$2,842,834
Anson County Schools	Wadesboro, NC	LEA	$2,247,373
Bradley County School District	Cleveland, TN	LEA	$4,499,121
Buffalo Board of Education*	**Buffalo, NY**	**LEA**	**$3,898,700**
Colorado City Independent School District	Colorado City, TX	LEA	$3,482,704
East San Gabriel Valley Regional Occupational Program	West Covina, CA	LEA	$4,499,251
Galveston Independent School District	Galveston, TX	LEA	$3,975,000
Ivy Tech Community College of Indiana	Kokomo, IN	IHE	$3,273,878
Jobs for the Future, Inc.*	**Boston, MA**	**Nonprofit**	**$4,867,815**
Kentucky Educational Development Corporation*	**Ashland, KY**	**Nonprofit**	**$5,520,019**
Laurens County School District 56*	**Clinton, SC**	**LEA**	**$6,890,232**
Los Angeles Unified School District*	**Los Angeles, CA**	**LEA**	**$7,000,000**
Manufacturing Renaissance*	**Chicago, IL**	**Nonprofit**	**$2,670,909**
Metropolitan School District of Pike Township*	**Indianapolis, IN**	**LEA**	**$7,000,000**
New York City Department of Education*	**New York, NY**	**LEA**	**$6,999,601**
Pima County*	**Tucson, AZ**	**Workforce entity**	**$5,351,690**
Prince George's County Economic Development Corporation	Largo, MD	Nonprofit	$7,000,000
Putnam County Board of Education	Eatonton, GA	LEA	$2,418,343
Rosemount Independent School District 196	Rosemount, MN	LEA	$2,990,026
School District number 1 in the City and County of Denver	Denver, CO	LEA	$6,999,980
St. Paul Independent School District 625	St. Paul, MN	LEA	$3,680,658
Toledo Public Schools*	**Toledo, OH**	**LEA**	**$3,824,281**
Upper Explorerland Regional Planning Commission	Postville, IA	Workforce entity	$2,784,360
Westside Community Schools	Omaha, NE	LEA	$2,647,212

Source: Grantee application information from the U.S. Department of Labor.

Notes: Lead application type was based on information in the YCC grantee's application. **Boldface** with an asterisk (*) indicates one of the 10 grantees we worked with for potential participation in the randomized controlled trial.

IHE = Institution of Higher Education; LEA = Local education agency

APPENDIX B. DATA COLLECTION AND ANALYSIS

This appendix provides information about the main data sources used in this report, the grantee surveys (Section A), site visits and telephone interviews (Section B), and the YCC participant tracking system (Section C). Further details are in Maxwell et al. 2017.

A. Surveys of grantees

The grantee survey collected quantitative information from all 24 YCC grantees in two rounds, one fielded in summer 2015 and one in summer 2017.[1] In both years, the survey directed respondents to answer questions for only one high school implementing the YCC program. To ensure that the survey yielded information for a consistently defined set of schools, the research team worked with grantees that offered the YCC program in several schools to select the school for which questions would be answered in both years. Grantees were instructed to identify the school with the earliest program start grade (usually grade 9). If multiple schools offered the YCC program beginning in that grade, the research team asked the grantee to select the school (from that pool) with the largest YCC enrollment. We conceptualized the survey as one that would provide in-depth information on the YCC design and services with a focus on 10 topical areas (organization and administrative structure, partners, YCC features, curriculum, employer engagement, career and academic counseling, work-based learning, support services, small learning communities, and professional development) in both years. Questions on program sustainability were added as an eleventh topic area in 2017.[2]

The research team analyzed the data from the surveys of all 24 YCC grantees using percentage distributions to describe characteristics and services measured with categorical variables and means to describe factors measured with continuous variables. The team treated item-specific nonresponse—including invalid responses or outliers—as missing data. Table B.1 provides frequencies of key data elements from the 2015 and 2017 surveys, and is broken into three sections based on the three YCC program component areas: preparing students for both college and career, connecting students with career-track employment, and offering academic and nonacademic supports. Table B.2 provides frequencies of key data elements on program sustainability plans from the 2017 survey.

