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REPORT

FINAL REPORT

Youth CareerConnect: Early Implementation Findings

October 24, 2017

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Submitted to:
U.S. Department of Labor
Employment and Training Administration and
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Washington, DC 20210
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Contract Number: DOLQ121A21886/DOL-ETA-14-U-00014

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ABSTRACT

In 2014, the U.S. Department of Labor (DOL) created the Youth CareerConnect (YCC) program, a high school–based program aimed at improving the college and career readiness of young adults. DOL awarded $107 million in four-year grants to 24 applicants that planned to bring together a group of community partners—including local education agencies, institutions of higher education, employers, the workforce development system, and support service organizations—to tailor YCC to their local employment market. YCC was designed to include a career focus in a high-growth H-1B industry, employer partnerships and engagement, integrated academic and career curricula, work-based learning and exposure to the world of work, individualized career and academic counseling, small learning communities, and professional development.

The purpose of this report is to explore implementation of YCC about two years after funding began. The report draws information from five sources: (1) a grantee survey describing YCC as it was implemented in one of its schools, (2) grantees' quarterly progress report narratives, (3) visits to 10 grantees, (4) YCC's Participant Tracking System, and (5) a survey of parents and students in YCC in 8 of the grantees visited. Through descriptive analysis of these data sources, the report addresses five research questions:

1. What types of students does YCC serve?
2. What program components are being implemented?
3. What distinguishes YCC from other programs?
4. What challenges do grantees face in implementing YCC, and how do they overcome those challenges?
5. How do grantees plan to sustain the program beyond the grant period?

Results from this implementation study suggest that YCC programs serve a diverse group of students. The grantees were spread throughout the continental United States and Puerto Rico and offered programs in 131 high schools across 75 school districts. YCC participants were racially and ethnically diverse (44 percent Hispanic, 22 percent black, 52 percent white), nearly half qualified for free or reduced-price lunch, and slightly more than half were male (56 percent).

The research suggests that grantees implemented activities and services in each of the three main program components: preparing students for both college and career, connecting students to career-track employment, and offering academic and nonacademic supports. Grantees actively integrated partners, especially employers, into YCC and used work-based learning activities, small learning communities, and students' Individual Development Plans to distinguish YCC from other programs. Some grantees faced challenges in launching the more intensive work-based learning activities—particularly mentoring and internships—that require considerable advanced planning and coordination with employers and other partners. Because such activities are often offered in the later high school years, future research will be able to assess if they become more readily available as a greater number of YCC students become eligible for them.

These results suggest grantees were successful in the early stages of structuring their programs and implementing services in all of the key program areas, laying the foundation for more fully implementing YCC programs over the rest of the grant period. Future products from the implementation study will provide updated findings and identify implementation practices that appear promising for scaling and replication. Findings from the implementation study will also be used to interpret results of a study that will estimate the impact of YCC on interim student outcomes and determine if impacts vary by student subgroups, based on student characteristics and program experiences.

ACKNOWLEDGMENTS

The authors acknowledge several people who contributed to and supported the research. At DOL, Chief Evaluation Officer Molly Irwin and Gloria Salas-Kos in the Employment and Training Administration provided advice and steadfast support that greatly enhanced our ability to execute the study. We appreciate their thoughtful insights into the program and their comments on the data collection instruments. In addition, Jessica Lohmann, Evan Rosenberg, and Gloria Salas-Kos provided comments on the draft report. Dr. David Stern at the University of California, Berkeley, provided guidance and comments throughout the study's development, including comments on a draft of this report. Carolyn Heinrich (Vanderbilt University), Susan Katzman (National Career Academy Coalition), James Kemple (New York University), and Richard Murnane (Harvard University), our technical working group, helped shape the research and provided guidance and comments during the study's development. Kate Dunham and Christian Geckeler (Social Policy Research Associates) and Erin Dillon, Alicia Leonard, and Lisbeth Goble (Mathematica) visited grantees and collected the site visit information used in the report. At Mathematica, Peter Schochet provided intellectual leadership, guidance, and input during all aspects of the study and provided feedback on a draft of the report. Linda Rosenberg reviewed the report and provided comments that enhanced its quality, and Lisbeth Goble led the efforts to develop and field the grantee survey. Alicia Leonard helped ensure the coordination of all data collection efforts, and Malik Mubeen provided outstanding programming assistance. Sheena Flowers helped prepare this report, and Carol Soble provided editorial assistance.

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TABLES

FIGURES

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LIST OF ACRONYMS

AJC	American Job Center
BIF	Baseline Information Form
CTE	career and technical education
DOL	U.S. Department of Labor
FAFSA	Free Application for Federal Student Aid
IDP	Individual Development Plan
IHE	institution of higher education
LWDB	local workforce development board
PBL	project-based learning
PLTW	Project Lead the Way
PTS	Participant Tracking System
QPR	quarterly progress report
ROP	regional occupational program
SLC	small learning community
STEM	science, technology, engineering, and mathematics
WBL	work-based learning
WDB	workforce development board
WIOA	Workforce Innovation and Opportunity Act
YCC	Youth CareerConnect

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EXECUTIVE SUMMARY

In April 2014, the U.S. Department of Labor (DOL) awarded $107 million in four-year grants to 24 applicants to implement Youth CareerConnect (YCC), a high school–based program that blends academic and career-focused learning and aims to prepare students for both college and careers. Grants ranged from $2.25 to $7 million and were designed to integrate public school systems with employers, institutions of higher education, the workforce development system, and community partners with the goal of ensuring that students acquire needed academic and workplace skills in high school. YCC grants were awarded to help prepare students for job openings in industries such as health care, advanced manufacturing, and financial services that rely often on the H-1B visa program to hire foreign workers when skilled domestic workers are not available. DOL uses the fees that companies pay for each worker hired under the H-1B program to establish grant programs such as YCC to fund job training and education for U.S. citizens to upgrade their skills.

Required YCC program elements include the following:

- **A career focus** in selected high-growth H-1B industries or occupations in the local labor market
- **An integrated academic and career-focused curriculum** aligned with the state's college and career-readiness standards and students' chosen career focus that allows students to follow a pathway to an industry-recognized credential, including a postsecondary degree
- **Strong partnerships and engagement with employers** aimed at ensuring that students complete YCC with an industry-recognized credential, and the skills needed for work
- **Work-based learning (WBL)** and exposure to the world of work for hands-on career development experiences that connect classroom instruction to work and career opportunities
- **Individualized career and academic counseling** that includes developing and regularly updating an Individual Development Plan (IDP) that addresses postsecondary preparation and career objectives
- **A small learning community** that provides students with needed supports
- **Professional development** to provide teachers and other professional staff with the knowledge and skills needed to develop the core curricula and support services that can guide students to a career in the chosen career focus area

The DOL's Employment and Training Administration, in collaboration with the Chief Evaluation Office, contracted with Mathematica Policy Research and its subcontractors Social Policy Research Associates and University of California, Berkeley, to conduct the YCC evaluation, including both impact and implementation studies. In this report, we provide the findings from the evaluation's implementation study through the 2015–2016 school year, after two years of YCC funding. Although a complete picture of implementation is not possible until grantees have time to implement the program fully, this analysis of early program implementation identifies grantees' early successes and challenges. Findings from the impact study will be released at the end of the project in 2019.

A. Grantees and their students

Successful applicants for YCC funds were diverse in terms of the type of organization funded, location, and program structure. The 24 YCC grantees had the following attributes:

- **They were most often education organizations.** Seventeen of the 24 grantees were local education organizations. Of the remaining 7 grantees, 4 were nonprofit organizations, 2 were workforce development boards (WDBs), and 1 was a workforce entity.
- **They had a wide reach.** The grantees offered YCC across 131 high schools in 75 school districts, four regional occupational programs (ROPs), and seven community colleges (excluding dual enrollment). Most (17 of the 24) grantees implemented YCC in only one district, but 2 had a broad reach and planned to implement YCC in at least 17 districts.
- **They were geographically diverse.** The grantees were located in 18 states and Puerto Rico and included a mix of rural, town, suburban, and city school districts.
- **They often had a career focus area** in health and science, technology, engineering, or mathematics fields, which aligns with the most common H-1B industries and occupations.

YCC encouraged grantees to enroll students from across their student populations. By June 2016, grantees had enrolled 14,249 students. Almost half (47 percent) enrolled in YCC in grade 9, although students also started in grades 10 (24 percent) and 11 (29 percent). A slightly larger percentage of enrollees were male (56 percent) than female. Students were racially and ethnically diverse (44 percent Hispanic, 22 percent black, and 52 percent white), with 43 percent qualifying for free or reduced-price lunch. A small percentage had special needs: 7 percent had a disability, and 9 percent were English-language learners.

B. Approach to describing early program implementation

The design and implementation of YCC is organized around three major program components:

1. **Preparing students for both college and career** by offering an integrated academic and career-related curriculum and providing postsecondary education supports to enable students to pursue education along with work-readiness training to build the soft skills needed to ensure students' readiness for work

6. **Connecting students with career-track employment** by providing interaction with employers who discuss workplace opportunities with students at school and offer on-site exposure to the workplace

7. **Academic and nonacademic supports** that promote student success through a small learning community; individualized counseling, including an IDP; and other personalized supports

The YCC evaluation examined early implementation of these program components by weaving together information from five sources: (1) a survey of grantees fielded in summer 2015 and completed by each grantee for its school with the largest YCC enrollment in the earliest starting grade (typically grade 9); (2) quarterly progress report narratives that all grantees submitted to DOL; (3) participant data from 23 grantees as recorded in the Participant Tracking

System through the 2015–2016 school year; (4) two-day site visits in late 2015 through early 2016 to 10 grantees' selected schools; and (5) baseline information forms from a sample of students (and their parents) who started YCC in fall 2016 at 8 of the grantees visited. Even though these complementary data sources allow us to examine information from different time points and different samples, we urge caution in interpreting results because information from any source is not representative of all schools or all students enrolled in them.

C. Early implementation

During the first two years of funding, YCC grantees reported focusing on integrating program elements into existing district and school structures. The complexity of the task depended on the extent to which elements were already in place. For example, schools with counseling programs that included career planning services found it relatively easy to build on existing counseling structures as they developed their YCC career and academic counseling. In contrast, schools without existing structures for sponsoring internships found it challenging to develop partnerships and processes that supported internship programs.

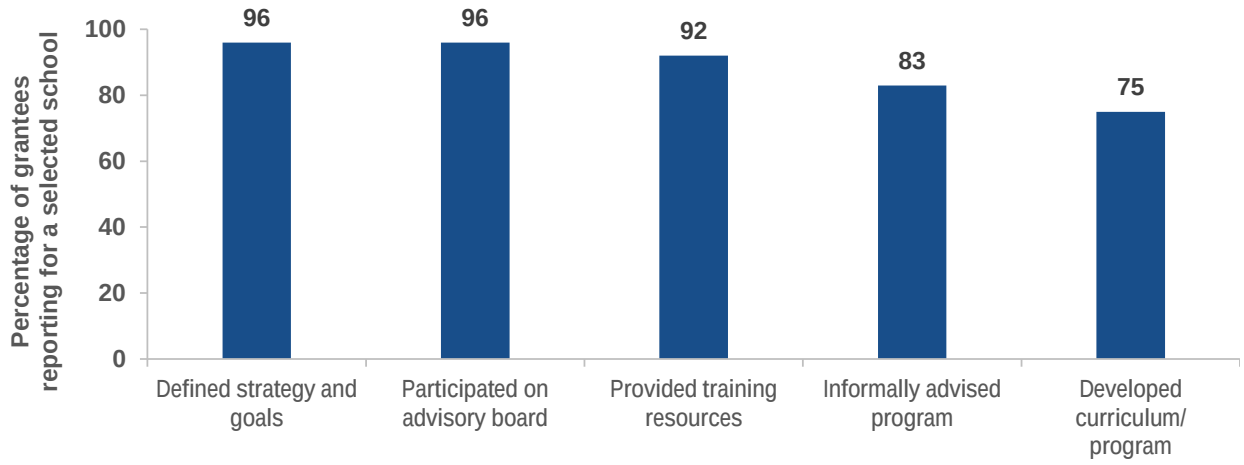
1. Initial implementation steps

Grantees' initial implementation steps included forming partnerships to help build and expand YCC and recruiting students to enroll in the program.

Community partnerships. Community organizations, especially employers, were reported to be integral to YCC. In the initial years of funding, partners participated in planning and designing the program, agreed to become involved in YCC, and contributed various types of resources. Although the nature of partnerships varied across grantees, several commonalities emerged:

- **Key partnerships began early, but some were still developing by the second year.** All grantees had identified partnerships with institutions of higher education (IHEs) and employers in their grant application, with 15 (of 24) grantees identifying more than one IHE partner and 23 identifying more than one employer partner. By the first year of funding, all grantees had developed partnerships, and about three-quarters received in-kind and direct financial assistance from their partners. In the first year, most grantees reported that they had created partnerships with employers, IHEs, local workforce development boards and American Job Centers, and other entities, although grantees were still developing many of these partnerships, especially with IHEs and local workforce agencies.
- **Employer partners played particularly important planning and leadership roles.** Employer partners often helped shape program strategy, participated on advisory boards, advised the program about the industry, and helped design the YCC curriculum (Figure ES.1). In addition, they provided workforce preparation activities for students by hosting field trips, delivering presentations at school, and offering opportunities for job shadowing. YCC staff's competing priorities and employers' unwillingness or inability to commit more time to YCC constrained efforts to sustain employer relationships and participation in YCC activities, such as mentoring and internships.

Figure ES.1. Employer participation in planning and development



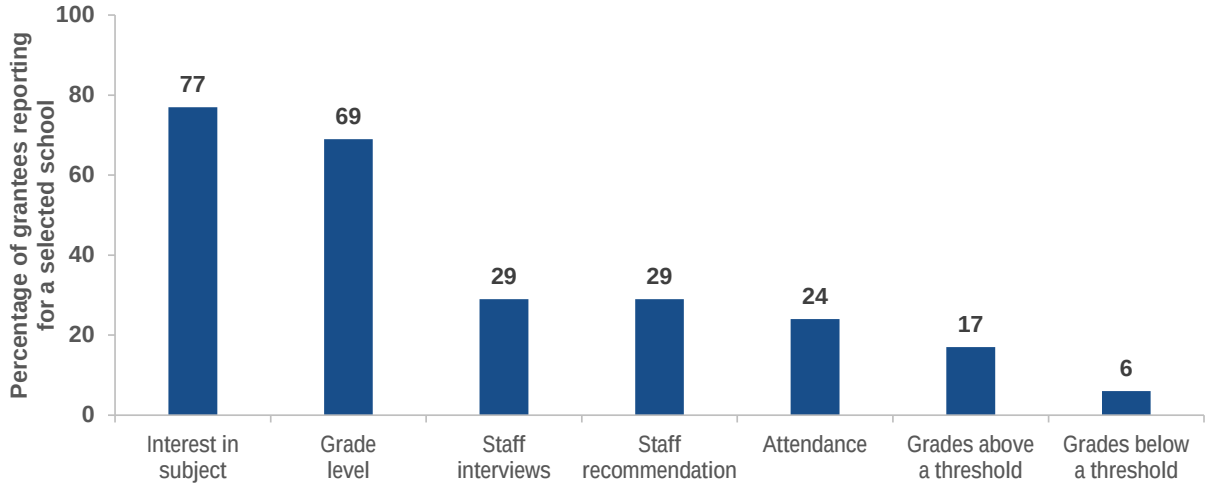
Source: Grantee survey 2015, Appendix D, Table D.8.

Note: The figure shows the percentage of grantees reporting employer involvement with YCC in a selected school.

Student recruitment and enrollment. Counselors generally recruited students into YCC and were responsible for distributing and collecting application materials. Although they used a variety of methods to recruit students—including self-referrals or word-of-mouth, flyers posted in high schools, community outreach, and school assemblies—counselors were sometimes hindered by district policies that governed recruiting and school assignment. On occasion, districts limited the amount and type of outreach conducted by YCC because district-determined factors (for example, a lottery based on student ranking of programs) or a student's place of residence determined program assignment. One district considered outreach unfair in light of other programs' inability to do the same and therefore did not permit YCC-specific outreach.

Once they recruited students, schools had to determine which students were eligible to participate in YCC. Most said they used a formal application process to determine eligibility and relied on a variety of criteria to select students for YCC (Figure ES.2). Over two-thirds considered interest and the student's grade level, and nearly 25 percent examined students' attendance records (either strong or weak) or grades (above or below a threshold). Other eligibility requirements included residence in the eligible school zone and completion of an introductory seminar or orientation. The one-third of schools that did not use a formal application process often enrolled students by basing recruitment on existing information about students in order to identify students who would be a good fit for YCC (for example, academically high-achieving and engaged students or students interested in the career focus).

Figure ES.2. Factors in YCC admission decisions



Source: Grantee survey 2015, Appendix D, Table D.9.

Note: The figure shows the percentage of schools in the grantee survey that used a formal application process for YCC and reported use of each factor in that process.

Successfully recruiting and accepting students into YCC might not, however, ensure students' enrollment. Course scheduling, for example, could interfere with YCC enrollment. Sometimes an honors-level course or other electives (for example, band or science club) that were offered at limited times interfered with students' ability to fit YCC into their schedules, leaving interested students unable to enroll in YCC.

2. Implementation of YCC program components

Some grantees did not fully implement YCC activities and services during the first two years of funding, either due to implementation challenges or because the planned structure of their programs called for implementing more-intensive services (such as mentoring and internships) in the third year of the grant. Nonetheless, our research suggests that grantees implemented activities and services in each of the three main program components: preparing students for both college and career, connecting students to career-track employment, and offering academic and nonacademic supports.

a. Preparing students for both college and career

Grantees used their career foci to help build both academic and career-related skills in two ways: they structured academic and career-related classes to complement each other, and they relied on specialized curricula or educational approaches that blended academic and career-related content across courses (Table ES.1).

- **Complementary academic and career-related courses** (1) integrated a career theme across all years, (2) used career courses to teach academic skills and academic courses to show students how academic subjects relate to a career theme, and (3) sequenced career courses to build technical skills, for example by preparing students for an industry-recognized credential and certification examinations.

- **Blended curricula or instruction** included specialized curricula or educational approaches that developed projects that applied skills from several courses. Such approaches included project-based learning, Project Lead the Way (a commercially available, integrated academic and career curriculum), and collaborative teaching.

Table ES.1. Two main approaches to integrating coursework

Approach to integrating coursework	Percentage of grantees using the approach
Complementary academic and career courses	
Integrated distinctive career theme across all grades	100
Relied on career classes to teach academic skills	100
Sequenced career courses to build technical skills	100
Demonstrated relationship between courses and professions	96
Related examples in academic courses to career theme	85
Offered courses leading to industry-recognized credential	74
Prepared students for certification examinations	61
Blended curricula or instruction	
Used project-based learning	96
Developed projects that apply skills from several courses	95
Used a capstone courses to synthesize knowledge	38

Source: Grantee survey 2015, Appendix D, Tables D.16 and D.17.

Note: The table shows the percentage of grantees agreeing that their YCC curriculum exhibited these characteristics for a selected school.

Grantees provided postsecondary supports that aimed to build students' awareness of and ability to enroll in postsecondary education and work-readiness training by fostering good work habits, appropriate traits and attitudes, social skills, communication abilities, and competencies.

- **Postsecondary supports** included credit accumulation and the goal of increased student awareness of postsecondary opportunities. College tours, classroom speakers, and informal/formal college-readiness support provided by college staff were intended to increase students' awareness of college and motivate students to earn college credit either in high school or through dual enrollment.
- **Work-readiness training** included training in workplace behavioral expectations, such as attendance, punctuality, and appropriate dress; workplace culture and communication, such as effective verbal and nonverbal communication and accepting feedback constructively; and workplace performance expectations, such as collaboration and problem-solving skills.

b. Connecting students to career-track employment

Activities in this program component required employers to participate in the program both in school and at the workplace.

- **School-based activities.** Grantees delivered technical classes in ways that connected students with employers as part of the school's preexisting career and technical education program, as part of the newly established YCC pathway, or through a local community college or other education partner. YCC staff coordinated such activities with a particular focus on guest speakers and employer mentoring. Guest speakers described their workplaces and careers to YCC students—mostly freshmen and sophomores—to help improve their understanding of the world of work and occupations. Even though some grantees did not offer mentoring during early implementation, those providing mentorship opportunities engaged mentors in activities that generally took place at school (for example, reviewing student résumés and providing advice about available job types, applying for jobs, and applying to and paying for college).
- **Work-based activities.** Activities at the workplace that connected students with career-track employment generally fell into three categories: job shadowing, worksite tours/field trips, and internships. Worksite tours/field trips and job shadowing were more common than internships.

c. Offering academic and nonacademic supports

YCC students received additional support services, most notably in the form of small learning communities and counseling based on an IDP framework.

- **Small learning communities (SLCs).** Grantees used several structures to create small learning communities for YCC students and teachers (Table ES.2). SLCs were often organized around a career theme, such as health care. Most schools operated as a school within a school, directed teachers to work with a specific group of students, offered teachers common planning time, and required students to take courses in cohorts.

Table ES.2. Small learning community features

Small learning community feature	Percentage of grantees offering the feature
Organization of space	
School within a school	67
Separate physical space	42
Stand-alone small school	4
Student and teacher schedules	
Teachers work with a specific group of students	78
Teachers have a common planning period	67
Students take classes in cohorts	52

Source: Grantee survey 2015, Appendix D, Table D.25.

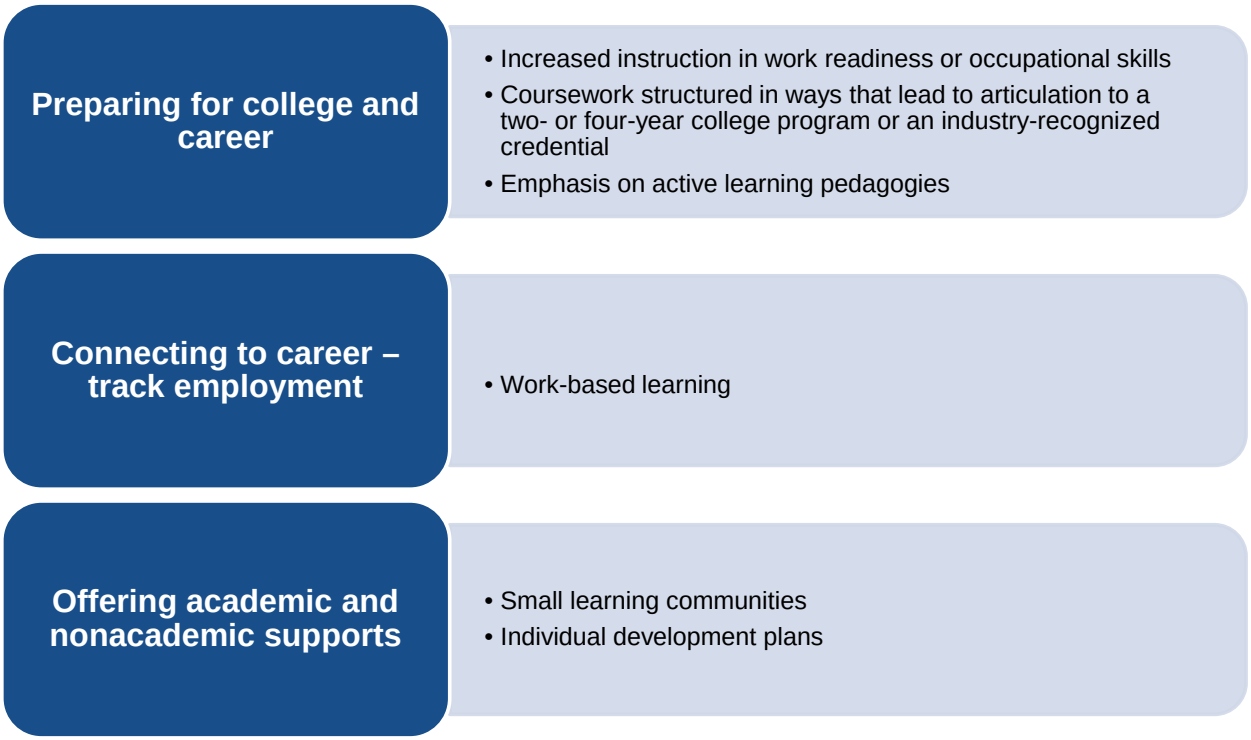
Notes: The table shows the percentage of grantees that build SLC structures at a selected school. More than one approach may be reported.

- **IDPs.** Through the development of IDPs and other interactions with students, counselors reported gaining insight into students' personal challenges and often helped target support services to specific students (for example, mental health services, access to tutoring, and food pantries). Although grantees were required to develop IDPs describing how students planned to achieve their academic and career goals, site visits suggested that not all grantees used an IDP, even if they generally followed the IDP framework when counseling students.

3. Unique YCC opportunities

Some of the YCC activities and services implemented by grantees in the first two years of the grant period were unique to YCC programs; others were more broadly available to students outside YCC. Despite variation across grantees in the extent to which opportunities were available inside and outside YCC programs, Figure ES.3 presents the key activities and services that tended to be unique to YCC.

Figure ES.3. Activities and services that distinguish YCC



Source: Authors' analysis of evaluation data.

- **Preparing students for both college and career.** Many of the activities and services that distinguished YCC from other programs were course based, including offering YCC students instruction in work-readiness or occupational skills at a rate higher than that offered to students outside YCC. In addition, YCC students' coursework might be structured to lead to articulation to a two- or four-year college program or an industry-recognized credential. Active learning pedagogies such as project-based learning (PBL) were used as a tool toward curriculum integration, although programs outside YCC also used active learning pedagogies.

- **Connecting students with career-track employment.** Grantees offered YCC students both school-based and WBL services at rates much higher than those for non-YCC students in the same schools, potentially with more intensity and industry exposure. In strong contrast to other programs, many YCC grantees arranged for field trips to workplaces, job shadowing, and classroom speakers who described workplaces. In moderate contrast to other programs, YCC also offered paid internships and group mentoring.
- **Offering academic and nonacademic supports.** Grantees offered YCC students a small learning community at a far higher rate than is offered outside YCC. Features such as a school-within-a-school structure and teachers working with a specific group of students demonstrated strong contrast between YCC and other programs. Cohorts of students taking classes together, along with physical space dedicated to YCC students, evidenced moderate contrast between YCC and non-YCC programs. Despite only subtle differences in the supportive services available to YCC students and non-YCC students, modest differences might exist between counseling services for YCC and non-YCC students: grantees did not develop an IDP with non-YCC students, and the range of counseling services was usually more limited and less intensive for non-YCC versus YCC students.

4. Professional development

Grantees were required to provide professional development to ensure staff would have the knowledge and skills needed to implement YCC and to continue providing YCC services after the grant period. Evaluation data suggest that grantees provided their YCC staff, especially teachers, with professional development opportunities in the first two years of the grant. Such opportunities typically covered broad instructional and professional skills that would be transferable across a range of settings and content areas. They most frequently offered opportunities in PBL and for teachers to collaborate with each other or partners. Fewer opportunities were used to discuss how to incorporate the industry focus into the curriculum or trained staff with industry-specific skills and competencies. Professional development efforts were sometimes hindered because grantees could not compel staff to participate and because staff had limited time available and competing demands for their time.

D. Early challenges

Despite early successes, our research identified three challenges that might impinge on a grantee's ability to implement YCC fully:

1. **Services that required considerable planning and coordination with program partners were slow to be implemented.** Coordination with external program partners presented several challenges. Because many YCC activities that require such coordination focus on students in grades 11 and 12, schools have not yet served a substantial number of older students for whom these opportunities are appropriate. For example, staff must work with employer partners to coordinate mentorships and internships, two required activities that were slow to be implemented. Both activities demand a greater commitment from employers than other activities and services and often involve challenges associated with resolving regulatory restrictions and logistical matters. Dual-credit opportunities involve similar difficulties because staff often must navigate complicated bureaucratic and logistical issues between high schools and colleges.

2. **Limited staff capacity impeded programs' efforts to implement activities and services.** YCC staff had competing demands and time limitations, which made it challenging to collaborate and deliver program components. Counselors, for example, often wore multiple hats, including WBL coordinator. Teachers described facing similar challenges as they struggled to find time for collaboration, planning, and developing innovative coursework. Although YCC hired additional staff to attenuate these time limitations, growth in programs offset these additional resources and left staff strapped for time.

3. **The rigor and challenge of YCC courses left some students struggling** and caused them to question their commitment to stay in the program. YCC coursework was often more challenging than other course options, as it included standard classes required for high school graduation as well as other YCC-specific courses, such as integrated science and technology courses, courses for college credit, and dual-enrollment classes. Grantees dealt with this challenge in different ways. Some developed enrollment criteria that helped ensure that students could successfully complete YCC, and at least one created two levels of YCC courses, with one geared specifically toward honors-level students.

E. Future reports

The YCC evaluation will ultimately provide a comprehensive picture of YCC implementation and how YCC affects behaviors in high school that have been shown to be associated with longer-term increases in employment and earnings. This early glimpse of implementation provides the groundwork for future reports that will explore the continued development and sustainability of partnerships, particularly those with employers; the provision of more robust WBL activities and mentoring; the general plans grantees have for sustaining YCC after DOL funding ends; and impacts on participant outcomes.

I. INTRODUCTION

Youth face difficulties in finding employment. In April 2017, when unemployment was 4.4 percent, youth aged 16 to 17—ages when many are still in school—faced unemployment of 16.8 percent (Bureau of Labor Statistics 2017). School leaving, work experience, and emerging workplace skills reduce unemployment for some portion of these young adults (rates fall to 12.5 for youth 18 to 19 and 7.3 for those 20 to 24), but some portion might face lifelong struggles after entering the labor market without needed skills. High school dropouts are especially vulnerable, as the unemployment rate for high school dropouts age 20 to 24 was approximately 20 percent in 2015, compared to just 5 percent for those with a bachelor's degree or higher (Kena et al. 2016). Dropping out of high school dropout is, unfortunately, not uncommon with about 7 percent of youth age 16 to 24 in 2014 neither enrolled in school nor having a high school diploma or an equivalency credential. Blacks and Hispanics evidence higher dropout rates (Snyder et al. 2016).

Although the employment outlook is more favorable for high school graduates, a high school diploma no longer translates into college and career readiness. In 2014, only 26 percent of high school graduates met college-readiness benchmarks in four areas—English, reading, mathematics, and science—even though 86 percent aspired to attain at least a two-year postsecondary or vocational degree (ACT 2014). The low level of college readiness among high school graduates calls into question the ability of some youth to acquire the education and skills needed to fulfill current and future jobs and potentially reduce the need for nonimmigrant H-1B visas, which are issued to foreign workers to help fill job openings in some of the fastest-growing sectors of the economy (Ruiz et al. 2012; U.S. Department of State 2011).

In response, the Employment and Training Administration within the U.S. Department of Labor (DOL) created the Youth CareerConnect (YCC) program. DOL's intention was to strengthen college and career readiness by redesigning the high school experience to provide students with challenging, relevant learning opportunities. Through YCC, schools would develop new partnerships with colleges and employers to support instruction, motivating students to develop the skills needed for postsecondary education and employability in high-growth, in-demand occupations and industries. YCC grants were awarded to help students prepare to fill job openings in industries such as health care, advanced manufacturing, and financial services that typically rely on the H-1B visa program to hire high-skilled foreign workers when qualified domestic workers are not available. DOL has used the fees companies pay for each worker hired under the H-1B program to establish grant programs such as YCC to fund job training and education for U.S. citizens to upgrade their skills.

One promising strategy for addressing this issue is to introduce a set of required program components that aim to provide high school students with a rigorous curriculum combining academics and technical training focused on specific in-demand industries while offering options for earning postsecondary credits during high school enrollment and college and career counseling within a small learning community environment. The research literature provides evidence that interventions aligned with this strategy have been successful in engaging students in school and improving educational outcomes (U.S. Department of Education 2016).

In April 2014, the DOL's Employment and Training Administration awarded $107 million in grant funds to 24 grantees across the country for them to implement YCC through September 2018. In collaboration with DOL's Chief Evaluation Office, the Employment and Training Administration contracted with Mathematica Policy Research and its subcontractor Social Policy Research Associates to conduct the YCC evaluation. The rigorous evaluation of YCC will determine whether the program improves performance in high school in ways that might lead to high school graduation, postsecondary education or training, and employment and earnings. In this report, we provide the first glimpse into the findings from the evaluation. We weave together information from five distinct data sources to provide an overview of YCC as implemented by grantees through the 2015–2016 school year, after nearly two years of funding. In the remainder of this chapter, we provide an overview of YCC (Section A), the YCC evaluation (Section B), and the structure of the report (Section C).

A. Youth CareerConnect

YCC grants were structured to strengthen America's talent pipeline. The ultimate goal was to improve employment and earnings after high school by increasing students' ability to complete postsecondary education and occupational skills training, obtain industry-recognized credentials, and secure an unsubsidized job. To meet this goal, the Notice of Availability of Funds and Solicitation for Grant Applications stated that grantees were to implement a common program model (Section A.1) and to do the following: [1]

- Confine the period of performance to 54 months, with a start date of April 1, 2014, including all required implementation and start-up activities. Grantees had a 5-month planning period, with program implementation starting in the fall of the 2014–2015 school year.
- Be receptive to all students, regardless of previous academic achievement, and serve a diverse group of students, including those with disabilities, those from low-income families, and those underrepresented in the chosen career focus area.
- Include two years of high school, such that programs could start no later than grade 11.
- Select a career focus in selected high-growth H-1B industries or occupations that are expected to lead to living wages and benefits that enable workers to achieve economic self-sufficiency in the local labor market.
- Provide a sustained program of professional development and an overall sustainability plan to outline how YCC will continue to build capacity and provide the same level of instruction and support to students after the period of grant funding.

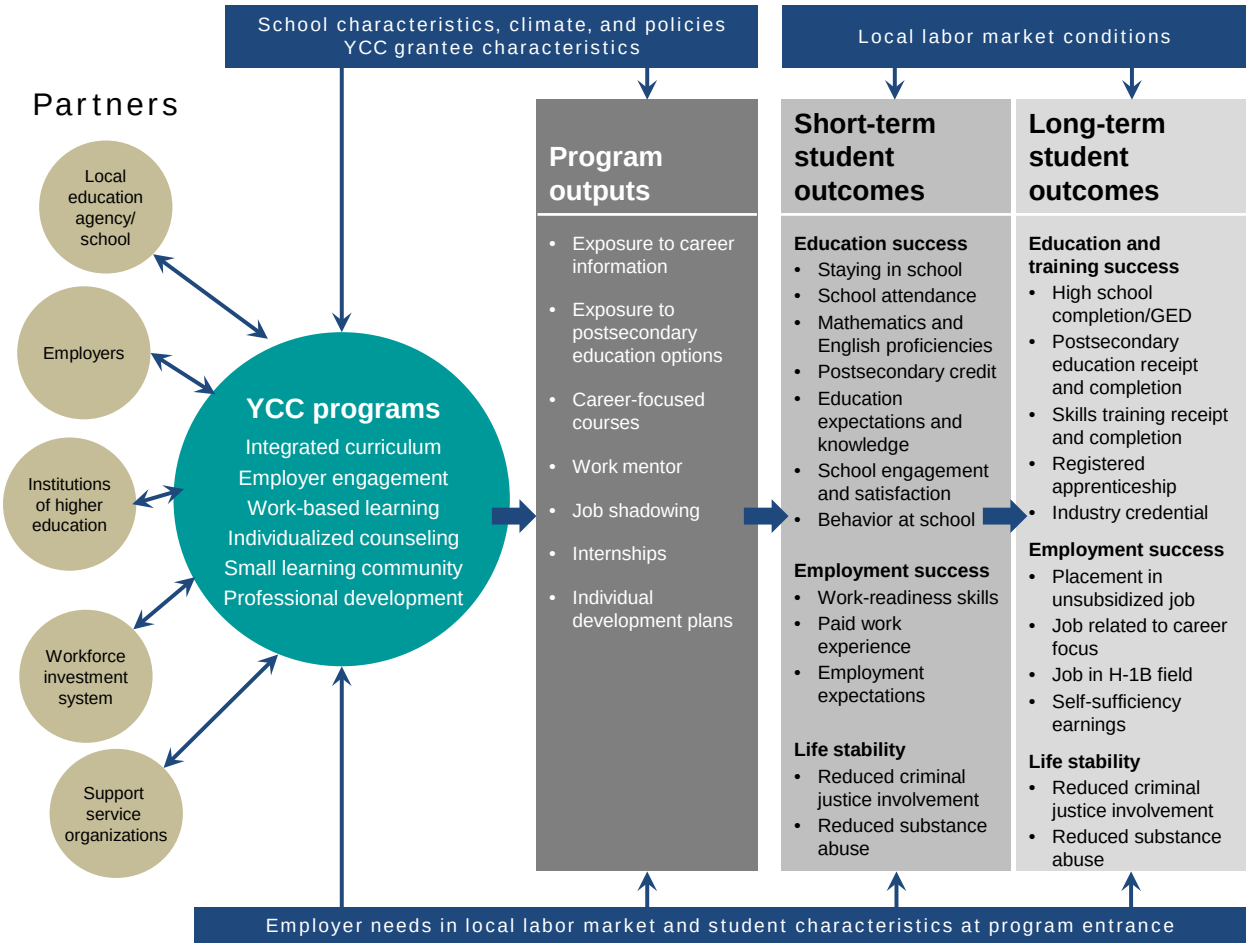
1. Program model

In Figure I.1, we present a model of the YCC program. The Solicitation for Grant Applications defined its key elements, shown in the large circle, as follows:

[1] See https://www.doleta.gov/ycc/pdf/Youth_Career_Connect_SGA_13-01.pdf.

- An **integrated academic- and career-focused curriculum** was to present students with a sequence of integrated college- and career-focused courses. The curriculum would allow students to be placed on a pathway that leads toward an industry-recognized credential, including postsecondary degrees; is organized around one or more career(s); integrates work-readiness skills; is contextualized to illustrate applications in the career field; provides opportunities to participate in interdisciplinary, project-based learning (PBL) activities; and is aligned with the state's college and career-readiness standards.
- **Strong partnerships with and strong engagement by employers** would help develop and sustain the curriculum and activities and ensure that students complete YCC with a high school diploma and an industry-recognized credential and command the skills needed to enter jobs after high school and in the future.

Figure I.1. Model of YCC program



- **Work-based learning (WBL) and exposure to the world of work** would provide hands-on career development experiences to connect classroom instruction to the world of work and future career opportunities in combination with rigorous academic preparation.

- **Individualized career and academic counseling** would build career and postsecondary awareness and opportunities beyond high school. Counseling would include the identification of a student's needs for support services and the formulation of an Individual Development Plan (IDP). The IDP would address postsecondary preparation, employment, or both, and includes career objectives, a program of study, degree or certificate objectives, and work experiences.
- A **small learning community (SLC)** would provide needed supports to students and allow for cross-disciplinary projects. SLCs would contain autonomous groups of students and teachers in a personalized learning environment/unit. Generally, the same teachers and students would remain together from grade to grade. Teachers in these units would usually have common planning time to allow them to develop interdisciplinary projects and keep abreast of the progress of their shared students.
- **Professional development** for teachers and other professional staff would offer a coherent, sustained program of training in the target fields. It would be part of a comprehensive effort to improve teaching and service delivery to support rigorous YCC activities for students and to help realize the expected program outcomes. The goal is to strengthen capacity, skills, and competencies in the chosen career focus and to explore ways to develop and integrate a career-focused core curriculum with the existing academic curriculum.

Partners (on the left of Figure I.1) play a critical role in supporting YCC and individual program elements. Key partners and their designated roles were to include the following:

- The **local education agency**, typically the school district, would provide YCC with instructional and financial support.
- **Employers** would help develop a curriculum that leads to an industry-certified credential; provide mentoring, career exploration through activities such as field trips and classroom presentations, and student internships; and offer professional development opportunities that build teachers' knowledge of various industry sectors.
- **Institutions of higher education (IHEs)** would help ensure that YCC aligns academic content with college-level coursework and offers high school students access to college-level coursework and credits.
- The **workforce development system** would create ties between schools and American Job Centers (AJCs), which increase access to employment services, such as those provided by the Workforce Innovation and Opportunity Act (WIOA). Furthermore, because AJCs have ties to employers, they could expand the depth and breadth of connections to employers and supplement direct career counseling services for youth—services that schools often have had difficulty providing (Kemple 2001; Shapiro 1999).
- Local **nonprofit organizations** could work with schools to help develop workforce skills, coordinate or oversee YCC program elements offered by one or more school districts, or provide additional support services to students. They can also coordinate outreach to students, employers, or the community.

Together, the program elements are expected to provide students with skill-developing opportunities, tools, and services—the *program outputs* in Figure I.1, which in turn show students how what they are studying in school—both in high school and in postsecondary education or training—can help them succeed in the workplace and therefore improve *short-term student outcomes*. As students make connections between skill-building opportunities and their academic studies, the goal is for them to become motivated to perform well in school and come to value the opportunities for pursuing postsecondary credentials that can further enhance their labor market opportunities. The desired result is an increase in the proportion of students who stay in school, attend school daily, attain academic proficiency in postsecondary mathematics and English, expect to continue their education or training after high school, build work-readiness skills, and engage in and demonstrate satisfaction with school. Moreover, short-term successes may mean that fewer students are subject to school disciplinary action, become involved in the criminal justice system, or engage in substance abuse.

These short-term successes are designed to improve *longer-term outcomes* by building students' motivation to succeed in school and the labor market and by providing them with the knowledge and skills to do so. As a result, a greater proportion of high school students will obtain a high school credential, complete postsecondary education, complete occupational skills training, earn industry-recognized credentials, and secure an unsubsidized job.

YCC does not operate in a vacuum, and the *context* in which it operates affects its structure, outputs, and outcomes (boxes along the top and bottom of Figure I.1). Student characteristics influence YCC's implementation design, needed student supports, and student outcomes, whereas school characteristics, climate, and policies can influence YCC's development and its outputs. Finally, the vibrancy of the labor market will mediate student outcomes over both the short term and the long term.

2. Building blocks for the YCC program model

Four models, each with past research showing evidence of success, influenced the structure of YCC.