[1] Twenty-two of the 2015 surveys were completed between May and July, although two grantees completed the survey in August and September. Eighteen of the 2017 surveys were completed in June, with six completed in July.

[2] A copy of the instrument used in the 2015 survey can be found at https://www.reginfo.gov/public/do/PRAICList?ref_nbr=201501-1291-002. A copy of the instrument used in the 2017 survey can be found at https://www.reginfo.gov/public/do/PRAICList?ref_nbr=201703-1291-001.

Table B.1. Activities and services that schools offered to YCC students, 2015 and 2017 (percentage of grantees reporting on their selected school's activities and services)

	2015	2017	Difference
Preparing for both college and career			
Integrated academic and career-focused coursework			
Standards and assessments	100.0	100.0	0.0
Academic curriculum aligned to state career and college-ready standards	95.8	100.0	4.2
Curriculum and instructional materials in career-related classes were based on industry standards	100.0	100.0	0.0
Academic courses	100.0	100.0	0.0
Graduates expected to complete coursework successfully to attend two-year college or apprenticeship training programs	100.0	100.0	0.0
Flexibility provided to students with special needs	100.0	100.0	0.0
Coursework reached high levels of English and mathematics (four years in each)	100.0	90.9	-9.1
Graduates expected to complete coursework successfully in order to attend four-year colleges	81.3	81.8	0.5
Career and technical education courses	100.0	100.0	0.0
Distinctive career theme integrated across all years of the program	100.0	100.0	0.0
Career and technical education courses sequenced to build technical skills from year to year	100.0	100.0	0.0
Students took courses for a career ladder in H-1B industry or occupation	100.0	100.0	0.0
Aimed at developing career-specific skills needed to enter the field	100.0	100.0	0.0
Aimed at developing technological (for example, computer) skills	100.0	100.0	0.0
Sequence of career and technical education courses enabled students to obtain skill certifications recognized by employers	90.5	95.8	0.3
Students able to demonstrate knowledge of a variety of careers and related educational requirements in career field	95.5	86.4	-4.1
Curriculum integration	100.0	100.0	0.0
Academic courses used examples related to career theme	85.0	100.0	15.0
Students were shown how their academic subjects relate to each other and apply in the context of adult professional work	95.8	95.7	-0.1
Students engaged in projects that applied skills from several courses (for example, senior or capstone projects)	95.0	95.2	0.2
Career-focused classes also taught academic skill building	100.0	94.7	-5.3
Integrated academic and career skill building			
Instruction (project-based learning used in courses, occupational skills training, students complete a capstone course)	95.8	100.0	4.2
Project-based learning used in courses	95.7	100.0	4.3
Occupational skills training	70.8	82.6	11.8
Students complete capstone course that brings together knowledge learned	38.1	73.9	35.8
Certifications and credentials	75.0	100.0	25.0
Courses leading to industry-recognized credential	73.9	100.0	26.1
Preparation for certification examination	60.9	95.8	34.9
Stackable credentials	50.0	70.8	20.8
Skill badges	13.6	25.0	11.4