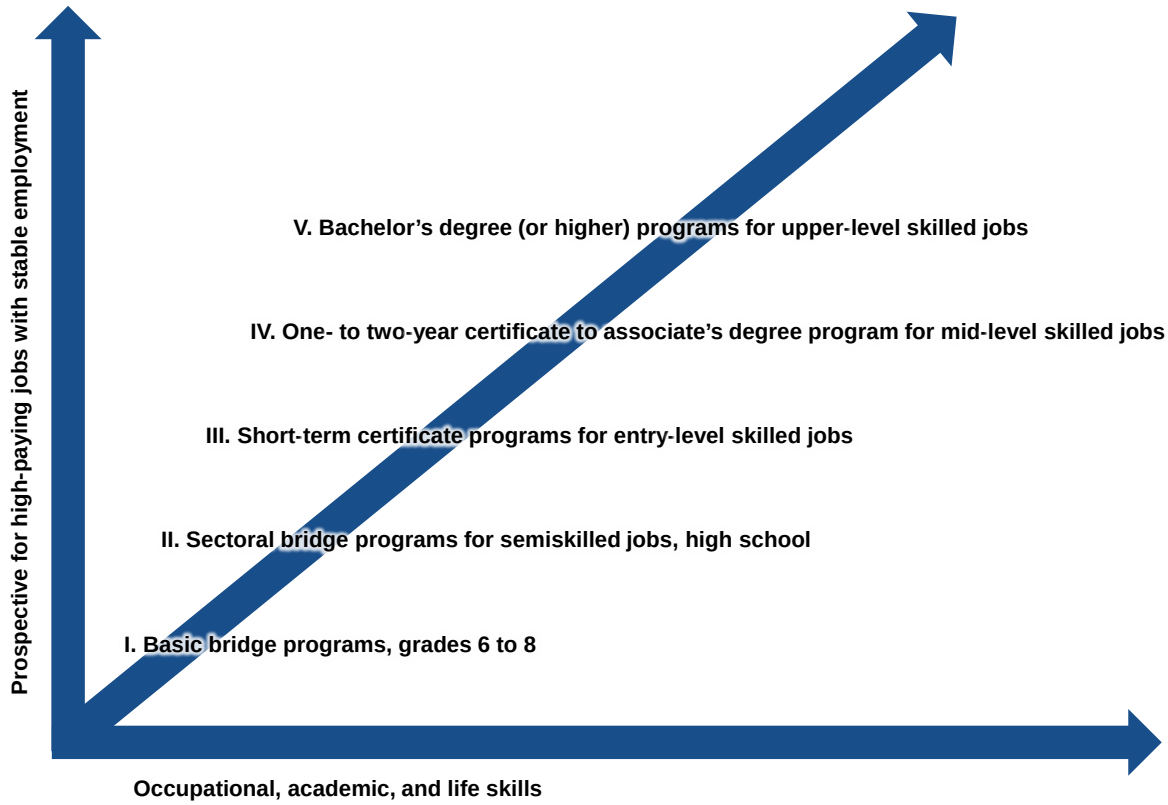
- **Career academy programs** used three core components to help redesign the high school experience in the 1990s (National Career Academy Coalition 2013; Brand 2009; Stern et al. 2010): (1) an SLC that links students and teachers for two to four years, with students taking some classes together each year as a cohort; (2) a college preparatory curriculum based on a career theme that applies academic subjects to labor market contexts and includes WBL; and (3) employer, higher education, and community partners (Stern et al. 1992). Experimental and quasi-experimental evaluations of early career academies found that they improved academic achievement and reduced high school dropout rates for disadvantaged students (Kemple 2008; Kemple and Snipes 2000; Maxwell and Rubin 2000; Stern et al. 2010, 1992), improved preparation for and graduation from college (Maxwell 2001), and increased wages, hours worked, and employment stability (Kemple 2004; Maxwell and Rubin 2002).

- **Sector-based initiatives,** which align occupational training with employer needs (Greenstone and Looney 2011; Maguire et al. 2010; Woolsey and Groves 2010), often within the workforce development system. The initiatives use both labor market statistics and information collected directly from employers to identify the skills needed by

employers. Training providers and employers then work collaboratively to develop the training curricula to meet the needs of specific jobs. Evaluations of sector-based programs have yielded promising findings. An experimental study of three relatively mature, sector-based programs estimated that adult participants earned about $4,500 (18 percent) more over the two years than similar adults who did not participate in the programs (Maguire et al. 2010).

- **Career pathways programs** (Figure I.2) provide an organized series of steps that lead to progressively higher credentials and employment opportunities aligned with jobs in demand in the local labor market (Fein 2012). The first steps on the pathway—where YCC lies—provide the basic and academic skills needed for college-level training and semiskilled jobs.[2] The next step on the pathway sometimes includes training and skills for a short-term certificate needed for entry-level jobs and then sets the stage for continuation along the pathway into associate's or bachelor's degree programs or workplace credentialing (for example, apprenticeships).

Figure I.2. Career pathway model



Source: Adapted from Fein (2012).

[2] Hull (2005) provides a discussion and examples of how the career pathway approach may be applied to secondary programs.

- **College and career readiness standards** set criteria for what students are expected to know and understand for both college and careers by the time they graduate from high school (http://www.corestandards.org/). They include all grades, from kindergarten through grade 12, and help students qualify for and succeed in entry-level, credit-bearing college courses leading to a baccalaureate degree or certificate or to career pathway–oriented training programs without the need for remedial or developmental coursework. The four keys to achieving such readiness require students to gain mastery in the following areas (Conley 2012):

  - **Cogitative strategies** that help students formulate a problem; research and interpret solutions to it; and communicate, monitor, and confirm those solutions
  - **Content knowledge** that provides students with the core and technical knowledge and skills needed to succeed
  - **Learning skills and techniques** that help students take ownership of their learning, and provide them with learning techniques, such as time management and study skills, to help them continue learning
  - **Transition knowledge and skills** that allow students to move successfully into life after high school

3. YCC grantees

In April 2014, DOL awarded grants to 24 applicants to implement YCC over four years (sidebar). The applications' descriptions of implementation of the program elements (Figure I.1) suggested that grantees would adopt a variety of approaches to YCC (Appendix D, Table D.1):

- **Grants ranged from $2.25 to $7 million.** Seven grants were less than $3 million, and six were at least $6 million.
- **The number of students expected to participate in YCC varied.** DOL worked with each grantee to establish enrollment targets for the four years. Based on these targets, grantees expected to enroll an average of 2,408 students in their YCC program, but the variation was enormous. Over the four-year grant period, one grantee expected to enroll 11,200 students, whereas three expected to enroll around 800 students. As a result, median enrollment was 1,495.

Grantees

1. Academia de Directores Médicos de Puerto Rico, Inc.
2. Anson County Schools (North Carolina)
3. Board of Education, Buffalo (New York)
4. Bradley County School District (Tennessee)
5. Colorado City Independent School District
6. East San Gabriel Valley Regional Occupational Program (California)
7. Galveston Independent School District (Texas)
8. Ivy Tech Community College of Indiana
9. Jobs for the Future, Inc. (Massachusetts)
10. Kentucky Educational Development Corporation
11. Laurens County School District 56 (South Carolina)
12. Los Angeles Unified School District (California)
13. Manufacturing Renaissance (Illinois)
14. Metropolitan School District of Pike Township (Indiana)
15. New York City Department of Education (New York)
16. Pima County (Arizona)
17. Prince George's County Economic Development Corporation (Maryland)
18. Putnam County Board of Education (Georgia)
19. Rosemount Independent School District 196 (Minnesota)
20. St. Paul Independent School District #625 (Minnesota)
21. School District Number 1 in the City and County of Denver (Colorado)
22. Toledo Public Schools (Ohio)
23. Upper Explorerland Regional Planning Commission (Iowa)
24. Westside Community Schools (Nebraska)

- **Education organizations were the most common grant recipients, but DOL awarded grants to other types of organizations as well.** Although 17 of the 24 grantees were local education agencies, other entities included nonprofit organizations (4), WDBs (2), and a workforce entity (Table C.1).

- **Grantees were geographically diverse.** Grantees located in 18 states and Puerto Rico are implementing YCC across 75 school districts and 131 schools. School district classifications of locale indicate that the grantees reach a diverse set of communities: 28 of the 75 districts are rural, 20 are located in towns, 11 are located in suburban communities, and 16 are located in cities. Most grantees (17 of the 24) planned to implement YCC in only one district, but 3 grantees (Ivy Tech Community College of Indiana and Upper Explorerland Regional Planning Commission) have broader reach, offering YCC in at least 13 districts.

- **The number of high schools with YCC varies across grantees.** As of September 20, 2016, grantees had enrolled students in 131 high schools. Some planned to offer YCC in a single high school, but, at the other extreme, four planned to offer YCC in five or more high schools or in a community college degree or certificate program(s).

- **Some grantees extended implementation beyond high school** and included one or two years of postsecondary education as an explicit part of YCC. DOL required these grantees to forge strong partnerships with IHEs to ensure that all participants completed the YCC program with either a high school diploma and industry-recognized credential or a credit-bearing postsecondary certificate or degree. Some grantees proposed such a model: one grantee was a community college, and three had already enrolled YCC students in community college programs as of September 20, 2016.

4. YCC students

By June 2016, grantees had enrolled 14,249 students in YCC (Table I.1). It was most common for students to enroll in grade 9 (47 percent), although students also started in grade 10 (24 percent) and grade 11 (29 percent). A slightly larger percentage was male (56 percent) than female (44 percent). The enrolled students were racially and ethnically diverse (44 percent Hispanic, 22 percent black, and 52 percent white), with a large proportion considered low-income based on their eligibility for free or reduced-price lunch (43 percent). A small percentage had special needs: 7 percent had a disability, and 9 percent were English-language learners.

Table I.1. Characteristics of YCC participants, as of June 2016

Characteristic	
Total number enrolled	**14,249**
Grade at enrollment (percentage in each grade)	
9	47
10	24
11	29
Sociodemographic characteristics (percentage)	
Male	56
Female	44
Eligible for free or reduced-price lunch	43
Percentage Hispanic	44
Race (percentage)	
White	52
Black	22
Asian or Pacific Islander	5
American Indian or Alaskan Native	2
Mixed	1
Percentage low-income	43
Support needs (percentage)	
With a disability	7
	9

Source: National report from the Participant Tracking System for the quarter ending June 30, 2016.

Note: Numbers may not add to 100 percent because of rounding or missing data. Other needs for support services (homelessness, offender, veteran, pregnant/parenting youth, or foster youth) comprised less than 1 percent of the YCC population.

B. The YCC evaluation

The evaluation organizes the development, implementation, and impact of YCC program elements (that is, the large circle in Figure I.1) under three major program components, all of which help ensure that students become ready for both college and career.

1. **Preparing for both college and career** by offering an integrated academic and career-related curriculum and providing postsecondary education supports. These activities and services are structured to enable students to pursue both postsecondary education and training that will build additional workforce skills and employment after graduating from high school.
2. **Connecting students with career-track employment** by providing exposure to employers who discuss workplace opportunities with students at school and provide exposure to the workplace at the work site.
3. **Offering academic and nonacademic supports** that promote student success through (1) an SLC; (2) individualized counseling, including developing and maintaining an updated IDP; and (3) other personalized supports that might help ensure student success.

The YCC evaluation, which extends through 2019, is a mixed-method study that includes an implementation study to provide a comprehensive picture of how grantees implement YCC as well as two rigorous impact studies—a quasi-experimental design study and a randomized controlled trial—to assess the YCC impact on key short-term outcomes. It will ultimately address three main research questions:

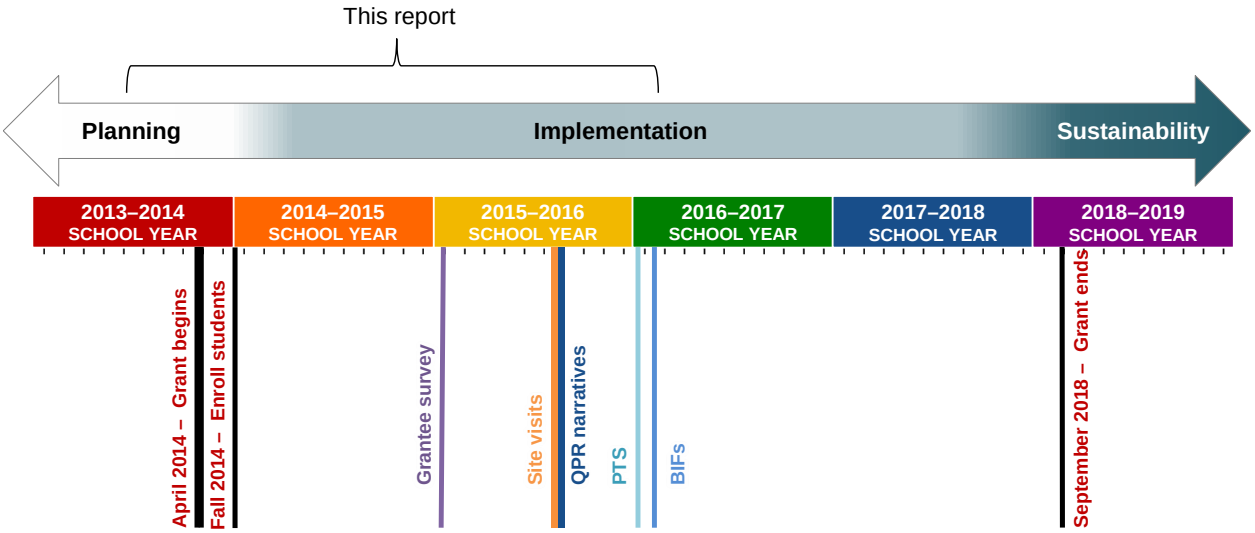
1. How are YCC activities and services implemented (implementation study)?
2. What is the impact of YCC on interim outcomes (quasi-experimental design study)?
3. Do the impacts of YCC vary by subgroups defined by baseline student characteristics (risk factors and gender) and experiences (quasi-experimental design study)?

In this report, we provide the evaluation's first findings by examining how grantees structured and implemented YCC during the first two years of funding. We address the first five of the implementation study's six specific research questions:

1. What types of students does YCC serve?
2. What program components are being implemented?
3. What distinguishes YCC from other programs?
4. What challenges do grantees face in implementing YCC, and how do they overcome those challenges?
5. How do grantees plan to sustain the program beyond the grant period?
6. What implementation practices appear promising for scaling and replication?

Complete answers to these questions will not be available until the end of the funding period, at which time grantees will have fully implemented YCC. Still, this report provides a snapshot of implementation in the first two years of grant funding, offering insights into early program successes and challenges and amassing knowledge by answering the first five implementation research questions. We draw on a mix of quantitative and qualitative data from five sources that bring together information at different time points (Figure I.3) to address the questions.

Figure I.3. Timeline for data collection



1. **Round 1 of the grantee survey,** administered between May and September 2015, provides information on service delivery models, staffing, staff development, partnerships, and implementation of the program components for grantee schools that accounted for the largest planned enrollment starting in the earliest grade (grade 9 for most). We collected data as implementation began during the 2014–2015 school year, the first full year of funding. Section A of Appendix C provides details on the data.

2. **Site visits** took place from December 2015 to March 2016 to the 10 grantees considered for inclusion in the randomized controlled trial. We believed that two conditions held in one or more of the 10 grantees' schools: oversubscription into YCC and considerable contrast with other (non-YCC) programs offered at the same school(s). The 10 grantees visited represented 11 districts and 17 high schools. They provided in-depth qualitative information on the schools with respect to the planning, design, and implementation of YCC and the process for mobilizing key partners. The information also includes YCC activities, challenges encountered, and solutions identified during the first two years of funding. Section B of Appendix C provides details on the data.

3. **Quarterly progress reports (QPR) narratives** from the last quarter of 2014 (December 2014) through the first quarter of 2016 (March 2016) submitted by all 24 grantees provided qualitative information describing YCC implementation. DOL requires grantees to submit QPRs for performance measurement. Section C of Appendix C provides details on the narratives.

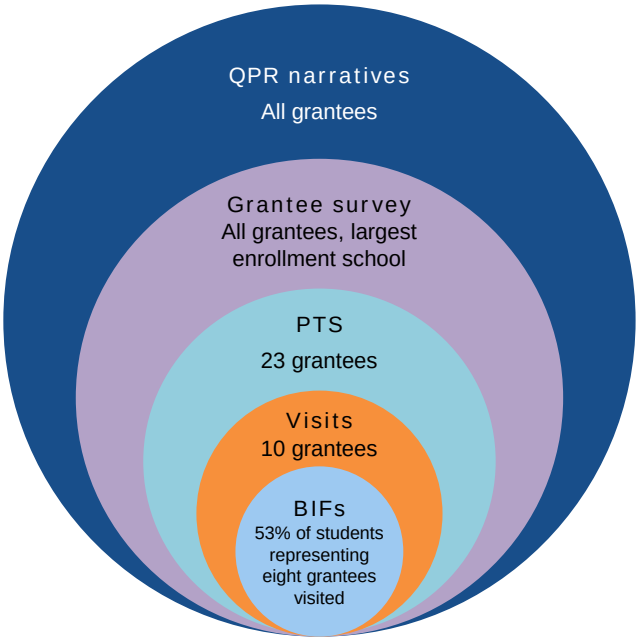
4. Records from the **Participant Tracking System (PTS)** used by all grantees to record their program performance data for DOL provided information on all YCC participants and on the YCC services they received as of April 1, 2014, when funding started. Using data from 23 grantees, we analyzed data from the 13,073 students who participated in YCC programs through the end of the districts' 2015–2016 school year as well as information on

professional development opportunities offered during that time. Section D of Appendix C provides details.

5. We administered **baseline information forms (BIF)** from fall 2015 to summer 2016 (the application period) in 16 schools representing 8 of the 10 grantees[3] selected for site visits. We analyzed data from 56 percent of parents and 53 percent of students in these schools who applied to the YCC program for the 2016–2017 school year. The BIFs provided information on student and household characteristics, education plans, activities, and work experience. Section E of Appendix C provides details.

Each of the five data sources targets a different slice of YCC, and as a result, the samples and the type of information from each differ, as shown in Figure I.4.

Figure I.4. Report's information sources



- **The samples differed.** The QPR narratives provide information for all YCC grantees; the grantee survey provides information for all grantees' school with the largest YCC enrollment starting in the earliest grade; the PTS provides information for all students and all professional development activities for 23 grantees; the site visits collected information from 10 grantees, although they often included a sample of grantees' schools; and the BIFs provide information on students and parents at selected schools at 8 of the 10 grantees visited.
- **We collected and analyzed both quantitative and qualitative information.** The grantee survey, PTS, and BIFs contain quantitative information that we analyzed by using descriptive statistics (averages and percentage distributions). The visits and QPR narratives yielded qualitative information, which we analyzed by following a structured coding scheme.

The data sources involve different units of analysis, but all data analysis was unweighted such that it gave equal treatment to grantees (in the grantee survey, QPR narratives, and site visit data) or individuals (in the BIFs and PTS data), irrespective of the size of the grantee. In the absence of weighting, the findings from the grantee survey and site visits reflect the average grantee in the study, and the findings from the PTS and BIFs reflect the average YCC student from schools in the study.

[3] One grantee had rules that would not allow administration of the BIFs, and another had a program assignment structure that was not conducive to BIF administration.

The complementarity of the data collected allows us to draw conclusions about YCC from different sources. Still, it is important to use caution when interpreting results because of the following:

- **All analysis must be considered descriptive,** which means that results presented in this report should not be interpreted to make causal inferences about the effectiveness of YCC's implementation.
- **Analysis focuses heavily on early high school grades.** The grantee survey largely focused on YCC as implemented by grantees starting in grade 9 (71 percent) or 10 (17 percent); in addition, the visits and BIFs were restricted to schools that started YCC in grade 9 or 10. These two sources understate the experiences of the four grantee programs that started YCC in grade 11, which encompasses about 25 percent of schools.
- **Results have limited generalizability.** The information from all sources is not representative of all YCC schools or students enrolled in them. All sources but the PTS and QPR narratives contain nonrandom samples. Although the PTS data include all students who ever participated in YCC, the QPR narratives contain self-selected information from grantees. Although we tried whenever possible to verify information across several sources, we still urge caution in extrapolating results beyond the samples analyzed.

C. Structure of the report

In this report, we present grantees' experiences in the first two years of funding. A future report will present implementation results in greater depth, based on another round of grantee surveys in spring 2017 and another round of visits in 2018. In this report, we describe grantees' early successes in implementing the program components, the support received by grantees in achieving those successes, and the challenges they faced in implementing all program components. We also discuss the students served by YCC and the services they received during the first two years of program operations.

The remaining chapters are as follows. In Chapter II, we discuss how grantees designed YCC, including how they recruited students into it, both of which are essential foundations for YCC's implementation in schools. In Chapter III, we describe implementation of the three YCC program components (preparing for both college and career, connecting students with career-track employment, and offering academic and nonacademic supports) during the first two years of funding. In Chapter IV, we discuss program options for students who are not in YCC and potential exposure to YCC as assessed by school attendance. We highlight in Chapter V the professional development opportunities that grantees have provided to teachers, counselors, and program staff. Finally, in Chapter VI, we summarize YCC implementation to date, including early successes and challenges.

Four appendices follow the chapters. Appendix A provides a glossary of terms commonly used in the report. Appendix B provides a table of the grantees, schools, and high school districts that have participated in YCC through September 20, 2016. Appendix C describes the methods used to collect and analyze the data from each of the five information sources, and Appendix D presents the tables that provide the basis for the report's figures and tables.

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II. DESIGNING YCC

DOL set a five-month planning period after awarding grants on April 1, 2014, to allow grantees time to decide how to structure and implement the YCC program and how to enroll students into YCC starting in fall 2014. As expected, grantees used the planning period to design and initiate YCC activities, although our research suggests that some grantees began their program planning during the grant application period and, for some program components, extended it beyond the 2014–2015 school year. Grantees addressed design decisions that involved determining YCC's career focus, the structure of the program (for example, the adoption of a college or career emphasis, the program staffing strategy, and the identification of partners), and the method of student recruitment. Although grantees made different decisions in each of these areas, the results of both the grantee survey and the site visits demonstrate that all grantees developed YCC with the local labor market in mind, built on their local experience in offering core components, engaged several employer and other community partners, and involved YCC counselors in a pivotal role in recruiting students.

In this chapter, we provide information on grantees' decisions about the focus on careers (Section A) and the structure of YCC (Section B). We also describe how grantees recruited and enrolled students (Section C). We draw primarily from the grantee survey and visits and, as appropriate, on information from the PTS and BIFs.

Key chapter findings

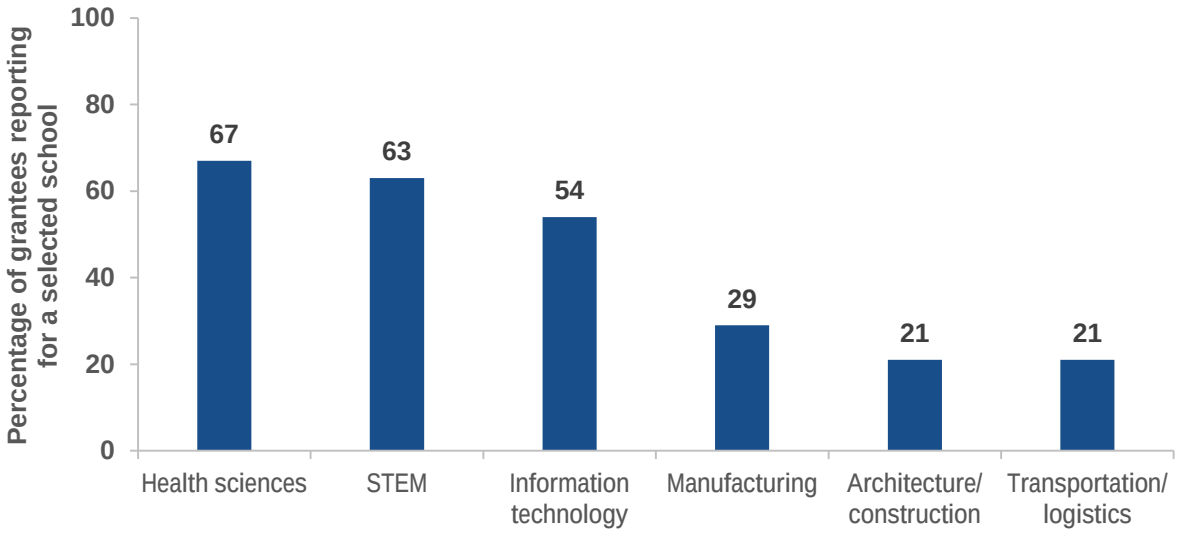
- **Grantees most often structured YCC with career focus areas in the health sector and the science, technology, engineering, and mathematics fields,** which align with the most common H-1B industries and occupations.
- **Grantees built on their experience and relied on partners in developing YCC.** Schools and school districts typically had experience in offering core YCC program components. Partners, including employers and institutions of higher education, provided resources and leadership for YCC as it developed.
- **Employers were particularly important partners** and were typically involved in program planning.
- **Counselors were central in recruiting students.** Once students were recruited, schools used both formal and informal criteria for accepting them into YCC.
- **YCC students who completed a BIF reported that they enjoyed school, valued good grades, and had low levels of negative behaviors**—such as skipping school and drug or alcohol use—before they enrolled in the program.

A. Career concentration

Given that YCC strives to prepare students for college and careers in high-demand industries in the local labor market, DOL required grantees to offer career foci in H-1B industries with in-demand occupations. Our research suggests that grantees most often chose concentrations in the expanding fields of health, science, and technology (Bureau of Labor Statistics 2015).

- **Schools identified career foci that aligned with H-1B industries.** When the grantee survey asked schools with the largest YCC enrollment (starting in the early grades) to identify their career foci (allowing for several responses), the schools identified careers in high-demand industries. About 67 percent offered a health sciences focus; more than 60 percent offered a concentration in science, technology, engineering, and mathematics (STEM); and more than 50 percent incorporated a focus on information technology (Figure II.1). About 20 to 30 percent (each) offered a career focus in manufacturing, architecture/construction, or transportation/logistics.

Figure II.1. YCC career focus areas

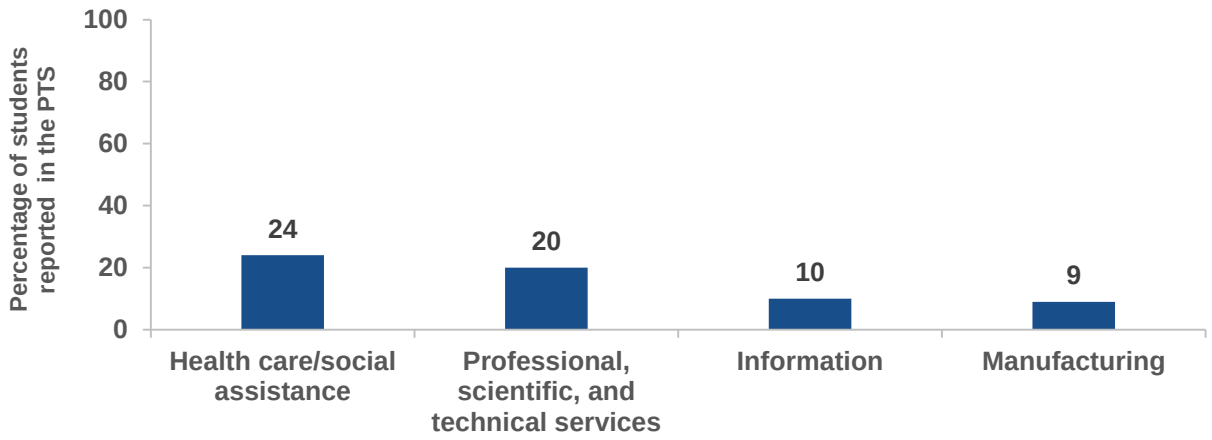


Source: Grantee survey 2015, Appendix D, Table D.2.

Notes: Figure shows the percentage of grantees reporting a focus for a selected school. The survey asked grantees to report the career focus of YCC for the school with the largest YCC enrollment starting in the lowest grade. The survey allowed for several responses.

- **YCC staff indicated that career concentrations were selected to meet the needs of local industries.** During interviews at 7 of the 10 grantees visited, respondents reported that they deliberately designed their YCC to focus on the skills sought by local companies. For example, staff at one grantee school stressed the importance of designing a program that could direct students into careers such as nursing, biomedical engineering, and medical technology because health care was the area's primary economic growth industry.
- **Nearly one-quarter of YCC students enrolled in health care and social assistance pathways.** The PTS provided information on the single industry focus for YCC students for all but one grantee and showed patterns for career focus (Figure II.2) similar to those reported by the schools (Figure II.1), even though the categories of foci differ. Health care and social assistance was the most common industry (24 percent of students), followed by professional, scientific, and technical services (20 percent), and information (10 percent).

Figure II.2. Most common career focus of YCC students



Source: PTS through the end of the 2105–2016 school year, Appendix D, Table D.3.

Notes: Figure shows the percentage of students enrolled in YCC with each career field.

B. YCC structure

The planning and design process for YCC focused on (1) an emphasis on college or career as an outcome of program participation, (2) appropriate staffing to provide program support, and (3) the development of relationships with partners to open up opportunities for YCC students. During this process, grantees likely drew on the experience of districts and schools in implementing activities and services that were similar to those to be undertaken as part of YCC.

According to the grantee survey, most schools and even more districts had at least some experience in offering YCC program elements (Table II.1). Nearly all schools described in the survey and nearly all associated districts reported experience in engaging employers in school-based programs, providing wraparound support services, integrating academic and career and technical education (CTE) curricula, and providing WBL experiences, although somewhat fewer had experience with internships. Schools with such experience averaged 3 to 5 years of experience, whereas school districts had approximately 14 to 24 years of experience in providing these program elements (Appendix D, Table D.4).

Table II.1. Experience in providing YCC program components

	Percentage with experience	
	District	School
Engaging employers in school-based programs	100	71
Providing wraparound support services	95	63
Integrating academic and career and technical education curricula	91	71
Providing work-based learning	91	63
Providing internships	71	44

Source: Grantee survey 2015, Appendix D, Table D.4.

Note: Numbers show the percentage of grantees reporting experience in each area for a selected school.

During the site visits, respondents discussed how they worked to integrate YCC into the participating schools and districts. The complexity of the task depended on the extent to which the core elements of YCC were in place prior to the grant award. For example, prior to YCC, all the schools visited had counseling programs in place with some degree of optional career planning services—albeit typically much more limited than those provided through YCC—making the counseling element relatively easy to design and integrate. Eight of the 10 grantees participating in the site visits already had schools with robust CTE systems and could use YCC grant funds to build on existing career pathways. In one school, YCC was so enmeshed in preexisting programs that it was difficult for staff to identify which services were YCC funded.[4]

1. College and career focus

One major design decision that grantees had to make was the relative emphasis that YCC would place on college or career. The site visits suggested that grantees sometimes emphasized one over the other (other data sources do not provide information on the relative emphasis on college versus career). Even though staff at 6 grantees specified that they emphasized college and career preparation equally, staff at the other 4 grantees specified that they emphasized one over the other. Two grantees said that the ultimate goal was for students to transition directly into local community colleges, such that YCC placed a stronger focus on dual enrollment than on career preparation. The other 2 grantees said that the ultimate goal was for students to leave high school with industry-recognized credentials that would allow them to join the local workforce; these grantees focused more heavily on skills acquisition and WBL. To support the chosen emphasis, 9 of the 10 grantees visited convened advisory councils of program staff and selected external partners to provide ongoing assistance with program implementation.

2. Staffing

Grantees also had to structure staffing to support YCC at both the program and school levels. Grantees visited reported that they hired a wide array of staff to support YCC, with common positions including YCC counselors, program coordinators, and teachers (as confirmed in the grantee survey; Appendix D, Table D.5). Discussions suggested that a major value-added aspect of the YCC grant was the opportunity to bolster school staff, particularly in counselor and coordinator positions. Grantees also reported that they benefited from a number of additional nonprogram staff, such as a school district's director of development.

Although the grant funded most YCC-specific positions, several grantees also drew on in-kind support from district and grantee agency staff. Seven of the 10 grantees visited benefited from the involvement of district-employed staff who divided their time between their routine job duties and YCC; in particular, these staff supported YCC in administrative roles that involved the allocation of grant resources and management of YCC data. Across grantees, district-employed teachers, counselors, and even assistant principals went well beyond their normal responsibilities to support YCC. For two grantees, high-level district personnel, such as the associate superintendent or director of student services, stepped in to help run YCC.

[4] At this school, we surmise that YCC augmented an existing program without highlighting its value to staff. Staff whom we visited in another of the grantee's schools and in the district office could clearly identify YCC-funded activities, which were also available at the school that was unable to distinguish YCC from existing programs.

General staffing structures included the following:

- **YCC coordinator/manager.** A program manager, program director, or YCC coordinator managed daily program operations while also serving as a liaison between the schools and districts or grantee organizations. The YCC grant covered the full-time salary of the majority of program managers, with the remaining managers working part-time or leveraging salaries from district funding.
- **YCC teachers.** Discussions with staff during the site visits suggested that some YCC teachers were new to a career pathways program (and some new to teaching in general) and that some had been teaching CTE or other career-focused courses for several years. The discussions revealed that both YCC and the relevant district funded the YCC teacher positions. Even though information on the proportion of grant and district funds used for teacher positions was not available, our discussions indicated that district funds typically supported those teaching career-focused courses offered to both YCC and non-YCC students.
- **YCC counselors/WBL coordinators.** Discussions with staff suggested that YCC counselors frequently fulfilled several roles that supported YCC students, including typical academic and career counseling services and ensuring that students received appropriate support services. In addition, counselors frequently served as WBL coordinators, setting up WBL experiences and connecting students with employers. Discussions indicated that the YCC grant frequently covered YCC counselors' salaries for full-time service, although the extent to which this was the case across grantees is not known.
- **Consultants.** Three grantees visited reported contracting with consultants to support tasks related to proposal writing, program implementation, recruitment, or navigating the federal grant process. The consultants worked with the school staff and YCC teachers to coordinate the delivery of key YCC components. For example, one grantee's consultant helped broker the relationship between the school district and a nearby community college to offer dual-credit courses to YCC students.

Strategy to engage employers

To facilitate deeper relationships between local high schools and employers, one YCC grant coordinator/manager formed a task force composed of a variety of partner organizations, including local nonprofit organizations, the chamber of commerce, and employers. The task force was charged with providing guidance and resources to help the YCC program implement high quality mentoring, worksite visits, job shadowing, and internships aimed at developing skills/competencies required for success in STEM careers.

Source: QPR narrative data

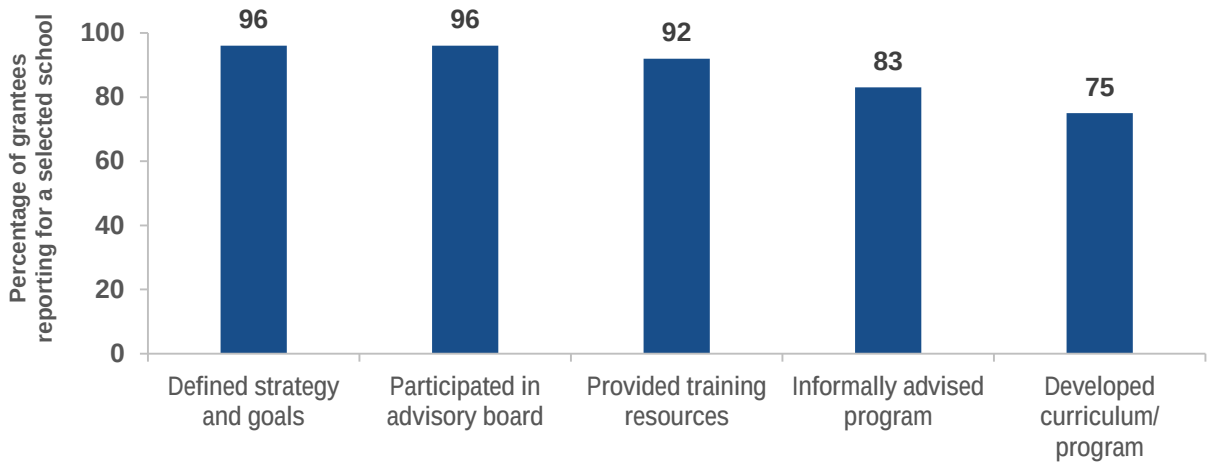
3. Partners

YCC grantees reported that design and start-up also required creating or strengthening relationships with partners, especially employers. Although all grantees visited reported that they struggled to find time to establish and maintain partnerships, they had successfully established partnerships with employers, IHEs, local workforce development boards (LWDBs,) or AJCs and other entities and expected the partnerships to continue after the grant period (Appendix D, Table D.6).

The grantee survey and site visits suggested that:

- **Employers were involved in and integral to nearly all programs.** All but 2 of the 24 schools described in the grantee survey reported that they already had employer partners (Appendix D, Table D.6). The 22 schools reported an average of about 19 employer partnerships and noted that even before the YCC grant was a possibility, they frequently benefited from the relationships. Perhaps because of the established partnerships, the schools were able to involve employers in YCC planning and development. Partners helped shape program strategy, participated on advisory boards, provided education or training resources, advised programs informally, and helped with curriculum development and program design (Figure II.3). In addition, 78 percent of schools in the grantee survey received in-kind assistance from employers while about one-fifth received financial support from employers (Appendix D, Table D.7).

Figure II.3. Employer participation in planning and development



Source: Grantee survey 2015, Appendix D, Table D.8.

Note: Figure shows the percentage of grantees reporting employer involvement with YCC with the school described in the grantee survey.

- **IHE partnerships were in place but developing.** All schools in the grantee survey reported that they had engaged at least one IHE partner, with the average school engaging close to three (Appendix D, Table D.6). About two-thirds received in-kind support from IHEs, and about one-quarter received financial support from IHEs (Appendix D, Table D.7). Site visits suggested that the partnerships were often still in development, with half of the 10 grantees visited characterizing at least some aspect of their IHE partnerships as still in the development or planning stages. Discussions during the site visits disclosed that the most common type of arrangement with IHEs was dual enrollment and college credit for students still in high school.
- **LWDB or AJC partnerships were emerging.** Although all but two schools in the grantee survey reported that they partnered with a LWDB or an AJC (Appendix D, Table D.6), discussions during site visits indicated that the partnerships might not have been active. Two of the 10 grantees visited had directly involved their LWDB in YCC during the planning

stage by relying on the LWDB representative(s) to advocate for YCC with local employers, by placing YCC staff on the board of the local career center, and, more commonly, by engaging LWDB staff to serve on the YCC advisory committee. The remaining 8 grantees involved AJCs at a "high level" and planned to expand their connection with AJCs as YCC developed, when key program components such as WBL opportunities were operational.

- **Grantees involved other entities.** In the grantee survey, about three-quarters of schools reported that they partnered with a support service organization (Appendix D, Table D.6), about two-thirds reported that they received financial support from state and local governments, and over half reported that they received financial support from private foundations (Appendix D, Table D.7). During the site visits, several grantees reported that local area industry leaders or the chamber of commerce was involved in YCC.

C. Students recruited for and enrolled in YCC

The grantee survey, as confirmed by the site visits, provided insights into how schools recruited and enrolled students into YCC, and the BIFs suggested that the recruiting and application procedures led to a diverse set of motivated YCC students.

1. Student recruitment, eligibility, and enrollment

The grantee survey suggested that staff used a variety of methods to recruit students into YCC, including self-referrals or walk-ins (71 percent of schools), word-of-mouth referrals (63 percent), flyers posted in high schools (58 percent), community outreach (58 percent), and school assemblies (50 percent) (Appendix D, Table D.9). Both the grantee survey and the site visits indicated that counselors were central to the recruiting efforts, with nearly all schools in the grantee survey (96 percent) reporting that counselors were part of their recruiting strategy (Appendix D, Table D.9) and respondents at 6 of the 10 grantees visited indicating that counselors were crucial to the success of their recruiting efforts. Site visits disclosed that counselors were the primary points of contact with interested students and were generally responsible for distributing and collecting all application materials.

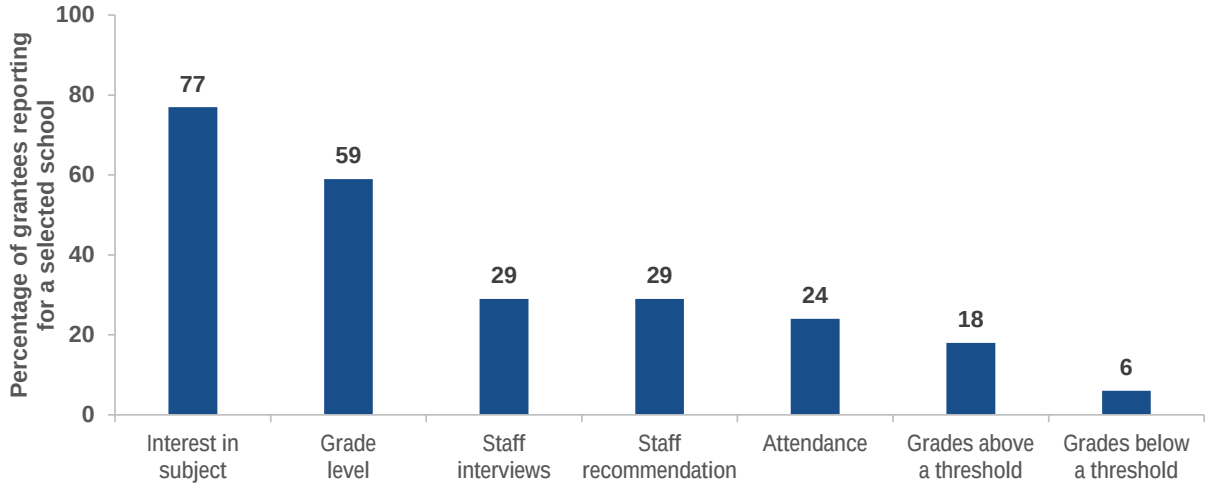
"The middle school counselors somewhat took over [recruitment]. They were very on-board with the program and recruiting."

—YCC manager

Source: Site visit data

Once they recruited students, schools had to determine which students were eligible to participate in YCC. About 70 percent of schools in the grantee survey said that they used a formal application process to determine eligibility. Schools with formal application processes used a variety of criteria to select students for YCC (Figure II.4). Over half of schools used interest and the student's grade level (because the program only started in grade 9, for example), and nearly 25 percent considered students' attendance records (either strong or weak) or grades (above or below a threshold). The site visits suggested other potential eligibility requirements, including residence in the eligible school zone and completion of an introductory seminar or orientation.

Figure II.4. Factors in YCC admission decisions



Source: Grantee survey 2015, Appendix D, Table D.9.

Note: Figure shows the percentage of schools in the grantee survey that used a formal application requirement for YCC and reported using each factor in the application process.

Discussions during the site visits suggested that the 30 percent of schools not using a formal application process to determine eligibility for YCC might use targeted recruitment based on existing information about students. Three of the 10 grantees visited directed YCC staff to target specific types of students to help ensure that participants could complete YCC courses. Sometimes staff relied on the YCC counselor's knowledge of students, academic records, specific class rosters, or career interest inventories to identify those considered a good fit for YCC (for example, academically high-achieving and engaged students or those interested in the career focus).

Despite the concerted efforts made by YCC staff to recruit and enroll students into YCC, the site visits pointed to some difficulties:

- **District policies for recruiting and school assignment sometimes weakened the recruitment process.** On occasion, districts limited the amount and type of student outreach for recruitment when district-determined factors (for example, a lottery based on student ranking of programs) or a student's place of residence determined program assignment. One district prevented YCC outreach because it considered outreach unfair in light of other programs' inability to do the same.
- **Course scheduling could interfere with YCC enrollment.** Discussions during the site visits illustrated how scheduling conflicts could affect enrollment in YCC, even for eligible students who had expressed interest in YCC. Sometimes honors-level courses or other electives (for example, band or science club) that were offered at limited times interfered with students' ability to fit YCC into their schedules, leaving interested students unable to enroll in YCC.