	2015	2017	Difference
Postsecondary education supports			
College visits	79.2	100.0	20.8
College faculty or representatives visited high school classes	70.8	91.7	20.9
Campus visits to two-year colleges	70.8	100.0	29.2
Campus visits to four-year colleges	62.5	91.7	29.2
Postsecondary preparatory coursework	79.2	100.0	20.8
Courses articulate to a two- or four-year college program	62.5	95.7	33.2
Dual-enrolled coursework	65.2	100.0	34.8
College entrance examinations preparation courses	41.7	75.0	33.3
Advanced Placement coursework	50.0	66.7	16.7
Postsecondary financial assistance	45.8	100.0	54.2
Financial aid planning assistance	37.5	95.8	58.3
Assistance with completion of the Free Application for Federal Student Aid	37.5	95.8	58.3
Tuition or financial assistance	33.3	82.6	49.3
Work-readiness training			
Assessment	100.0	100.0	0.0
Workplace skills were incorporated and assessed	95.8	100.0	4.2
Competency-based assessments were offered	95.5	100.0	4.5
Several assessments reflected practices in career field	80.0	95.0	15.0
Soft skills training	83.3	100.0	16.7
Work-readiness assessments (for example, WorkKeys)	69.6	83.3	13.7
Citizenship training	69.6	75.0	5.4
Training in decision making and determining priorities	68.2	87.5	19.3
Peer-centered activities (peer mentoring or tutoring)	65.2	79.2	14.0
Community service learning	65.2	87.5	22.3
Organizational and teamwork training	60.9	91.3	30.4
Workplace behavioral expectations	100.0	100.0	0.0
About work expectations for attendance and the need to adhere to them	100.0	100.0	0.0
About work expectations for punctuality and the need to adhere to them	100.0	100.0	0.0
To dress appropriately for a position and duties	100.0	95.8	-4.2
Workplace culture and communication	100.0	100.0	0.0
To speak clearly and communicate effectively–orally and non-orally	100.0	100.0	0.0
To accept direction, feedback, and constructive criticism with a positive attitude and use information to improve work performance	95.5	100.0	4.5
To understand requirements for career pathways (for example, what they need to attend a two- or four-year college or earn a certificate.)	90.9	100.0	9.1
To demonstrate understanding of workplace culture and policy	91.3	91.7	0.4
Workplace performance expectations	95.7	100.0	4.3
To relate positively with co-workers and work productively with individuals and in teams	95.7	100.0	4.3
To participate fully in a task or project from initiation to completion	91.3	100.0	8.7
To meet quality standards	87.0	100.0	13.0
To exercise sound reasoning and analytic thinking to solve workplace problems	82.6	95.8	13.2

	2015	2017	Difference
Connecting students with career track employment			
School-based career activities			
Connecting to employers: Mentoring	87.0	100.0	13.0
Group mentoring	65.2	87.0	21.8
Individual mentors	56.5	87.5	31.0
Connecting to employers: Other school-based activities	91.7	95.8	4.1
Speakers to describe workplaces and careers	91.7	95.8	4.1
Work-based learning activities			
Connecting to employers: Internships	58.3	95.8	37.5
Unpaid internships	39.1	83.3	44.2
Paid internships	37.5	79.2	41.7
Internships at a place of work, but not required	27.3	62.5	35.2
Required internships at a place of work	21.7	37.5	15.8
Virtual internships	14.3	16.7	2.4
Connecting to employers: Other work-based learning	91.7	100.0	8.3
Field trips to workplaces	87.5	100.0	12.5
Job shadowing for individual students	69.6	83.3	13.7
Group job shadowing	60.9	79.2	18.3
Other workforce readiness activities	79.2	100.0	20.8
Résumé-writing workshops	52.2	87.5	35.3
Mock interviews staged by industry professionals	50.0	87.5	37.5
Attendance at trade associations or professional conferences	56.5	75.0	18.5
Connecting students to a training program	43.5	75.0	31.5
Referral to programs at an American Job Center	9.5	41.7	32.2
Apprenticeships	4.5	16.7	12.2
Offering academic and nonacademic supports			
Small learning community (SLC)			
SLCs for students	87.5	91.3	3.8
Students attend a school within a school	66.7	54.6	-12.1
Students take classes together as a cohort at each grade level	52.2	82.6	30.4
Students have a physical space available only to them	41.7	65.2	23.5
Students attend a separate small school	4.3	9.1	4.8
SLCs for teachers	87.0	91.3	4.3
Teachers scheduled to work with a specific group of students	78.3	82.6	4.3
Teachers have a regularly scheduled common planning period	66.7	78.3	11.6
Individualized counseling			
Individual Development Plan (IDP)	95.5	100.0	4.5
Working with students to develop an IDP	95.5	100.0	4.5
Reviewing and updating a student's IDP	95.5	100.0	4.5
Educational and career goals	100.0	100.0	0.0
Helping students identify feasible educational and career goals	100.0	100.0	0.0
Providing career interest inventories	85.7	91.7	6.0
Assessing students' ability to identify and obtain employment in chosen career	66.7	83.3	16.6
Providing occupational information based on local labor markets	50.0	87.5	37.5

	2015	2017	Difference
Educational and career planning and preparation	100.0	100.0	0.0
Assisting in selecting courses that meet career and educational objectives	100.0	100.0	0.0
Identifying work-based learning experiences to complement career aspirations	77.3	95.8	18.5
Assisting in selecting and applying to postsecondary education	77.3	100.0	22.7
Assisting with resume preparation or interview skills	75.0	95.8	20.8
Determining ways to finance postsecondary education or training	71.4	100.0	28.6
Assisting in selecting and applying to postsecondary training	70.0	100.0	30.0
Helping with job search and placement	65.0	83.3	18.3
Facilitating a relationship with or identifying resources at AJCs	36.8	54.6	17.8
Special populations support	100.0	100.0	0.0
Providing for unique needs of students with physical or learning disabilities	100.0	95.8	-4.2
Encouraging and supporting low-income and underrepresented students to enroll in YCC	100.0	100.0	0.0
Providing for unique needs of English-language learners	90.0	87.5	-2.5
Academic and nonacademic supports			
Academic support	82.6	100.0	17.3
Developmental or special education	81.8	79.2	-2.6
Individualized tutoring	72.7	100.0	27.3
Homework assistance	66.7	91.7	25.0
Acceleration strategies to get lower-performing students up to speed by graduation	57.1	91.7	34.6
Financial support	83.3	100.0	16.7
Transportation	70.8	95.8	25.0
School supplies	60.9	66.7	5.8
Work clothes or uniforms	52.2	70.8	18.6
Costs related to credential attainment for individual participants (for example, fees for certification examinations)	50.0	91.7	41.7
Work-related equipment (for example, personal computer)	45.5	70.8	25.3
Fees associated with other tests or examinations (for example, ACT)	37.5	70.8	33.3
Child care	13.6	8.3	-5.3
Other dependent care (for example, elder care)	0.0	0.0	0.0
Health and well-being support	77.3	66.7	-10.6
Psychological counseling (in-house or as referral)	71.4	58.3	-13.1
Health care services/referrals	63.6	66.7	3.1
Support for special populations	83.3	87.5	4.2
Services for students from low-income families	83.3	83.3	0.0
Services for students with disabilities	83.3	87.5	4.2
Services for English-language learners	75.0	79.2	4.2
Services for pregnant and parenting students	68.2	66.7	-1.5

Notes: Although all 24 YCC grantees responded to both the 2015 and 2017 surveys, item-specific nonresponse lowered sample size in some cells. *Italics* identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table B.2. Status of sustainability plans, 2017 (percentage of grantees reporting on their selected school's sustainability plans)

	Plan complete	Plan partially complete	Plan not started	Not planning to offer after YCC funding ends	Don't know
Integrated curriculum	21.7	52.2	17.4	4.4	4.4
Employer engagement	16.7	75.0	8.3	0.0	0.0
Individualized academic counseling	20.8	50.0	8.3	4.2	16.7
Individualized career counseling	16.7	62.5	8.3	4.2	8.3
Work-based learning	41.7	41.7	12.5	4.2	0.0
Small community learning	25.0	41.7	8.3	12.5	12.5
Student access to industry-specific career tracks	41.7	45.8	8.3	4.2	0.0
Key staff positions	16.7	58.3	16.7	4.2	4.2
Program advisory board	50.0	41.7	8.3	0.0	0.0
Pursuing additional funds to support the YCC program after the grant period ends	12.5	66.7	16.7	4.2	0.0

Notes: Although all 24 YCC grantees responded to the 2017 surveys, item-specific nonresponse lowered sample size in some cells.

B. Visits and telephone interviews

For three consecutive years, we visited or interviewed through telephone calls the 10 YCC grantees considered for participation in the RCT component of the impact study. These grantees were selected because the team believed they met two conditions in at least one of their schools: oversubscription into YCC and considerable contrast with other (non-YCC) programs. For grantees implementing their YCC program at a single school, that school was the focus of the visit. For the remaining seven grantees that implemented their YCC program in multiple schools, between one and four schools were included in each visit. At these grantees, the team focused on the schools with oversubscription and considerable contact with alternative programs. In all but one grantee, the team visited multiple schools in one district; for one grantee, the team visited schools located in two districts (Table B.3). Maxwell et al. (2017) provides details.