2. Enrolled students in selected schools

We use data collected from the parent and student BIFs to provide additional information on the students who enrolled in YCC, including household characteristics, parent motivation for their student's enrollment in YCC, expectations for educational attainment, students' prior work history, student engagement in school, and negative behaviors before enrollment in YCC. We urge caution in generalizing from the BIFs to the larger population of YCC students. A selected group of parents and students at 8 grantees participating in site visits completed the BIFs (Appendix C, Section E explains). Our results are suggestive but not representative of the type of students who enrolled in YCC starting in fall 2016.

a. Household characteristics

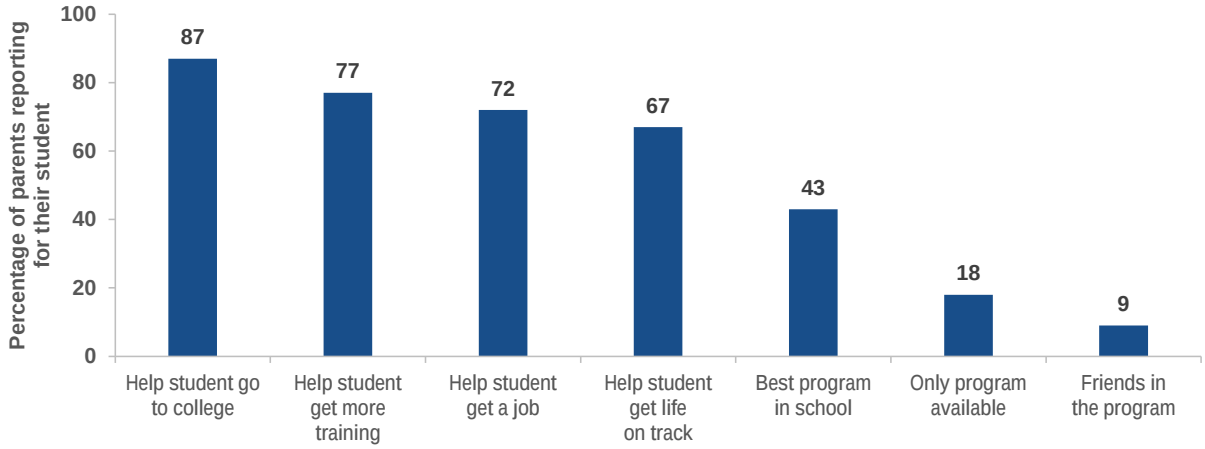
The BIF asked parents to provide information about the characteristics of the household in which the student lived (Appendix D, Table C.10). Students lived in households with the following characteristics:

- Contained two adults and two other children, on average.
- Used English (77 percent) or Spanish (18 percent) as the primary language spoken.
- Reported some type of income (95 percent). Over three-quarters had wage or salary income (79 percent), and about one-quarter received food stamps/SNAP (Supplemental Nutrition Assistance Program) benefits or Medicaid. Relatively few reported other types of income.
- Had less school mobility than the average national household. About 18 percent of the students changed schools three or more times since grade 1 for other than structural reasons, compared to 31 percent of students in a nationally representative sample (U.S. Government Accountability Office 2010).
- Had a household head with a postsecondary degree (45 percent) or completed vocational training (26 percent), most of whom were employed in the week before completing the BIF (74 percent).

b. Parents' motivation for students' application to YCC

About 73 percent of parents reported that they were involved in the student's decision to apply to YCC. Of those who were involved, most thought that YCC would help the student go to college, secure more training, secure a job, and get his or her life on track (Figure II.5).

Figure II.5. Parents' motivations for their student's YCC application



Source: Parent BIF 2015–2016, Appendix D, Table D.11.

Note: Respondents are parents completing a BIF and involved in their student's decision to apply to YCC. Figure shows the percentage who reported each motivation for his/her student's application.

c. Expectations for educational attainment and prior work history

Both parents and students reported high expectations for students' educational attainment (Appendix D, Table D.12). More than 80 percent of parents and students completing a BIF expect a graduation from postsecondary education with at least with a bachelor's degree, with more than 40 percent also expecting an advanced degree, such as a master's degree or doctorate. As is consistent with these high expectations, nearly all parents reported that they discussed postsecondary education with their children, and the vast majority reported that they had such conversations more than twice (82 percent).

Only 14 percent of students reported paid work experience prior to YCC (Appendix D, Table D.13). Of those with work experience, 40 percent were currently working, Students most commonly reported jobs in personal care and service, such as babysitting and grounds maintenance (for example, yardwork).

d. Student engagement in school and negative behaviors before YCC enrollment

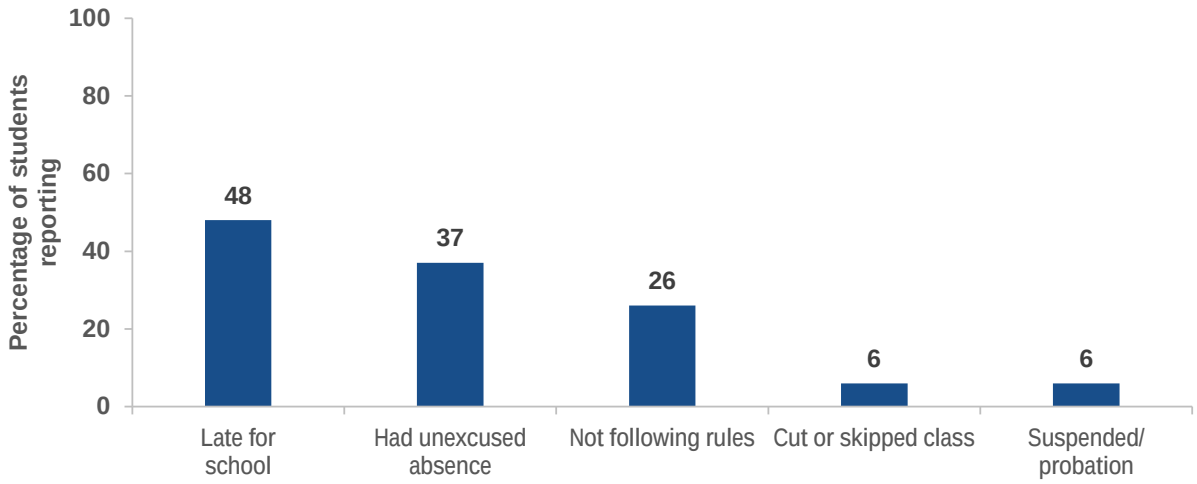
Students provided information in the BIF that indicated how engaged they were in school before enrolling in YCC (Appendix D, Table D.14). Responses suggested that YCC participants were fairly engaged in school. Participants reported that they

- Either liked school (45 percent) or liked it a lot (36 percent);
- Saw grades as very important (81 percent) or important (18 percent);
- Spent about seven hours on homework per week, nearly evenly spread across the school day (two hours), before or after school during the week (three hours), and on weekends (two hours); and
- Participated in school-sponsored activities (98 percent).

Students provided information about the extent to which they engaged in negative behaviors in school in the past three months (for example, being late for or having an unexcused absence from school, being suspended, cutting classes) and their prior experience with alcohol, other drugs, and arrests (Figure II.6). Although students might underreport their engagement in negative behaviors, responses suggest that YCC participants engaged in some negative behaviors before enrolling in YCC:

- In the past three months, almost half indicated they had been late for school, 37 percent reported an unexcused absence, and 26 percent reported getting in trouble for not following school rules.
- About 6 percent (each) had skipped a class or been suspended/put on probation.
- Less than 5 percent said they had ever used marijuana (2 percent), used alcohol (2 percent), or been arrested or taken into custody for a crime or offense (1 percent) (Appendix D, Table D.15).

Figure II.6. Students' reported negative behaviors before YCC enrollment



Source: Student BIF 2015–2016, Appendix D, Table D.15.

Note: Figure shows the percentage of students completing the BIF who reported each behavior.

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III. YCC PROGRAM COMPONENTS

With the goal of improving students' success in college and career, grantees are required to implement activities and services in three program areas: preparing students for college and career, connecting students to career-track employment, and offering academic and nonacademic supports. During the early years of YCC implementation, grantees reported strongly embracing the goal of offering rigorous and challenging coursework that allowed for hands-on learning opportunities. The data suggest that grantees implemented activities and services in each of the required core components but had made less progress on some of the more complex and resource-intensive features of YCC, such as integrated coursework, internships, and mentoring.

In this chapter, we discuss activities and services implemented in each of the three program components: preparing students for college and career (Section A), connecting students with career-track employment (Section B), and offering academic and nonacademic supports (Section C). We draw on several data sources. Both the grantee survey and site visits (as augmented by the QPR narratives) focused heavily on identifying the services and activities implemented by grantees in the three areas. The PTS data examine the activities and services in which students actually participated, permitting an assessment of the degree of YCC program implementation.

Key chapter findings

- **Grantees structured the YCC curriculum to meet state college and career-readiness standards.**
- **Grantees offered activities and services in all three key program components,** although they were still developing or planning some services after about 1.5 years of funding.
- **Grantees integrated academic-career skill building** by developing complementary academic and career-focused courses and using specialized curricula and pedagogies.
- **Grantees struggled to maintain meaningful employer engagement for the work-based learning program component**, with YCC staff and teachers pointing to competing demands on their time and logistical challenges.
- **Grantees developed small learning communities and used Individual Development Plans (IDPs) as a framework to provide YCC students with support.** Most grantees developed small learning communities to support students, and most used the IDP as a framework for counseling students, even if not all students actually had an IDP.

A. Preparing for both college and career

Given that YCC aims to prepare students for both college and career, grantees must provide students with both academic skills and work-readiness skills that enable them to navigate the workplace successfully. Such preparation means that YCC must align its curriculum with state college and career-readiness standards. Without such alignment, students might lack the skills and ability needed to access postsecondary education or lack the work-readiness skills needed to gain access to employment and training opportunities that allow them to build the technical skills required for a entering a career pathway.

Information from the grantee survey, supported by interviews conducted during the site visits, suggests that grantees structured their YCC curriculum to meet both college and career-readiness standards (Appendix D, Table D.16). All, or nearly all, schools in the grantee survey reported that they did the following:

- Aligned the academic curriculum with state college and career standards (96 percent)
- Based curriculum and instructional materials in career-related classes on industry standards (all)
- Required students to take four years of both English and mathematics (all)

Individuals interviewed during the site visits reported that YCC coursework included both the standard academic coursework required of all students to meet the respective state's requirements for high school graduation as well as pathway-specific academic coursework. The latter may be aligned with both state standards (for example, state CTE guidelines) and industry standards (for example, standards for precision machining).

Site visit interviewees also described a negative aspect of YCC's rigor and standards. Three grantees noted that YCC courses were generally rigorous and challenging, such that some students struggled considerably and questioned their commitment to remaining in YCC. In response, one grantee created two levels of YCC courses, with one geared specifically toward honors-level students. Those interviewed felt that an integrated curriculum that blended academic and career-focused coursework might help students who might otherwise struggle academically. Perhaps as a response to student difficulties, grantees also offered postsecondary education supports and work-readiness training to support the integrated academic and career-focused coursework focused on college and career readiness.

1. Integrated academic and career-focused coursework

Grantees tended to integrate academic and career-focused coursework in two ways (Table III.1). They structured academic and career-related classes to complement each other, and they used specialized curricula or educational approaches that blended academic and career-related content across courses.

Complementary academic and career-related courses. In the grantee survey, virtually all schools reported that they (1) integrated their career theme across all years, (2) used career courses to teach academic skills, (3) demonstrated the relationship between coursework and professions, (4) sequenced career courses to build technical skills, and (5) aligned coursework to H-1B industries or occupations. Additionally, over 60 percent of grantees reported they offered courses that would lead to an industry-recognized credential and prepared students for an industry-recognized certification examination (Table III.1).

Site visits uncovered some examples of complementary coursework. For example, one school aligned a preengineering class with training in machining technology skills to satisfy the National Institute for Metalworking Skills credential by teaching students to work with the prescribed equipment while reinforcing the need for literacy and mathematics skills through work-related skills such as reading blueprints and using measuring tools.

Table III.1. Two main approaches to integrating coursework

Approaches to integrating coursework	Percentage of grantees offering:
Complementary academic and career courses	
Integrated distinctive career theme across all grades	100
Relied on career classes to teach academic skills	100
Sequenced career courses to build technical skills	100
Courses were aligned H-1B industry or occupation career ladders	100
Demonstrated relationship between courses and professions	96
Related examples in academic courses to career theme	85
Offered courses leading to industry-recognized credential	74
Prepared students for certification examinations	61
Blended curricula or instruction	
Used project-based learning	96
Developed projects that apply skills from several courses	95
Used a capstone courses to synthesize knowledge	38

Source: Grantee survey 2015, Appendix D, Tables D.16, D.17, and D.18.

Note: Table shows the percentage of grantees who agreed that their YCC curriculum exhibited these characteristics for a selected school.

More often, the site visits suggested that grantee staff might see such efforts as carefully structuring work-related elective courses to meet industry standards while allowing students to meet academic requirements for high school graduation and college attendance. Indeed, during the site visits, most grantee staff spoke about academic and career-related courses as two separate areas, with the career courses fulfilling pathway-specific requirements and counting as electives rather than as general education credits that fulfill academic requirements. For example, grantees

- Allowed YCC students to earn First Aid, CPR (cardiopulmonary resuscitation), EMS (Emergency Medical Services), and CNA (Certified Nursing Assistance) certifications through their pathways;
- Offered an introduction to computer-aided design alongside an introductory engineering class and design laboratory, in conjunction with an introductory advertising and media class;
- Allowed junior and senior engineering pathway students to take a mechatronics class at the local community college to fulfill a high school elective requirement; and
- Allowed students to take more technical, work-based offerings at the district's Area Technology Center, where 50 percent of class time is spent in the laboratory

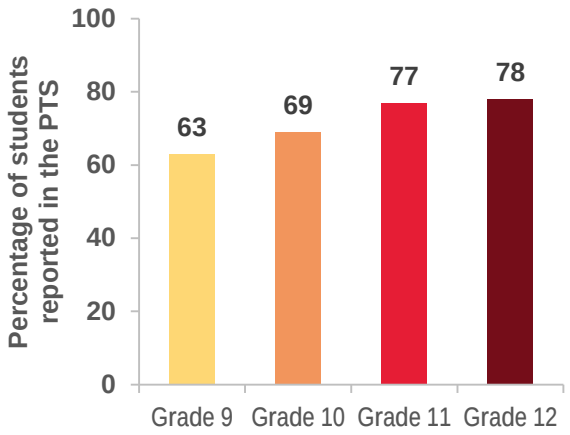
In all cases, work-related courses were structured not to diminish students' ability to meet academic requirements for high school graduation. Such approaches recognized that only some students would ultimately pursue a college degree in their career focus area, whereas others might pursue a career in a given industry. For example, a YCC student in biomedical sciences

may not want a postsecondary degree in biology but might be interested in becoming licensed as a phlebotomist, which requires a high school diploma and formal training.

Information in the PTS suggests that most juniors and seniors, who have more latitude in their schedules to take elective coursework than freshmen and sophomores, had taken industry-specific classes (Figure III.1). The grade 11 and 12 students who took electives typically took several of them and generally completed them (Appendix D, Table D.19). For example, nearly 40 percent of seniors taking industry-specific courses had taken at least four courses, with more than 60 percent completing at least one.

Blended curricula or instruction. In the grantee survey, nearly all grantees reported that students used PBL and completed projects that applied skills from several courses, although not necessarily in ways that synthesized knowledge in a capstone experience (Table III.1). The site visit interviews suggested that YCC teachers created PBL activities by, for example, involving biomedical science students in trying to understand the cause of death of a fictional patient or requiring students to tackle a problem specific to their career pathway. Sometimes teachers of different content areas collaborated to design project-based activities that integrated different academic subjects, in addition to integrating academic and career-related classwork. For one grantee, the YCC teachers conducted a PBL-based integration of curricula so that students in the English language arts course were reading an Agatha Christie murder mystery at the same time that they were investigating the DNA of "murder suspects" in their science class. Another grantee modified standard academic coursework for YCC students during their freshman year by requiring them to take a yearlong YCC-only biotechnology course instead of the standard freshman biology class.

Figure III.1. Students taking industry-specific courses



Source: PTS through the 2015–2016 school year, Appendix D, Table D.19.

Note: Figure includes students enrolled in YCC through the end of the 2015–2016 school year.

Integrated learning in practice

Project-based learning
is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or challenge.
Buck Institute for Education

Project Lead the Way (PLTW)
PLTW is a nonprofit organization that produces curricula in a variety of STEM-related academic subjects for school districts' purchase and use. The PLTW curriculum is generally project-based, involves hands-on learning experiences that map to real-world contexts, and includes resources for teachers' professional development. Many states have now adopted the PLTW curriculum as their standard curriculum for career courses.
Project Lead the Way

The site visits suggested that in addition to PBL, grantees used a specialized integrated curriculum such as Project Lead the Way (PLTW) and coordinated teaching efforts to present an integrated academic and career-focused curriculum. Four of the

10 grantees visited used PLTW curricula in biomedical science, engineering, or computer science, sometimes in addition to their own established pathway courses. For example, one grantee used the PLTW engineering curriculum, in addition to its newly established series of courses for the computer science/information technology pathway. PLTW curricula offer the advantage of built-in PBL activities. Besides covering academic content in areas such as physics and biology, PLTW curricula are designed to engage students in hands-on PBL in all coursework. For example, PLTW courses include projects related to robotics, designing a functioning model elevator, and amplifying DNA, sometimes while using software applied in the field, such as computer-aided design. Students in PLTW courses were often "building something" and acquiring direct career-related experience.

The six non-PLTW grantees visited relied on a combination of PBL, coordinated teaching, and curriculum-design efforts to offer integrated or complementary academic and career-focused learning. For example:

- Two provided examples in their QPR narratives of YCC students using computer-aided design software to create wind turbines and participating in a STEM exposition that required the students to adopt various industry roles (for example, a scientist, doctor, or medical ethicist).
- Frequent meetings among grade-level and content teams helped instructors integrate industry topics into academic coursework. For example, one grantee conducted a weekly meeting of YCC teachers to create interdisciplinary curricula, and another grantee organized a curriculum committee composed of academic and CTE teachers, college representatives, and business partners to work on integrating academic and CTE curricula.

2. Postsecondary education supports

Offering activities and services that expose students to postsecondary education is another way that YCC is expected to provide students with college and career options after high school. According to the grantee survey, nearly 80 percent reported that they offered college visits and college-preparatory coursework, such as dual-enrolled courses or those that articulated to a two- or four-year college program (Appendix D, Table D.20). Additionally, nearly half (46 percent) offered financial assistance, such as help planning for financial aid, completing the Free Application for Federal Student Aid (FAFSA), or assistance with tuition and fees.

Beyond traditional college tours for postsecondary support

One grantee arranged for small groups of YCC students to visit local colleges for STEM-related events. One day, students had the opportunity to compare a four-year and a two-year college. They also had the opportunity to attend a basketball game as guests of college engineering students.

Source: QPR narrative data

On site visits, respondents also discussed increasing access to postsecondary education through exposure and dual enrollment.

College exposure. As noted in the survey, exposure tended to include college tours and speakers, course curriculum review and alignment with postsecondary standards, and both formal and informal college-readiness support from college staff. Although these supports were

also offered to students outside YCC, 3 of the 10 grantees visited had specific postsecondary coaches or liaisons in place to support these activities, either at the high school or at the college, to facilitate connections between education partners. For example, a college liaison in one site worked with a high school's guidance counselors to coordinate postsecondary services for students. The job of the halftime postsecondary coach at one high school was not only to provide counseling and IDP assistance exclusively for YCC students, but also to spend time organizing college tours and building connections with state colleges. YCC students also received support from additional college staff (for example, résumé workshops from a college's career advisors or conversations about college readiness from college professors teaching dual-enrollment courses).

Dual enrollment. Dual-enrollment course opportunities were offered at the high school campus, online, or on the college campus. For example, one grantee offered dual credit for a capstone PLTW course that met on the high school campus and an online dual-enrollment option for YCC students only (a communications course at a local state university). The grantees visited varied in terms of which courses were approved for dual enrollment: some were specific YCC pathway courses, and others were more general in nature. For example, in partnership with a local community college, one grantee offered dual-enrollment opportunities for all high school juniors and seniors in classes such as statistics, sociology, and psychology, with plans to offer additional dual-enrollment courses in STEM that were mainly (though not exclusively) for YCC students. Such opportunities were frequently available to all students, with YCC students potentially receiving added encouragement or other incentives (such as paid college fees) to participate in them.

"[Through YCC], we are looking to cultivate the policy conditions that support the expansion of dual enrollment across the state."

—YCC grant administrator

Source: Site visit data

Establishing and facilitating dual-credit opportunities between high schools and colleges can be a complex, bureaucratic process. Three grantees that participated in visits reported facing various challenges, such as the following:

- Union and state rules guiding the involvement of college instructors in dual-credit courses.
- A long approval process for individual courses or for longer-term agreements between high schools and community colleges. Such processes were sometimes lengthened by college or high school bureaucracies.
- Student difficulty in completing courses needed to attend college because dual-enrollment courses did not meet subject matter requirements for college entrance. Scheduling conflicts meant that students sometimes had to choose between enrolling in a dual-enrollment course or a course that was required for college entrance.
- Restricting enrollment to students with certain grade minimums or thresholds so that they did not end up with a failing grade on their college transcripts.