The visits and telephone interviews provided in-depth qualitative information on the planning, design, and implementation of the YCC program and key partnerships as well as in-depth information on YCC services offered, challenges encountered, solutions, and plans for sustaining the services after YCC funding ended. During in-person visits to schools, interviews were conducted with YCC coordinators/managers, staff delivering YCC program services at the school, partner organization staff members, participating employers, and career and technical education staff who had knowledge of alternative programs. Telephone calls focused on YCC coordinators/managers.

- The first round of visits occurred between December 2015 and March 2016. The 10 grantees visited represented 11 districts and 17 high schools offering the YCC program. Interview data from these visits was highlighted in the initial implementation report (Maxwell et al. 2017).

- The second round of visits and telephone calls took place from February to April 2017. This data collection consisted of visits to 4 of the 10 grantees (4 districts, 6 high schools, including 2 schools not visited before) with telephone interviews with program coordinators for the other 6 grantees.
- The third round of visits occurred between December 2017 and March 2018. These visits to all 10 grantees included discussions at 11 districts and 15 high schools, including 2 schools not visited before.

To ensure consistency in data collection and a shared understanding of what had to be accomplished during the discussions, the study team prepared semi-structured protocols by topic and respondent type to guide on-site activities.[3] The protocols promoted uniform data collection while ensuring sufficient flexibility to pursue open-ended discussions as needed. Each year, the research team's visitors and callers participated in training geared toward using the protocols, understanding the YCC initiative's three major program components (preparing students for both college and career, connecting students with career-track employment, and offering students academic and nonacademic supports), and identifying key respondents to be interviewed.

The research team reviewed the raw notes and materials from the visits and telephone calls and synthesized them into detailed write-ups based on a standardized template shared across the team. The write-ups grouped information according to career focus, integrated academic and career-focused curriculum, employer engagement, work-based learning, individualized counseling, small learning communities, professional development, context, accomplishments, challenges, successes, and sustainability. The research team's lead for the implementation study (or the research team's project director if the lead was a visitor) reviewed the write-ups for completeness, thoroughness, and accuracy. Visitors from the research team made follow-up telephone calls when verification or additional information was needed.

The common write-up format allowed for in-depth coding in qualitative data software (NVivo) by theme and sub-theme, permitting cross-site comparisons. The research team used codes to cluster findings by core topics of interest and by themes. This common process allowed the team to identify trends across grantees and schools and to consider how different services and contexts influenced the early implementation experience. The team cross-checked the findings from visits with information from the quarterly progress report narratives that had been organized by grantee, date of submission, and key topics summarized in the reporting template.

[3] Protocols can be found at: available at https://www.reginfo.gov/public/do/PRAICList?ref_nbr=201703-1291-001.

Table B.3 Grantees, schools, and districts included in visits and interviews

Grantee (10 grantees)	Grantee type	Local YCC program name	Level of YCC implementation	School visited (21 high schools)	High school district of school visited (11 districts)
Board of Education, Buffalo, New York	School district	Medical Careers Pathway Program	Single school	MST–Math, Science, Technology School	Buffalo Public SD
Jobs for the Future, Inc.	Non-profit organization	Massachusetts Advanced Pathways Program	Three schools across three districts	Brockton HS	Brockton SD
Kentucky Educational Development Corporation	Non-profit organization	Project ACHIEVE	Ten schools across eight districts	Pulaski County HS Southwestern HS	Pulaski County SD
Laurens County SD 56	School district	Carolina Alliance for Technology	Four schools across three districts	Clinton HS Laurens HS	Laurens District 56 Laurens District 55
Los Angeles USD	School district	Los Angeles USD YCC Program	Six schools within one district	Teacher Preparatory Academy/Technology Preparatory Academy Hawkins HS Responsible Indigenous Social Entrepreneurship Sylmar HS Sylmar Biotech Health Academy Bernstein HS STEM Academy of Hollywood Contreras Learning Center, The School of Business and Tourism Manual Arts HS, School of Medicine, Arts and Technology	Los Angeles USD
Manufacturing Renaissance	Non-profit organization	Manufacturing Careers & College Connect	Single school	Austin Polytechnical Academy	Chicago PS
Metropolitan SD of Pike Township	School district	Pike HS YCC Program	Single school	Pike HS	Metropolitan SD of Pike Township
New York City Department of Education	School district	CUNY P-TECH	17 schools within one district	Energy Tech HS MECA (Manhattan Early College School for Advertising)	New York City Department of Education
Pima County	Workforce entity	CREO (STEM Math)	12 schools across seven districts	Rio Rico HS	Santa Cruz Valley USD
Toledo Public Schools	School district	Pathways to Prosperity	Five schools within one district	Bowsher HS Scott HS Start HS Woodward HS	Toledo PS

C. Participant tracking system

DOL required that all grantees use the PTS to report on program performance throughout the grant period. Grantees provided information on participants' characteristics, YCC activities and services received, and outcomes, as well as the extent and nature of staff professional development activities related to the YCC program.[1]

PTS data used in this report were drawn for two periods starting from April 2014, when grants began, through (1) the 2015–2016 school years, with the school year varying based on individual school districts or school calendars; and (2) March 2018, the latest data available when analysis began. For ease of reference, we refer to these time periods as spring 2016 and spring 2018, respectively. The spring 2018 data are cumulative and include individuals included in spring 2016 data, although they would be captured in different grades. For example, the 9th grade student in spring 2016 data is included as an 11th grader in the spring 2018 data.

The research team analyzed data from the PTS by using percentage distributions to describe characteristics and services measured with categorical variables and means to describe factors measured with continuous variables. The research team treated item-specific nonresponse—including invalid responses or outliers—as missing data. Tables B.4 to B.8 provide data tables created from the PTS for this report. Numbers in *italics* identify cells in which fewer than 75 percent of students had recorded information. The tables include all students in the PTS during the specified time, regardless of length of participation in the YCC program: some students had participated in the YCC program for a short time; others may have participated for about four years. A student's grade is based on the grade at enrollment and standard academic progress. For example, a student who enrolled in the YCC program in grade 10 in the 2014–2015 school year is considered a student in grade 11 in 2015–2016, and in grade 12 in 2016–2017. The all grades column of the table includes those in grades 13 or higher, even though the table does not explicitly report information for those students.

[1] The system manual that provides information contained in the PTS can be found at https://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201805-1291-001.

Table B.4. Leaving the YCC program, 2016 and 2018

	Spring 2016					Spring 2018				
	Grade					Grade				
	9	10	11	12	All grades	9	10	11	12	All grades
Percentage leaving YCC	13.9	16.9	13.9	59.5	21.7	5.5	7.6	15.4	45.9	35.9
If left YCC, reason left										
Completed YCC	0	0.7	4.1	60.9	25.8	5.6	2.4	4.1	53.8	54.9
Dropped out of YCC but remain in high school	29.2	43.1	43.6	18.9	30.8	20.6	28.8	24.8	18.5	17.5
Dropped out of YCC program and high school	1.6	4.6	12.2	1.9	4.2	2.4	1.3	2.7	2.6	2.5
Other reason	68.8	50.7	38.6	18.0	38.4	69.0	66.5	67.1	24.6	24.7
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**	**2,295**	**5,002**	**6,965**	**6,996**	**27,188**

[a]Reasons for leaving the program are shown only if they apply to at least 5 percent of participants. The PTS contains no other information to categorize "other" reasons. Predetermined categories include institutionalized, health/medical, deceased, family care, reserve forces called to active duty, relocated to mandated residential program, dropped out of YCC but remained in high school, dropped out of both YCC and high school, successfully completed YCC, and other.