3. Work-readiness training

Work-readiness training that helps students develop good work habits, positive attributes and attitudes, social skills, communication abilities, and professional competencies aims to

enhance an individual's performance on the job and foster ongoing success in the workplace. In the grantee survey, all schools reported that YCC provided such training (Appendix D, Table D.21). Specifically, virtually all schools taught the following work-readiness skills in YCC:

- Workplace behavioral expectations, including attendance, punctuality, and appropriate dress
- Workplace culture and communication, such as effective verbal and nonverbal communication and accepting feedback constructively
- Workplace performance expectations, particularly as related to collaboration and problem-solving skills

In addition, over 60 percent of grantees reported offering training in citizenship, prioritization and decision making, and teamwork (Appendix D, Table D.18). [5]

Schools took seriously the need to build work-readiness skills. Nearly all schools described in the grantee survey assessed such skills and offered competency-based assessments (Table III.2). The majority also reported that they offered assessments that reflected career practices, although most did not offer badges that recognized these assessments.

Table III.2. Assessing work-readiness skills

Assessment	Percentage of grantees that agreed that YCC used the assessment
Assessed workplace skills	96
Offered competency-based assessments	96
Offered assessments reflecting career practices	80
Offered work-readiness assessments	70
Awarded skill badges	14

Source: Grantee survey 2015, Appendix D, Tables D.17 and D.18.

Note: Table shows the percentage of grantees who agreed that YCC used these assessments for a selected school.

The site visits suggest that both formal and informal workforce-training activities focused exclusively on YCC students. Examples of relatively formal methods for work-readiness training in YCC included the following:

- **A weekly or every two weeks class session** delivered by counselors/WBL coordinators and guest speakers on topics such as the job search process, job-readiness skills, communication, problem-solving skills, and teamwork.
- **A weeklong work-readiness training curriculum** designed to introduce students to the hidden rules of workplace culture. Completion of the curriculum was a prerequisite to any internship or job shadowing.

[5] The PTS suggests that grantees also offered community service learning and leadership development activities to bolster work-readiness skills, but only 45 percent of YCC students participated in leadership development activities and only 20 percent participated in community service learning (Appendix D, Table D.22).

- **A two-hour soft skills workshop** delivered by a contracted provider. The workshop covered topics such as interviewing, résumé writing, social media, and time management.
- **Online work-readiness programs,** including a program designed to prepare students for WBL experiences by requiring them to earn a pre-internship badge. To earn the badge, students created a résumé and cover letter, participated in financial literacy training, and learned about work etiquette and professional behavior.
- **A college and career foundations course** that included résumé presentations and role-play activities. This course was required for all grade 9 and 10 students, including YCC students.

Examples of more informal methods for teaching workforce readiness included the following:

- **Incorporating work-readiness topics into other YCC classes** through a number of means, including inviting guest speakers from local businesses to speak during class, integrating formal work-readiness curriculum into regular instruction, and informal discussions led by YCC teachers about workplace success. Topics ranged from elevator speeches and eye contact to workplace behavior.
- **Coaching students on soft skills in one-on-one interactions with counselors.** One grantee, for example, relied on its YCC counselors to coach students in skills such as a firm handshake, communicating with others, and handling difficult interpersonal situations. Another had YCC counselors provide individual soft skills training by reviewing a series of work-readiness pamphlets that covered topics such as job interviewing skills and making good first impressions.
- **Training through "special event" days.** For example, every Wednesday was a "dress for success" day at one school. On these days, students dressed professionally and used academic language so that they could further understand the distinction between street and workplace language and demeanor. Other schools coached students on appropriate interactions and engagement with professionals in preparation for special events such as field trips to work places. Emphasized topics included thinking of questions to ask ahead of time, dressing and behaving appropriately, and being on time.

Work-readiness training in action

One grantee's grade 9 students participated in the "It's My Future" program, which focuses on workplace competencies and lessons in the areas of high-growth jobs, job interviews, soft skills, goal setting, the work environment, and personal brand.

Source: QPR narrative data

B. Connecting students with career-track employment

Connecting students to career-track employment is an integral part of YCC, and activities in this program component require employers to be engaged. Indeed, respondents in all 10 grantees visited spoke of the need for employer involvement to build and sustain connections with career-track employment. During the first year of grant funding, grantees made strides to connect with employers to set the foundation for providing such connections (as discussed in Chapter II), and discussions during site visits suggested that grantees leveraged these commitments to engage employers at a deeper level during the early implementation. Grantees reported continuing to

reach out to new employers who were not at the table during the planning stage to broaden their reach.

1. School-based career activities

Visits suggested that grantees delivered technical classes in ways that connected students with employers as part of the school's preexisting CTE program, as part of the newly established YCC pathway, or through a local community college or other education partner. YCC staff, typically counselors/WBL coordinators, generally coordinated efforts among students, employers, and school staff. These staff reported coordinating such activities with a particular focus on guest speakers and employer mentoring.

Guest speakers and career exploration. Most schools (92 percent) described in the grantee survey reported inviting guest speakers to describe their workplaces and careers to YCC students (Appendix D, Table D.23). From the schools visited, we learned that these guests tended to speak to freshman and sophomore students to improve their understanding of the world of work and occupations. Speakers talked with students during classes, before school, or during lunch or advisory period. Examples of such activities include a local manufacturing company discussing precision machining; a "Lunch and Learn" and "Business Breakfast" guest speaker series; and visits from software engineers who talked to students about careers in engineering and training opportunities in the local community. PTS data indicate that by the end of the 2015–2016 school year, more than one-third of students had attended guest speaker appearances or participated in career exploration services (Appendix D, Table D.24).

Employer mentoring. DOL requires YCC to provide mentoring, with the Solicitation for Grant Applications stipulating that mentors must have frequent contact with participants over the course of at least one year. Although DOL states that group mentoring is acceptable, it requires mentoring to include an assigned mentor who works individually with a student. Our discussions with staff suggested that during the proposal stage many grantees were unclear about DOL's mentoring requirement. As a result, they planned to provide group mentoring almost exclusively. DOL later clarified its intentions for mentoring, and grantees adjusted their mentoring goals. Still, the grantee survey indicated that 65 percent of schools offered group mentoring and that 57 percent offered individual mentoring (Appendix D, Table D.23). Only half of the grantees visited had implemented any mentoring services by the time of the visit. The other half planned to do so at a point later in the grant period, intending to implement a model that targets mentoring services to students once they reach later grades. Similarly, PTS data suggest that most students did not receive mentoring in the first two years of program implementation (Appendix D, Table D.24). At the end of the 2015–2016 school year, only about 30 percent of YCC students had participated in mentoring. Of those, most were enrolled in YCC for about 11 months before receiving mentoring and then received it for approximately two quarters.

Site visits suggested that WBL coordinators/YCC counselors were instrumental in enlisting employers to identify mentors, often using personal networks and tapping into the grantee's existing employer pool (those who helped plan and design YCC and those who provided a letter of commitment to it). Two grantees were especially successful, with one recruiting about 49 employer mentors and another recruiting 35 employer mentors.

Mentors were reported to engage with students in several activities, mostly at the school, such as reviewing student résumés, providing advice on how to apply for jobs, offering information about the types of jobs available in the community, and guiding students in applying to and paying for college. Staff reported several distinct benefits for students, including connecting them to role models, exposing them to new experiences, and giving them extra support.

Nonetheless, grantees continued to face challenges in recruiting mentors and coordinating schedules and arranging logistics for mentors and students to meet. Such challenges produced a range of creative solutions such as (1) targeting mentors to students in a specific grade (one targeted students in grade 10, one in grade 11, and one in grades 10 and 11)[6]; (2) requiring students to prepare for mentors by completing a 20-page application (for a strong mentor match), participating in a 20-minute interview with YCC staff, and attending a short orientation about mentoring; (3) matching students with employers regardless of employers' industry affiliation; and (4) setting up lunchtime mentor meetings with students, although students were reported to often had conflicting commitments.

2. Work-based learning activities

Grantees also organized activities at the workplace that connected students with career-track employment. Both the grantee survey and the site visits suggested that these activities generally fell into three categories: job shadowing, worksite tours/field trips, and internships.

Job shadows. Job shadowing provides students with an opportunity to spend time with and observe a seasoned career professional in his or her work setting with the goal of sparking interest in specific careers and comprehending what those careers involve. Among the schools described in the grantee survey, 70 percent reported offering job shadowing activities (Appendix D, Table D.23). Site visit interviews indicated that YCC programs offered job shadowing in diverse careers, such as nursing, radiology, and automotive technician. One grantee provided virtual job shadowing to all YCC students, using online technology to connect students to a network of professionals; however, because the school allowed only older students to participate in off-site job shadowing, grade 9 students most commonly participated in virtual job shadowing.

Worksite tours/field trips. Close to 90 percent of schools described in the grantee survey noted that they offered field trips to workplaces (Appendix D, Table D.23). Site visit respondents revealed that YCC counselors/WBL coordinators often visited the worksite before the students' visit to work out logistics, clarify the goals of the tour with the employer, and discuss what the employer should highlight during the tour. Tours were often organized by industry-specific pathways to ensure that experiences were connected to classroom learning. For example, YCC students in an engineering pathway toured an automotive transmission company, and YCC students in a health pathway toured a local hospital to learn about the range of careers in health care. During these tours, students were encouraged to ask questions about careers and the skills needed to succeed in them. Given the frequency of worksite tours, one grantee developed a "template" for organizing the tours.

[6] Site visits schools started YCC in grade 9 or 10, and grantees might not yet have activities for seniors.

Internships and other work experience. In the first two years of the grant period, many grantees did not focus on internships, in part because many grantees launched YCC with grade 9 or 10 students and did not plan to offer internships until grade 11 or 12 as career academies did (Kemple and Snipes 2000). Indeed, the grantee survey indicated that about 40 percent of schools offered paid (38 percent) or unpaid (39 percent) internships and that it was relatively uncommon to require students to participate in an internship (22 percent) (Appendix D, Table D.23).

The site visits confirmed the relative scarcity of internships. Only three of the grantees visited offered internships, and they reported an insufficient number of slots to provide internships for all students. Furthermore, among the grantees that offered them, the array of internship opportunities varied somewhat; some grantees provided internships only in the specific industries that aligned to the YCC pathways, whereas others sought to place all students into an internship experience, regardless of whether that experience aligned directly with the career focus in which they were enrolled.

Internship opportunities

One grantee visited took advantage of its strong partnership with an LWDB to offer internships to students. The LWDB helped place YCC students in summer internships with the local school district's information technology department, and the LWDB supported the students' compensation and training.

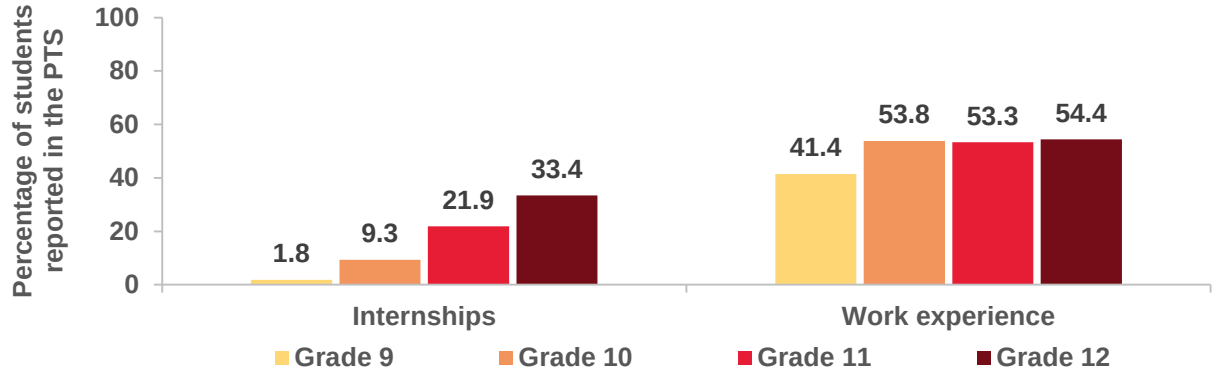
Another grantee visited specialized in the health care pathway and offered summer internships for YCC students at a local medical center in various health-related positions. Before the internships, the WBL coordinator gave students a pep talk to reinforce soft skills, such as the importance of punctuality, maintaining good behavior, and keeping a positive attitude.

Source: Site visit data

The other seven grantees visited were still developing internships by recruiting employers and establishing guidelines for student safety and success. The site visit respondents indicated that WBL coordinators/YCC counselors collaborated with local employers and community organizations to identify internships that could benefit both YCC and non-YCC students. At least three grantees visited planned to coordinate with the local AJC to expand their options for internships. When offered, internships tended to be available for the summer or during the school day but were reserved for grade 11 and 12 students who were of legal working age, were making satisfactory academic progress, and had flexible schedules that allowed them to work during the school day.

PTS data show that 22 percent of grade 11 students and 33 percent of grade 12 students had internships during the first two years of the grant period (Figure III.2). However, 22 percent of students who had an internship participated in more than one (Appendix D, Table D.24). Nearly half had at least one paid internship (46 percent), and most had experiences in their chosen industry (64 percent) or occupation (18 percent). In addition, 53 percent had an internship with an employer partner who had a preexisting relationship with YCC. Across all grades, students were typically in YCC for 13 months before receiving an internship and then participated in an internship for one quarter. Although relatively few students were connected to employment through internships, a much larger number of students were directly connected to employers through other work experiences, such as job shadowing or other industry exposure (Figure III.2). By grade 12, more than half of YCC students could claim this type of work experience.

Figure III.2. Internships and other work experience during YCC



Source: PTS through the 2015–2016 school year, Appendix D, Table D.24.

Note: Figure includes students enrolled in YCC through the end of the 2015–2016 school year.

Grantees were to ask employers working with YCC students to provide feedback on and reinforce the students' soft skills. Grantees making this request used a variety of tools, including the following:

- **The DOL Work-Readiness Tool.** The tool covers attendance, punctuality, workplace appearance, taking initiative, quality of work, communication skills, responses to supervision, teamwork, problem solving/critical thinking, and workplace culture, policy, and safety.
- **Informally working with employers to address negative behaviors.** When problems arose during internships, grantees asked employers to reinforce soft skills training by using the same language as that in the formal work-readiness curriculum delivered to students.
- **Conducting mock interviews for internships.** One grantee asked industry representatives to provide feedback on student résumés, mock interviews, and professionalism as part of an internship selection process and coached them in soft skills such as eye contact and speaking skills.

3. Challenges to connecting students to career-track employment

Grantees identified three types of challenges to engaging employers that slowed their ability to connect students with career-track employment:

- **Legal restrictions.** Many employers, especially manufacturing companies, would not allow students under age 18 to work for them because of labor laws and regulations that often required employees to be fingerprinted, show proof of a negative tuberculous test, and undertake training.
- **Employer engagement.** Employers often did not have time to participate meaningfully.
- **Lacked of adequate staff resources.** YCC counselors/WBL counselors—the staff primarily responsible for employer engagement and outreach—reported that they were stretched thin because of their several YCC responsibilities. They had to balance their counseling role with

other roles, including employer outreach and coordinating and scheduling mentoring and WBL opportunities.

C. Academic and nonacademic supports

YCC was designed to provide a comprehensive set of student supports, including an SLC, individual counseling (including IDPs), and other personalized supports. The supports were intended to promote student engagement and help students determine which paths to pursue while addressing barriers to success. For example, research has indicated that SLCs can lead to a positive school climate, reduce dropout rates, and increase student achievement (Kahne et al. 2006). Indeed, YCC staff reported during the site visits that the supports benefited students, helping them prepare for the demands of college, balance family and school obligations, and identify transportation options (for example) that expedited productive participation in school.

1. Small learning communities

The Solicitation for Grant Applications directed grantees to develop SLCs. In the grantee survey, schools reported that SLCs took the following forms (Table III.3):

Table III.3. Small learning community features

Small learning community feature	Percentage of grantees offering the feature
Organization of space	
School within a school	67
Separate physical space	42
Stand-alone small school	4
Student and teacher schedules	
Teachers work with a specific group of students	78
Teachers have a common planning period	67
Students take classes in cohorts	52

Source: Grantee survey 2015, Appendix D, Tables D.25.

Note: Table shows the percentage of grantees who reported offering these SLC structures.

- **School within a school.** About two-thirds of schools reported that they implemented YCC as a school within a school. One site visit school, for example, is organized into eight academies, each with its own career focus. One of the academies is the YCC program. Two of the grantees visited structured YCC as schools, although the schools coexist with other schools in the same physical space. YCC teachers and counselors reported that this type of small learning community, which often featured classes geared toward social interaction and group collaboration, led to deep bonds between YCC students that encouraged peer-to-peer support and the feeling of being a "YCC family."
- **Dedicated space for YCC students.** Almost half (42 percent) of schools in the grantee survey reported that they had designated a separate physical space for YCC students, giving students and sometimes teachers a place to congregate and build community in a safe

environment (for example, a cozy room for YCC students, equipped with colorful furniture and a computer laboratory).

- **Common planning time.** About two-thirds of schools reported that they established common planning times for teachers. During the planning periods, YCC teachers shared best practices, discussed students' work, and jointly planned curriculum and lessons. Perhaps most important, the common planning time allowed academic and career teachers to make connections that helped them integrate academic and work-readiness or technical skills. At schools with common planning time, some teachers reported having their own close-knit group of peers, which facilitated the exchange of ideas and promoted discussions about ways to support and learn from each other.
- **Cohorts of students.** About half of schools described in the grantee survey organized YCC students into cohorts. The grantees visited used a cohort structure to group students by career focus, with YCC students taking most of their classes together and potentially staying together throughout high school. Most often, teachers worked with the same cohort and were slated to stay with that cohort through all subsequent years of the YCC programs. According to some teachers, this allowed them to "keep tabs" on their YCC students and notify each other when students were struggling, in or out of school, and to provide appropriate support. The cohort model also allowed teachers and students to form positive personal relationships. For example, for one grantee, YCC students took four of five classes together with the same four teachers, allowing the teachers to develop personal relationships with the students and coordinate with each other about student progress.

The site visits provided insights into two other ways in which schools helped structure small learning environments for students. First, small class sizes within a career pathway—in combination with out-of-the-classroom activities such as an engineering club, a robotics team, and an afterschool science program—helped students develop a sense of community within a learning environment. Second, advisory periods provided regularly scheduled times for YCC students and counselors or teachers to work together to provide mutual support. The advisory periods helped strengthen the connections between adults and students and allowed students to participate in activities such as club meetings and tutoring sessions and to use the computer laboratory or meet with teachers for extra help.

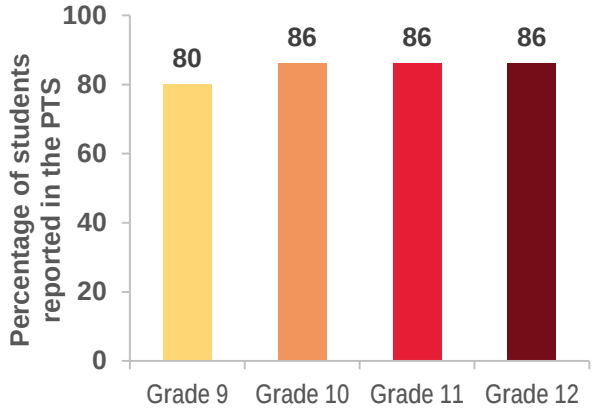
In addition to these specific strategies, many classes within the YCC pathways are using PBL to encourage students to work in teams. In at least four sites visited, schools are providing professional development on PBL specifically for YCC teachers, in an effort to make learning collaborative, real, and hands-on.

2. Individualized counseling

Individualized counseling in YCC is distinguished by its dual focus on academic and career guidance, which is framed around an IDP. According to site visit discussions, YCC counselors were the first point of contact for students' questions about their schedules, college, and career planning, and counselors worked with students one on one to explore their current situation; their academic progress; and their career options, plans, and decisions. Counselors not only developed IDPs with students, but also met students' parents, coordinated with other school staff, and connected students with WBL, tutoring, and supportive services.

The grantee survey (Appendix D, Table D.26) and the PTS (Appendix D, Table D.27) both suggest that counseling for YCC students is pervasive, especially in grades 10 through 12 (Figure III.3). Counselors at the grantees visited confirmed this impression, stating that they met with students regularly—ranging from weekly to monthly—in both formal and informal settings.

Figure III.3. Counseling for YCC students



Source: PTS through the 2015–2016 school year, Appendix D, Table D.27.

Note: Figure includes students enrolled in YCC through the end of the 2015–2016 school year.

Still, grantees faced challenges that hindered YCC counselors from providing the consistent, one-on-one support that YCC students might need, despite the counselors' best intentions to do so. The growing number of students enrolled as YCC evolved made it more difficult to serve students, even with the additional staff hired with YCC funding (see Chapter II). YCC counselors had to balance their counseling role with other duties, including identifying WBL opportunities and coordinating with employer mentors and school staff. As a result, they struggled to provide the counseling and support that some YCC students needed to address their complex problems outside of the classroom.

a. Individual Development Plans: A framework for counseling

DOL required that grantees help students develop and update an IDP, which sets career and education goals, work experience plans, and then identifies steps to align education and training to achieve these goals. Although the grantee survey suggested that virtually all grantees worked with students to develop and review such plans (Appendix D, Table D.28), the site visits and PTS suggest this might not be the case.

- Only 7 of the 10 grantees visited actively used IDPs. Five of these 7 grantees had used IDPs (or similar tools) for several years, but the IDP process was new for the other 2 grantees. Of the 3 grantees not using IDPs, 2 planned to use it in the following school year, but the 1 remaining grantee indicated it did not have plans to adopt IDPs.
- Even though not all grantees use IDPs, most provided counseling support in areas related to them. The grantee survey suggested that counselors at all schools helped students identify appropriate educational and career goals; in addition, most also administered career interest inventories (86 percent), assessed students' ability to obtain employment in their chosen careers (67 percent), and offered occupational information relevant for local labor market conditions (50 percent) (Appendix D, Table D.28).
- YCC counselors reported some challenges in using the IDP as a planning tool.