Table B.5. Career focus areas of YCC students

Career focus	Spring 2016 Grade 9	Grade 10	Grade 11	Grade 12	All grades	Spring 2018 Grade 9	Grade 10	Grade 11	Grade 12	All grades
Percentage with the following industrial focus[a]										
Health care and social assistance	15.5	21.0	34.2	25.1	23.5	16.7	19.7	24.2	24.5	24.0
Professional, scientific, and technical services	15.0	21.3	22.7	22.3	20.1	17.4	17.4	17.6	20.9	19.2
Information technology	10.2	11.6	8.5	8.0	9.9	12.5	11.4	10.2	10.9	10.5
Manufacturing	8.1	7.2	9.2	11.5	8.6	6.8	10.2	9.4	9.3	9.3
Management of companies and enterprises	6.9	3.3	0.1	0.1	3.0	10.5	6.5	4.6	3.5	4.2
Other services (except public administration)	14.3	6.9	5.1	0.3	7.5	5.1	14.3	10.3	5.2	7.9
Unclassified	4.7	11.5	6.7	25.7	10.5	3.0	3.8	4.3	8.0	7.2
Percentage with the following occupational focus[b]										
Architecture and engineering	27.6	25.0	12.2	12.0	20.5	25.8	26.6	20.8	18.3	19.6
Computer and mathematical	15.9	15.5	11.7	19.2	15.2	16.4	17.1	16.0	14.8	15.5
Health care practitioners and technical	11.8	12.6	16.1	15.6	13.8	13.6	11.4	13.4	12.9	13.1
Health care support	5.7	6.3	9.7	4.3	6.7	4.9	6.3	6.1	6.5	6.4
Business and financial operations	11.0	4.5	1.0	1.9	5.0	6.0	5.5	7.0	5.1	5.0
Student has not chosen	9.5	8.7	7.5	11.0	8.9	3.5	3.5	6.4	6.3	6.3
Percentage expecting an industry or occupational credential[c]	5.1	10.8	11.1	14.9	9.9	4.2	3.1	5.7	10.0	7.8
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**	**2,295**	**5,002**	**6,965**	**6,996**	**27,188**

[a]Industries are designated by using the North American Industry Classification System codes. We report industry at the one-digit level and at the two-digit level when more than 5 percent select the industry. Numbers do not add up to 100 percent because schools could report career focus for industry and/or occupation.

[b]Occupations are designated by using codes from the Occupational Information Network. We report occupation at the one-digit level and at the two-digit level when more than 5 percent select the industry. Numbers do not add up to 100 percent because schools could report career focus for industry and/or occupation.

[c]Expecting an industry or occupational credential reflects whether the student has an industry or occupational focus that is expected to result in an industry-recognized credential during YCC participation.

Table B.6. Participation in industry-specific courses

	Spring 2016					Spring 2018				
	Grade					Grade				
	9	10	11	12	All grades	9	10	11	12	All grades
Percentage taking industry-specific courses	62.9	68.5	77.1	78.1	70.7	66.6	77.3	76.6	78.8	77.3
If took industry-specific courses enrollment restrictions (percentage)										
Course open only to YCC students	81.4	85.1	54.1	39.7	65.8	83.4	75.4	72.6	69.4	64.6
Course open to non-YCC students	18.6	14.9	45.9	60.3	34.2	16.6	24.6	27.4	30.6	35.4
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**	**2,295**	**5,002**	**6,965**	**6,996**	**27,188**

Table B.7. Work-based learning activities

	Spring 2016					Spring 2018				
	Grade					Grade				
	9	10	11	12	All grades	9	10	11	12	All grades
Employer service provided (in a school setting including career fairs, career exploration talks, and mock interviews)										
Percentage with a service an employer provided	25.6	39.9	45.5	39.3	37.4	40.3	29.9	35	39.8	37.9
If employer-provided service:										
Average number of quarters employer service provided	2.0	2.6	2.5	2.5	2.4	1.5	1.9	2.2	2.8	2.3
Average months in YCC before first employer service	6.5	9.5	10.5	9.9	9.5	3.1	8.7	11.6	18.7	13.4
Mentoring[a]										
Percentage receiving mentoring services	25.7	33.8	28.8	27.8	29.5	25.8	33.3	34.3	37.0	33.5
If received:										
Average number of quarters	1.9	2.3	2.0	1.9	2.1	1.6	2.3	2.7	3.1	2.6
Average months in YCC before first service	8.2	12.5	10.8	10.5	10.8	3.9	7.9	11.6	13.2	10.8
Internships										
Percentage participating in internships	1.8	9.3	21.9	33.4	14.1	1.1	4.1	10.8	26.5	17.5
If participated in internships, percentage with:										
More than one internship	7.9	14.0	25.2	23.2	21.5	3.8	13.2	26.8	31.5	31.0
A paid internship	61.9	35.4	35.6	61.1	45.5	19.2	44.1	41.9	39.2	42.6
An unpaid internship	39.7	66.7	67.3	41.0	57.0	80.8	57.4	61.9	64.9	61.1
An internship with an employer partner	44.4	46.3	47.7	62.5	52.5	38.5	53.4	47.5	47.8	52.4
An internship in student's chosen field/industry	38.1	53.2	64.0	72.5	63.8	96.2	57.8	52.1	62.0	62.5
An internship in student's occupation focus	28.6	27.0	15.6	14.1	17.9	50.0	19.6	17.2	15.4	14.9
Percentage completed an internship	98.4	93.4	88.2	96.3	92.5	88.5	87.7	96.2	95.9	96.6
Average number of quarters participated in an internship	1.0	1.1	1.2	1.2	1.2	1.5	1.4	1.8	1.8	1.7
Average months in YCC before first internship	9.6	14.0	12.0	12.4	12.5	6.0	11.0	13.9	18.3	15.5
Work experience other than internship (job shadowing, exposure to various aspects of an industry, and other exposures to the world of work)										
Percentage receiving experience	41.4	53.8	53.3	54.4	50.4	42.0	48.7	52.7	58.5	53.8
If received work experience:										
Average number of quarters received work experience	1.8	2.0	1.8	1.9	1.9	1.8	2.0	2.3	2.6	2.2
Average months in YCC before first work experience	4.9	7.3	7.5	7.3	6.8	3.2	6.1	7.6	8.9	7.6
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**	**2,295**	**5,002**	**6,965**	**6,996**	**27,188**

[a]Mentoring includes one-on-one, group, and/or service-based mentoring in which students are matched with adults.

Table B.8. Counseling and support services received

	Spring 2016 year					Spring 2018				
	Grade					Grade				
	9	10	11	12	All grades	9	10	11	12	All grades
Percentage of participants completing initial IDPs[a]	*25.3*	*41.8*	*55.7*	*59.4*	*43.5*	*41.5*	*39.9*	*42.1*	*59.3*	*50.1*
Percentage of participants completing FAFSA (free application for federal student aid)	*0.0*	*0.2*	*15.5*	*31.4*	*8.7*	*0.1*	*0.1*	*0.3*	*23.4*	*13.7*
Career/academic counseling										
Percentage of participants receiving career/academic counseling	79.7	86.0	86.4	85.8	84.4	82.4	66.7	80.4	87.1	80.7
If received career/academic counseling:										
Average number of quarters	2.7	4.0	4.4	4.2	3.8	2.1	3.2	4.0	5.2	4.3
Average months in YCC before first service	3.6	4.7	3.3	4.1	3.9	2.6	3.0	3.0	4.1	3.5
Support services[b]										
Percentage of participants receiving support services	31.1	36.4	36.5	37.9	35.2	39.7	36.6	45.7	51.5	44.7
If received support services:										
Average number of quarters	1.9	1.9	2.1	2.3	2.0	1.7	1.9	2.2	2.3	2.2
Average months in YCC before first service	3.7	8.2	8.8	8.2	7.3	2.4	7.5	7.5	11.3	8.9
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**	**2,295**	**5,002**	**6,965**	**6,996**	**27,188**

[a]An IDP is an Individual Development Plan that addresses postsecondary preparation, such as completion of the FAFSA or continued education/training, employment, or both.

[b]Support services include assistance with transportation, assistance with child care and dependent care, assistance with housing, referrals to medical services, and assistance with uniforms or other appropriate work attire and work-related tools, including items such as eyeglasses and protective eye gear.

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