  - Counselors at 3 grantees remarked that the IDP was not particularly useful because of how often high school students changed their minds about their career interests and the classes they wished to take.
  - Counselors across the 10 grantees visited felt that the IDP may be inappropriate for freshmen because grade 9 students had not yet started to think about career interests. As a result, 2 grantees opted to use IDPs in a limited way until YCC students reached their junior and senior years, and another did not use it until sophomore year.

- The PTS suggests that less than half of YCC students completed an IDP, although the percentage increases as students move through their high school years (Appendix D, Table D.28). Only about 12 percent of YCC students in grade 9 had developed an IDP, but 77 percent of students in grade 12 had done so.

b. Academic counseling

The grantee survey and the site visits suggested that YCC counselors provided students several types of academic counseling. In addition to monitoring students' grades to make sure that students were on track for graduation, counselors helped students with education planning, college advising, and supports to improve study habits.

- **Education planning.** YCC counselors were an important partner in students' educational planning. The grantee survey disclosed that in all schools counselors helped students select courses that met their educational goals (Appendix D, Table D.28). Site visits indicated that counselors also set up students' schedules and identified dual-enrollment opportunities in their pathways. Such support was crucial, according to several YCC counselors, because YCC students enrolled in a pathway with little knowledge of the course requirements and were unsure if their courses would meet graduation requirements. At one high school, the YCC counselor worked with students to make sure they enrolled in classes that satisfied university entrance requirements.

- **College advising.** YCC counselors provided support for identifying and pursuing postsecondary education opportunities. The grantee survey suggested that about three-quarters of schools employed counselors who helped students select and apply to postsecondary education (77 percent) and find ways to finance postsecondary education or training (71 percent) (Appendix D, Table D.28). Site visits revealed similar college advising responsibilities, such as helping students complete college applications and counseling students about financial aid. In addition, counselors helped individual students schedule college visits and college entrance examinations. One grantee hired a postsecondary coach to focus exclusively on college access. The coach met with YCC freshmen about their college goals during their IDP sessions and looked for opportunities to expose them to college. She worked with teachers to ensure that freshmen and sophomores visited at least six college representatives during the school's college fair and helped build juniors' awareness of college requirements.

- **Supports to improve study habits.** Site visits suggested that YCC counselors connected students with supports to help them develop the study skills they needed to succeed in school. For example, students received information about coming to class prepared, how to

access tutoring services at the school or elsewhere, and how to manage their time effectively. At one school, the YCC counselor emphasized her expectations for strengthening basic study skills, particularly as related to organization and time management. The school had set up small, peer-run groups available to all students (YCC and non-YCC) to help them focus on these specific skills.

c. Career counseling

YCC counselors offered a variety of supports related to career counseling. The grantee survey suggested that counselors often helped students create resumes and practice interview skills (75 percent); they also assisted with job search and placement (65 percent) (Appendix D, Table D.28). Site visits confirmed that counseling included career planning activities, such as securing information on occupations suited to students' interests and career focus; connecting students with mentors' developing or improving students' résumés; providing information on how to look for jobs and succeed in job interviews; and connecting students to career-track employment through job shadows, guest speakers, worksite tours, and internships. Site visits also revealed variation in how grantees approached career counseling. Just over half (6 of 10) provided intensive career counseling, whereas others provided light-touch support. Those with an intensive approach hired staff, typically called counselors/WBL coordinators, devoted to career counseling; they worked actively with students to expose them to careers and help them learn about options after high school. Other grantees offered light-touch career counseling services by providing students with exposure to career preparation and planning, either through classes in which teachers talked about careers or in casual meetings with students' counselors.

3. Other personalized supports

YCC typically offered other personalized supports to meet students' individual needs. Specifically, schools offered the following:

- **Academic supports** in the form of individualized tutoring (73 percent) and homework assistance (67 percent) (Appendix D, Table D.20)
- **Nonacademic supports,** including financial assistance for transportation (71 percent), school supplies (61 percent), work clothes (52 percent), and various credentialing costs (50 percent) (Appendix D, Table D.29)
- **Supports for special populations,** including supports for students with disabilities, English-language learners, low-income students, and pregnant/parenting (83 percent) students, and health and well-being services, such as health care and psychological counseling (77 percent) (Appendix D, Table D.29)

Data from the PTS indicate that about 35 percent of YCC students received at least one supportive service (Appendix D, Table D.27).

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IV. UNDERSTANDING STUDENT OPTIONS AND PARTICIPATION

YCC seeks to improve students' post–high school outcomes through both school- and work-based program components that foster positive behaviors and build academic and career skills. To understand YCC's potential for effectiveness, we need to understand how the activities and services it offers differ from what is otherwise available to students and the extent to which students actually attend the program. In this chapter, we explore these dimensions of YCC effectiveness by first discussing the opportunities available to students in the same school but outside YCC or, if YCC is implemented school-wide, in a similar school in the district (Section A). We also present information on the extent to which YCC students actually attend school and, hence, have the potential to engage in YCC activities and services (Section B). Both the grantee survey and site visits provide insights into whether YCC differs from alternative programs; the PTS provides insights into whether students attend school.

Key chapter findings

- **YCC offers activities and services in each of the three core components, differentiating it from other programs.**
- **YCC offers students exposure to work-readiness and occupational skills training.** The grantee survey suggested that courses offered to YCC students might provide increased opportunities for active learning and an increased level of instruction in work-readiness or occupational skills. Site visits, however, revealed that courses outside YCC also use pedagogies such as PBL and PLTW, suggesting that the main differences might lie in increased exposure to work-readiness and occupational skills.
- **YCC connects students to career-track employment activities.** Activities and services offered in this area may produce the strongest contrast between YCC and other programs. Both the grantee survey and the site visits suggested that opportunities involving employers in ways that connect students to employment are available at a higher rate to YCC students than to students outside YCC.
- **YCC offers academic and nonacademic supports.** The small learning community might be the strongest differentiator between YCC and other programs with respect to supports. Counseling and the use of IDPs might also differentiate programs, although we have a limited ability to assess such differences. Other supports might be similar for YCC students and students outside YCC.

A. YCC differs from other programs available to students

Responses to the grantee survey suggested that YCC expanded students' access to activities and supports. Relevant information comes from grantees' answers to questions asking if specific opportunities were offered to YCC students and to all or some of the students outside YCC but in the same school (or at a similar school in the district if YCC was school-wide). Using this information, we identified YCC activities and services that differed from those offered outside the program as those with at least a 30 percentage point difference between being offered in YCC and being offered to *all students* outside YCC but in the school. Among those activities and services that differed for YCC, we identified those with a **strong contrast** in the case of at least a 20 percentage point difference between what was offered in YCC and what was offered to *some students* outside YCC; those with a **moderate contrast** in the case of a 10 percentage point difference between YCC and *some students* outside the program; and those with a **weak contrast**

in the case of a 10 percentage point difference (higher or lower) between the offer rate to YCC students and to *some students* outside YCC. Of note, none of the activities or services listed in the grantee survey was offered at an equivalent or higher rate to all students outside YCC.

Even though our analysis suggests activities and services might distinguish YCC from other programs (Table IV.1), especially when viewed in conjunction with information from the site visits, we recommend caution in generalizing findings. The schools described in the grantee survey are not representative of all schools offering YCC, and the rate of missing data is often high for activities and services offered outside YCC. In addition, questions did not inquire about comparisons associated with all YCC activities and services (for example, counseling).

Table IV.1. Opportunities available to YCC students and those outside it

Preparing for both college and career	Connecting students with career-track employment	Offering academic and nonacademic supports
Strong contrast		
• Work-readiness assessments (for example, WorkKeys) • Training in decision making and determining priorities • Training in organization and teamwork	• Field trips to workplaces • Job shadowing (group) • Job shadowing for individual students • Speakers to describe workplaces and careers	• School supplies support • School-within-a-school structure • Teachers work with a specific group of students • Transportation support • Work clothes or uniform support • Individual Development Plans
Moderate contrast		
• Citizenship training • Courses articulate to a two- or four-year college • Courses leading to industry-recognized credential • Occupational skills training • Project-based learning in courses	• Internships (paid) • Mentors (group)	• Cohort classes at each grade level • Costs paid for credential attainment (for example, fees for certification examinations) • Developmental or special education • Peer-centered activities (peer mentoring or tutoring) • Physical space dedicated to students
Weak contrast		
• Campus visits to two-year colleges • Campus visits to four-year colleges • Capstone courses • Certification examination preparation • College faculty or representatives visited high school classes • Community service learning • Dual-enrolled courses • Stackable credentials	• Connections to a training program • Internships (unpaid) • Mentors (individual) • Mock interviews staged by industry professionals	• Homework assistance • Individualized tutoring

Source: Grantee survey 2015, Appendix D, Tables D.18, D.20, D.23, D.25, and D.29.

Notes: The table shows the YCC activities and services in source tables that contrast with those offered in the same school but outside YCC (or by a similar school in the district if YCC is school-wide). YCC offers the services listed with at least a 30 percentage point increase over those offered to all students outside YCC. Those with strong contrast also had a 20 percentage point higher offer rate to some students in the same school, those with a moderate contrast had a 10 percentage point increase, and those with a weak contrast had less than a 10 percentage point difference (higher or lower).

The analysis suggests that YCC offered activities and services in each of the three program components that differentiated YCC from other offerings (Table IV.1). Even if some students in the same school received the activities and services listed in Table IV.1, the large differential (at least 30 percentage points) between those offered in YCC and those offered to all students in the school suggests that YCC expanded the availability of the activities and services. For each program component, we observe the following:

Preparing for both college and career. Many of the available activities and services demonstrating a strong or moderate contrast with other programs were course-based activities or services. Grantees reported that YCC offered students increased instruction in and assessment of work-readiness skills, including training in organizational and teamwork skills, decision making and determining priorities, citizenship, and occupational skills. Grantees also reported that YCC structured coursework in ways that led to articulation to a two- or four-year college program or an industry-recognized credential. PBL might help with curriculum integration, as it demonstrated a moderate contrast with programs outside YCC. Many other academic supports (for example, campus visits, college visits to classrooms, community service learning, capstone courses, dual-enrolled courses, stackable credentials, and preparation for certification exams) also seem to differentiate YCC from other programs, with a weak contrast.

In the schools visited, we saw less evidence of access to activities focused on college and career preparation than reported in the grantee survey. The 10 grantees visited all offered preexisting and concurrent CTE courses or career pathway programs. Three grantees offered PLTW courses to the general student population, and three grantees gave all students the opportunity to take dual-enrollment courses for college credit. Grantees visited reported few differences in the academic and career-focused learning opportunities offered to YCC and non-YCC students, except in some cases for expanded academic programming and benefits, such as dual-credit courses at no charge to the student.

Connecting students with career-track employment. The grantee survey suggests that schools offered both school-based and WBL services at much higher rates to YCC students than to other students in the same schools. In strong contrast to other programs, YCC offered students field trips to workplaces, job shadowing (both in groups and individually), and classroom speakers describing the workplace. It also offered—in moderate contrast to other programs—paid internships and group mentoring and, to some degree of contrast, other job-related services, including connections to training programs, individual mentoring, unpaid internships, and mock interviews staged by industry professionals.

The site visits confirmed the strong contrast in WBL activities between YCC and other programs. Respondents at 7 of the 10 grantees visited indicated that even though non-YCC students at some schools participated in WBL activities, the WBL services were far less intensive than those offered to YCC students and provided far less industry exposure. Respondents at four site visit grantees attributed the difference to the fact that a WBL coordinator was dedicated to serving YCC students and helping the students make industry connections, such as internships.

Offering academic and nonacademic supports. Evidence from the grantee survey suggests grantees offered some counseling services, SLC features, and other supports at much higher rates for YCC students than for non-YCC students. For example, there was a strong contrast in the use of IDPs for YCC and non-YCC students. Additionally, analysis suggests that YCC offered students an SLC at a far higher rate than what was available outside YCC. Features such as school-within-a-school structures and teachers working with a specific group of students all showed a strong contrast between YCC and other programs; at the same time, cohorts of YCC students taking classes together and the availability of a physical space dedicated to the use of YCC students demonstrated a moderate contrast with supports outside YCC. Many supportive services provided to YCC students contrasted strongly or moderately with the supports provided outside YCC, including supports for school supplies, transportation, work clothes, fees, developmental or special education, and peer-centered mentoring or tutoring. There was a weak contrast for other supports, including homework assistance and individualized tutoring.

The site visits also provided insight into differences between counseling and supportive services for YCC and non-YCC students. Interviews indicated that grantees provided more in-depth counseling services for YCC students than for others. For example, no grantee developed an IDP with non-YCC students, and the range of counseling services provided to non-YCC students was usually more limited and less intense than that provided to YCC students. In contrast to the grantee survey, site visits suggested only subtle differences in the supportive services available to YCC students and non-YCC students. In most cases, staff reported that all students had access to the same supportive services, either directly at the school or through referrals to external organizations. Site visit grantees reported that they generally did not reserve YCC grant funds for supportive services.

B. Attending YCC

Given that grantees had benefited from only two years of funding at the time of our data collection for this report and that not all program components were yet in place, we cannot discern YCC's long-term pattern of participant attendance and program retention. The PTS does, however, allow us to describe early patterns of attendance and participation (Appendix D, Tables D.30 and D.31):

- **YCC students had attendance rates slightly higher than national averages.** On average, grade 9 and 10 participants attended approximately 93 percent of school days, and the attendance rate for grade 11 and 12 participants was approximately 92 percent. The rates are slightly higher than national averages. In the 2007–2008 school year, for example, the nation's average high school daily attendance rate was 91 percent (U.S. Department of Education 2011).
- **Fewer than 20 percent of students in grades 9 to 11 left YCC.** PTS data indicate that relatively few of these students left because they dropped out of high school, with less than 2 percent of 9th graders, less than 5 percent of 10th graders, and approximately 12 percent of 11th graders leaving YCC because they dropped out of high school. These numbers should be interpreted with caution, however, as the PTS did not classify the reason for program exit for approximately 40–70 percent of students in grades 9 to 11 who left YCC.

- **More than 60 percent of students in grade 12 that left YCC had completed the program.** Another 19 percent left YCC but remained in high school, and another 2 percent dropped out of high school.
- **More than half of grade 12 students had completed at least one course that could lead to postsecondary credits.** As expected, few 9th- and 10th-grade students had completed at least one course that could lead to the attainment of postsecondary credits. However, 40 percent of students in grade 11 and 53 percent of students in grade 12 had completed at least one such course. Among the grade 12 students with postsecondary credits, the average student earned four credit hours.

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V. PROFESSIONAL DEVELOPMENT

DOL requires YCC grantees to provide professional development and training during the grant period with the goal of having teachers, guidance counselors, and other school staff gain the knowledge and skills needed to develop the core curricula and support services that can guide students to a career in their chosen career focus area. Professional development also supports the goal of sustaining YCC services after the grant period.[7] The grantee survey, site visits, QPR narratives, and PTS all collected information about the professional development opportunities that grantees offered to YCC staff, suggesting that grantees made numerous professional development options available, with opportunities generally focused on instruction. In this chapter, we describe the type and level of available professional development opportunities (Section A) and their associated challenges (Section B).

Key chapter findings

- **Grantees provided professional development opportunities.** Most opportunities focused on development for course instructors, most often related to curriculum and instruction.
- **Challenges reported by a few grantees included their inability to compel teachers to participate, competing requirements, and limited staff time.**

A. Professional development

In the grantee survey, all but one grantee reported offering opportunities for professional development (Appendix D, Table D.32). When grantees described the opportunities in closed-ended questions, they reported that they most frequently offered professional development opportunities for PBL (78 percent). Additionally, more than half (57 percent) also offered development on incorporating an industry focus into the curriculum, and about 44 percent offered opportunities to build industry-specific skills and competencies. Few (17 percent) said that they offered intensive industry-focused training. Grantees also reported that professional development focused on collaboration or establishing communities of practice with other teachers or partners (70 percent). In particular, some grantees reported that they offered opportunities for individualized mentoring or coaching by master teachers or industry experts (44 percent), and about one-quarter said that they offered industry site-based residencies or externships.

[7] Sustainability plans will be assessed in more detail during future evaluation data collection efforts and reports.

Discussions with staff during the site visits supported the above findings. Staff, particularly course instructors, reported that YCC provided discrete and ongoing professional development opportunities. Formal training took the form of PLTW certification, participation in an intensive STEM academy, and participation in PBL training (provided by the Buck Institute for Education). For at least 4 of the 10 grantees visited, schools provided professional development in PBL for YCC teachers in an effort to encourage hands-on, collaborative learning. Less often, staff mentioned that professional development incorporated participation in webinars, online workshops, and various other types of training—including professional development provided by partner organizations such as community colleges and the LWDB. Two grantees used professional development resources for teachers to participate in industry externships (sidebar).

Professional development: Harnessing the private sector

At one grantee visited, three YCC teachers took a professional development course offered by a software engineering firm. The course taught them how to use industry-relevant engineering and design expertise in the classroom and how to implement project-based learning. The course provided professional development points for successful completers as well as access to the company's proprietary engineering software.

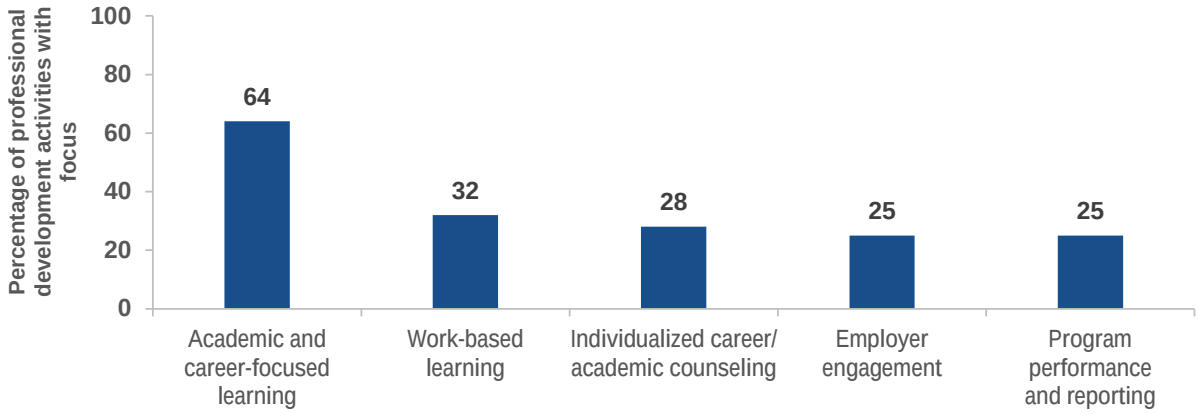
At another grantee, high school staff participated in a teacher training laboratory program offered by an industry partner (a utility company). The staff received on-site professional development in how to integrate energy and sustainability topics across the curriculum.

Source: QPR narrative data; site visit data

The site visit discussions also suggested that professional development opportunities supported teachers' regular meetings with each other. In these sessions, teachers may have collaborated to create new curriculum content, discuss PBL strategies, or develop project-based units and interdisciplinary themes for projects. One grantee facilitated such a collaborative exchange and professional development across its schools by convening monthly YCC group meetings at each of its 10 schools to provide a forum for counselors and others to share ideas and strategies. Two grantees hired instructional coaches to support YCC teachers' development and curriculum planning.

PTS data further confirm that grantees most often offered professional development opportunities that addressed curriculum and instruction; in fact, the two most commonly reported topic areas of professional development were academic and career-focused learning and WBL (Figure V.1). Still, professional development activities reported in the PTS suggest that grantees also provided opportunities that did not address instruction: approximately one-quarter of opportunities (each) dealt with individualized career and academic counseling, employer engagement, and program performance and reporting.

Figure V.1. Focus of professional development sessions



Source: PTS through 2015–2016 school year, Appendix D, Table D.33.

Note: Numbers show the percentage of professional development sessions offered during the 2014–2015 through 2016-2017 school years (about 100 per grantee) that focused on each topic.

B. Challenges in providing professional development

During the site visits, staff described two major challenges that limited their ability to use professional development to enhance their staff's ability to guide students to a career in their chosen career focus:

1. **The inability to compel teachers to participate in professional development.** The grantees visited could not require staff to participate in professional development opportunities. Teachers had only so much time available for lesson planning and preparation, and they had to address students' basic skill deficiencies and behavior issues as well as prepare students for high-stakes testing. These competing demands left teachers with little time to engage in professional development for YCC. The provision of stipends was one strategy to encourage participation, with at least three grantees visited providing stipends for various professional development opportunities, including weekly collaborative teacher meetings.
2. **Alignment with other professional development activities.** At least one grantee noted that time demands are a major challenge, given today's many local reforms requiring professional development. School leaders or staff must align the various professional development opportunities with each other, identify resources to fund them, and in some cases administer surveys to determine teachers' preferences for professional development.

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VI. SUMMARY

The YCC evaluation findings of early implementation demonstrate the accomplishments and challenges faced by grantees during the first two years of YCC funding. YCC's successes in both implementing program components and distinguishing YCC from other school programs point to the potential for fully implementing YCC's program components and building college and career readiness in high school students. However, the challenges in implementing key activities, particularly in WBL, indicate that success is not guaranteed. In this chapter, we summarize the evidence on YCC's early successes (Section A) and challenges (Section B) and then discuss next steps for program implementation and the YCC evaluation (Section C).

A. Early successes

Our research identified four early implementation successes for YCC: recruiting and enrollment strategies that led to enrollment of a diverse group of students, establishing community partnerships, offering activities and services in all major program components, and expanding student access to key supports and opportunities.

1. **Recruiting and enrolling a diverse group of students.** Grantees designed and implemented recruitment and enrollment systems that yielded a diverse group of students, including many historically underserved student groups. Students of color accounted for more than half of enrollees, and almost half of all students qualified for free or reduced-price lunch. Surveyed participants reported engagement in school and low levels of behavior problems before joining YCC. Surveyed students and their parents voiced high expectations for educational attainment, with most expecting that students would graduate from college or earn an advanced degree.

2. **Establishing community partnerships.** Grantees established new partnerships and strengthened existing ones. Employers, IHEs, community organizations, AJCs, and LWDBs were critical partners in program planning, with employers and IHEs frequently providing YCC resources, such as participation on advisory boards, assistance with curriculum development, and WBL opportunities, such as classroom visits, mentoring, internships, and job shadowing.

3. **Offering activities and services in all key program components.** Data from the grantee survey, site visits, and the participant tracking system indicate that grantees offered activities and services that—to some extent—prepared students for college and career, connected them with career-track employment, and supported them in academic and nonacademic ways.

    - **Preparing students for college and career.** Grantees indicated that they integrated academic and career courses and offered other activities and services designed to prepare students for successfully entering both college and a career. For example, grantees reported strategically pairing courses to develop complementary academic and career skills, using career examples in academic courses, and demonstrating through career coursework how academic coursework applied to the workplace. They also indicated that they adopted applied learning approaches such as PBL, integrated projects, and even specific curricula such as PLTW that developed academic and workplace skills

throughout several integrated courses. In addition, grantees reported creating new course sequences and offering industry-specific courses that successively built career-focused skills. Teacher collaboration may have facilitated integrated learning, with grantees describing co-taught classes and projects that spanned several courses. As part of their goal to prepare students for careers, YCC programs reported teaching students about workplace behaviors and skills, including appropriate dress, punctuality, attendance, taking initiative, and teamwork. This instruction took place formally—for example, in biweekly sessions or workshops—and informally—for example, by integrating such instruction into regular classes and interactions with counselors.

- **Connecting students with career-track employment.** YCC programs were designed to connect students with career-track employment experiences that could build the knowledge and skills needed to succeed in postsecondary education and the workplace. To that end, grantees reported involving employers in designing program curricula and WBL opportunities. Nearly all grantees offered opportunities for students to interact with employers at school through presentations, workshops, and mentoring and in the workplace through field trips, job shadowing, and internships.

- **Offering academic and nonacademic supports.** Grantees reported creating SLCs for YCC students and teachers, most often by operating as a school within a school that offered cohort classes and by assigning teachers to work with a specific group of students. YCC also offered a variety of academic supports that exposed students to postsecondary education (for example, college preparatory coursework and college visits) and provided both academic and career counseling.

4. **Expanding access to activities, services, and supports.** YCC distinguished itself from other programs in the same school in all three program components. Grantees reported that more than other programs, YCC offered instruction in work-readiness and occupational skills and used active learning pedagogies such as PBL and PLTW. YCC grantees reported involving employers in the program in ways that connected students to employment at a greater rate than did other programs in the school. Such activities were based both in school, in the form of group mentoring and guest speakers, and at the workplace, including job shadowing, field trips to worksites, and paid internships. Grantees also indicated that more than other programs, YCC offered SLCs by structuring schools within schools, assigning teachers to work with specific groups of students, scheduling students to take classes together as a cohort, and making physical space available exclusively for YCC students. Finally, grantees reported that IDPs were used more frequently in YCC than in other programs.

B. Early challenges

Despite the above accomplishments, our research identified three common challenges faced by grantees that might limit their ability to implement YCC fully. With grants awarded in April 2014, it is too early to assess whether grantees will overcome these early challenges.

1. **Services that required considerable planning and coordination with program partners, such as internships, mentoring, and dual-enrolled coursework, were slow to be implemented.** Staff reported facing a wide variety of challenges. For example, to ensure mentoring and internship opportunities, staff had to devote considerable time to coordinating

their efforts with employer partners, particularly given the range of regulatory restrictions and logistics to be addressed. To offer dual-credit opportunities, staff had to navigate complicated bureaucratic and logistical issues between high schools and colleges. It is important to realize, however, that many YCC services are intended for students in grades 11 and 12 (typically year three or four of program participation) and that many programs have not yet served a substantial number of older students for whom these opportunities are appropriate.

2. **Limited staff capacity impeded programs' efforts to implement activities and services.** As they planned for and implemented YCC, staff often faced competing demands and time constraints, thereby challenging their ability to collaborate and deliver YCC program components. For example, counselors—who are integral to the success of YCC—had to juggle many responsibilities, particularly when their position required them to serve as the WBL coordinator. Their duties frequently included working directly with students, providing scheduling support, connecting students to academic and career opportunities, recruiting mentors or internship hosts, and establishing various systems, such as those for matching students with internships and creating dual-enrollment pathways. Teachers also described challenges related to finding time for collaboration, planning, and development of innovative coursework. Although YCC provided funds that could be used to hire additional staff and relax some of these time constraints, program growth consumed the additional resources.

3. **The rigor and challenge of YCC courses left some students struggling.** Their struggles caused some students to question their commitment to remaining in YCC. In response, some grantees developed enrollment criteria to help ensure that students could successfully complete YCC, and at least one grantee created two levels of YCC courses, with one geared specifically to honors-level students.

C. Next steps in YCC implementation and evaluation

In their early years of implementation, YCC grantees established partnerships and program structures that allowed them to offer activities and services that laid the foundation to expand services in the future. Employer partners, for example, contributed to program design and helped connect students to the workplace, but many grantees had not yet established strong systems for matching students with mentors or internships. As YCC continues to develop, it will be important to see if grantees can leverage their partners to provide more direct WBL opportunities for students, particularly for the juniors and seniors for whom these experiences are most appropriate. In addition, DOL is interested in sustaining YCC after the grant period. Accordingly, grantees have offered professional development largely aimed at instruction for teachers and have established partnerships that, they believe, will continue after the grant period. The YCC evaluation will eventually provide a comprehensive picture of implementation near the end of the funding period in 2018, and in December 2019 a report will show how YCC affected behaviors in high school that are likely to lead ultimately to increased employment and earnings. With this knowledge, DOL will be able to better assess whether YCC programs met the goals of the grant and realized the potential suggested by its early implementation.

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APPENDIX A

GLOSSARY

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In Table A.1, we provide definitions for terms that we use several times throughout the report. Given that the glossary is a centralized resource for readers' reference to the definitions used in the report, it eliminates the need to define terms repeatedly and improves the exposition of the text. Whenever possible, definitions are taken directly from Appendix A in the *Notice of Availability of Funds and Solicitation for Grant Applications for the Youth CareerConnect Program* (https://www.doleta.gov/ycc/pdf/Youth_Career_Connect_SGA_13-01.pdf) with only minor rewording. We designate such terms with an asterisk (*). We list terms alphabetically and use acronyms defined in the List of Acronyms.

Table A.1. Definition of terms

Term	Definition
Academic and nonacademic supports	Holistic support to students that includes supportive and wraparound services to remove barriers to program participation, small learning communities, and individualized career and academic counseling. Definitions of each component are below.
Career pathway*	A clear sequence, or pathway, of education coursework or training credentials aligned with employer-validated work-readiness standards and competencies. Pathways allow workers to advance to increasingly higher levels of education and employment with a framework for weaving together basic and postsecondary education and workforce training currently separated into silos and connecting those services to employers' workforce needs.
College- and career-readiness standards*	State-determined K–12 academic content standards that build toward college and career readiness by the time of high school graduation. College- and career-readiness standards are either (1) standards common to a significant number of states or (2) standards approved by a state network of institutions of higher education, which must certify that students who meet the standards will not need remedial coursework at the postsecondary level.
Contextualized learning strategies*	Instruction that embeds traditional academic content (for example, reading, writing, mathematics) within a context that is meaningful to students' daily lives or interests; integrates real-world experiences into the curriculum; and develops knowledge, skills, and abilities in the context in which they will be used.
Counseling (career and academic)	Individualized assistance and guidance that includes career and postsecondary awareness and exploration opportunities beyond the high school experience and creation of an Individual Development Plan.
Employability skills*	A set of skills and behaviors necessary for any job. Examples include social competence, job-seeking and interview skills, workplace norms, conflict resolution, and communication skills.
High-growth industry/ occupation*	An industry or occupation that meets one or more of the following criteria: (1) projected to add substantial numbers of new jobs to the economy, (2) being transformed by technology and innovation requiring new skill sets for workers, (3) is new and emerging and projected to grow, or (4) has a significant impact on the economy overall or on the growth of other industries and occupations.

Table A.1 *(continued)*

Term	Definition
Individual Development Plan (IDP)	A road map that assists a student and parent/legal guardian in exploring available postsecondary career and educational opportunities and aligns coursework and curriculum to apply to postsecondary institutions, secure financial aid, and, ultimately, enter the workforce. Developing the IDP is a process that enables students to gain an understanding of themselves, explore careers, understand how postsecondary training can help them achieve their goals, and gain skills to become college and career ready. Each YCC participant is required to have an IDP. For more information see https://youthcareerconnect.workforcegps.org/resources/2016/01/15/16/06/Individual-Development-Plans-for-YCC-Students.
Industry theme*	Topics of study that incorporate industry- or occupation-specific core competencies and that enhance an ability to enter a specific career or career pathway.
Industry-recognized credential*	Certification of attainment of the measurable technical or occupational skills necessary to obtain employment or advance within an occupation. It is either (1) developed or endorsed by a nationally recognized industry association or organization or (2) sought or accepted by employers in the industry in hiring or recruiting. It must be awarded by a third party, such as an educational institution or a professional, industry, or employer organization. It demonstrates core competencies and meets industry standards for specific industry occupations. Examples include associate's and bachelor's degrees, registered apprenticeship certificates, occupational licenses, industry-recognized or professional association certifications (also called personnel certifications), and other certificates of skills completion for specific skill sets or competencies in one or more industry or occupation.
Integrated academic and career-focused learning*	A sequence of integrated college and career-focused courses that leads toward an industry-recognized credential, including postsecondary degrees; is organized around one or more career(s); integrates work-readiness skills; is contextualized to illustrate applications in the career field; provides opportunities to participate in interdisciplinary, project-based learning activities; and is aligned with the state's college- and career-readiness standards.
Job-readiness skills*	See employability skills.
Mentoring*	Includes one-on-one, group, or service-based mentoring in which program participants are matched with adult mentors in the selected industry or occupation. Mentors should have frequent contact with program participants over a prolonged period of at least one year and should provide students guidance in navigating their identified career pathway.
Program sustainability*	Includes (1) a focus on professional development during the grant period, including training of teachers, career counselors, and other staff, with the training concentrating on educating professional staff about the specific industry of focus and how to incorporate it into the core curriculum and (2) a sustainability plan that outlines how the program will be designed to build capacity and continue to provide the same level of instruction and support to participants whose participation will extend beyond the grant period.
School within a school*	A separate and autonomous smaller educational unit within a larger school. It has a separate educational program, its own staff and students, and its own budget. Both the teachers and students are affiliated with the school within a school as a matter of choice.

Table A.1 *(continued)*

Term	Definition
Small learning community*	Smaller, autonomous groups of students and teachers in a personalized learning environment that can better meet the needs of students. Generally, the same teachers and students remain together from grade to grade. Teachers in the units usually have common planning time to allow them to develop interdisciplinary projects and keep up with the progress of their shared students.
Soft skills*	See employability skills.
Stackable credentials*	Credentials that may be earned in sequence and build on previously learned content as individuals progress along a career pathway. With stackable credentials, individuals have the ability to build a portfolio of credentials as they transition from learning to work or to different and potentially higher-paying jobs.
Support services (wraparound)*	Services designed to address needs and ensure participant success. Services may include, but are not limited to, individualized tutoring, transportation, child care, services under the Individuals with Disabilities Education Act, tools, work clothes, or other necessary services.
Work-based learning*	Educational training that combines rigorous academic preparation with hands-on career development experiences to connect classroom instruction to the world of work and future career opportunities.
Work-readiness skills*	See employability skills.

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APPENDIX B

YCC GRANTEES AND SCHOOLS

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Table B.1 provides an overview of the grantees, schools and school districts implementing YCC as of September 20, 2016. It lists each grantee and the name of the program it is implementing with YCC funding and the schools and school districts in which it is implementing it.

Although the name of the YCC grantee and of its program are readily available from the grantee's application for funding, the name of the schools implementing YCC changed from the application and during the period in which the grant unfolded. We used the Participant Tracking System to identify schools—both high schools and community colleges—that were implementing each grantee's program by identifying schools with students who had been entered into the system as YCC participants as of September 20, 2016. For each high school, we identified the associated school district and the district's locale using the Common Core of Data for the 2013–2014 school year (https:/nces.ed.gov/ccd). Because some high school names changed during the course of YCC funding, with some changing multiple times, we standardized names across the appendices using those listed in this table. When the school implementing YCC is a community colleges, we designate it as such in the "community college" column.

We used the following acronyms in the table:

AJC	American Job Center
BIF	baseline information form
CS	community school
CSD	community school district
CTE	career and technical education
HS	high school
ISD	independent school district
PS	public school
ROP	regional occupational program
SD	school district
STEM	science, technology, engineering, and mathematics
USD	unified school district
YCC	Youth CareerConnect

Table B.1. YCC grantees and their schools enrolling YCC participants

Grantee (24)	YCC name	School name (131 high schools)	High school district (75)	Locale	ROP or career center (4)	Community college (7)
Academia de Directores Médicos de Puerto Rico, Inc.	Puerto Rico Youth Health Careers Program	Escuela Superior Lila María Mayoral Escuela Superior Dr. Rafael López Landrón Escuela Superior Natividad Rodríguez	Puerto Rico Department of Education	Suburban		
Anson County Schools	Anson YCC Program	Anson HS	Anson County Schools	Town		
Board of Education, Buffalo, New York	Medical Careers Pathway Program	MST–Math, Science, Technology School	Buffalo Public SD	City		
Bradley County SD	Pathways Bradley	Bradley Central HS Walker Valley HS	Bradley County SD	City		
Colorado City ISD	Colorado Career Academy	Colorado Career Academy Wallace HS	Colorado City ISD	Town		
East San Gabriel Valley ROP	East San Gabriel Valley ROP	Baldwin Park HS	Baldwin Park USD	Suburban		
		Covina HS	Covina-Valley USD	Suburban		
		Gladstone HS Sierra Vista HS Bob Margett Career Pathway School (aka Community Day School)	Azusa USD	Suburban		
		East San Gabriel Valley ROP		Suburban	X	
		Mt. San Antonio College				X
		Citrus College				X
Galveston Independent SD	Galveston Career Connect	Ball HS AIM College and Career Prep Odyssey Academy	Galveston ISD	Town		
Ivy Tech Community College of Indiana	Integrated Technology Education Program	Hamilton Heights HS	Hamilton Heights SD	Suburban		
		Carroll HS	Northwest Allen CS	Rural		
		Tipton HS	Tipton SD	Town		
		Eastern HS	East Washington SD	Town		
		Maconaquah HS	Maconaquah SD	Rural		
		Manchester HS	Manchester SD	Rural		
		North Miami HS	North Miami SD	Rural		
		Northfield Jr./Sr. HS	MSD Wabash County	Rural		
		Southwood Jr./Sr. HS				
		Northwestern HS	Northwestern SD	Rural		
		Peru HS	Peru SD	Town		
		Tri-Central HS	Tri-Central SD	Rural		
		Wabash HS	Wabash City SD	Town		
		Western HS	Western SD	Rural		
		Logansport Community HS Century Career Center		Town	X	
		Elwood Community School Corporation John H. Hinds Career Center		Town	X	
		Heartland Career Center		Rural	X	

Table B.1. *(continued)*

Grantee (24)	YCC name	School name (131 high schools)	High school district (75)	Locale	ROP or career center (4)	Community college (7)
Jobs for the Future, Inc.	Massachusetts Advanced Pathways Program	Brockton HS	Brockton SD	Suburban		
		Marlborough HS	Marlborough SD	Suburban		
		West Springfield HS	West Springfield SD	Suburban		
Kentucky Educational Development Corporation	Project ACHIEVE	Casey County HS	Casey County SD	Rural		
		Garrard County HS	Garrard County SD	Rural		
		Johnson Central HS	Johnson County SD	Rural		
		Knox Central HS Lynn Camp HS	Knox County SD	Town		
		Lawrence County HS	Lawrence County SD	Town		
		Lee County HS	Lee County SD	Rural		
		Middlesboro HS	Middlesboro ISD	Town		
		Pulaski County HS Southwestern HS	Pulaski County SD	Town		
Laurens County SD 56	Carolina Alliance for Technology	Clinton HS	Laurens District 56	Rural		
		Laurens HS	Laurens District 55	Rural		
		Ridge View HS Westwood HS	Richland District 02	Suburban		
Los Angeles Unified SD	Los Angeles USD YCC Program	Teacher Preparatory Academy/Technology Preparatory Academy Banning HS International Trade 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	City		
Manufacturing Renaissance	Manufacturing Careers & College Connect	Austin Polytechnical Academy	Chicago PS	City		
Metropolitan SD of Pike Township	Pike HS YCC Program	Pike HS	Metropolitan SD of Pike Township	City		

Table B.1. *(continued)*

Grantee (24)	YCC name	School name (131 high schools)	High school district (75)	Locale	ROP or career center (4)	Community college (7)
New York City Department of Education	CUNY P-TECH	In-Tech Academy Queens Vocational and Technical HS Academy for Software Engineering Urban Assembly Gateway School for Technology Transit Tech Career and Technical HS Brooklyn Technical HS Ralph McKee Career and Technical Education HS HS of Computers and Technology HS for Construction Trades, Engineering and Architecture Columbia Secondary School Chelsea CTE HS Energy Tech HS City Polytechnic HS of Engineering, Architecture, and Technology Inwood MECA (Manhattan Early College School for Advertising) Cisco Network Academy at the School of Co-operative Technical Ed Diesel Mechanic Apprenticeship Program HSE (high school equivalency) program at Jamaica Hospital	New York City Department of Education	City		
Pima County	CREO (STEM Math)	Pueblo Magnet HS	Tucson USD	City		
		Tucson High Magnet School				
		Buena HS	Sierra Vista USD	City		
		CPIC-CAS (Center for Academic Success) Charter School	Center for Academic Success, Inc.	City		
		Desert View HS Sunnyside HS	Sunnyside USD	City		
		Nogales HS	Nogales USD	Town		
		Rio Rico HS	Santa Cruz Valley USD	Town		
		Yuma HS	Yuma Union HS District	City		
		Pima Community College				X
		Arizona Western College				X
		Cochise College				X
Prince George's County Economic Development Corporation	Prince George's YCC Program	Potomac HS Bladensburg HS Fairmont Heights HS	Prince George's County PSs	Suburban		
Putnam County Board of Education	Youth Empowered for Success	Putnam County HS	Putnam County SD	Rural		

Table B.1. *(continued)*

Grantee (24)	YCC name	School name (131 high schools)	High school district (75)	Locale	ROP or career center (4)	Community college (7)
Rosemount ISD 196	E3 STEM (Exploration, Education, Employment in Science, Technology, Engineering and Math)	Apple Valley HS Eagan HS Eastview HS	Rosemount ISD 196	Suburban		
		Dakota County Technical College				X
		Inver Hills Community College				X
St. Paul ISD 625	St. Paul PS YCC Program	Como Park Senior HS Humboldt HS	St. Paul ISD 625	City		
SD Number 1 in the City and County of Denver	Denver Plan for Postsecondary and Workforce Readiness	Martin Luther King Early College John F. Kennedy HS CEC Middle College High Tech High Early College Abraham Lincoln HS George Washington HS West HS East HS Manual HS	SD Number 1 in the City and County of Denver	City		
Toledo Public Schools	Pathways to Prosperity	Bowsher HS Scott HS Start HS Toledo Technology Academy Woodward HS	Toledo PS	City		
Upper Explorerland Regional Planning Commission	IA-PIPE: Northeast Iowa Pathways to Employment	Waukon HS (Allamakee)	Allamakee CS	Town		
		Central Community School (Elkader)	Central CSD	Rural		
		Clayton Ridge HS (Guttenberg)	Clayton Ridge CSD	Rural		
		Decorah HS	Decorah CSD	Town		
		Starmont HS	Starmont CSD	Rural		
		Kee HS (Eastern Allamakee)	Eastern Allamakee CSD	Rural		
		Edgewood-Colesburg Jr./Sr. HS	Edgewood-Colesburg CSD	Rural		
		Crestwood HS (Howard-Winneshiek)	Howard-Winneshiek CSD	Town		
		Maquoketa Valley HS (Delhi)	Maquoketa Valley CSD	Town		
		MFL MarMac HS	MFL MarMac CSD	Rural		
		New Hampton HS	New Hampton CSD	Town		
		North Fayette Valley HS	North Fayette Valley CSD	Rural		
		Oelwein HS	Oelwein CSD	Town		
		John R. Mott HS (Postville)	Postville CSD	Rural		
		Riceville HS	Riceville CSD	Rural		
		South Winneshiek HS	South Winneshiek CSD	Rural		
		Turkey Valley Jr./Sr. HS	Turkey Valley CSD	Rural		
		West Central (Maynard)	West Central CSD (Maynard)	Rural		

Table B.1. *(continued)*

Grantee (24)	YCC name	School name (131 high schools)	High school district (75)	Locale	ROP or career center (4)	Community college (7)
Upper Explorerland Regional Planning Commission *(continued)*		West Delaware HS (Manchester)	West Delaware County CSD	Town		
		Cascade Jr./Sr. HS Western Dubuque HS at Epworth	Western Dubuque CSD	Rural		
		Hempstead HS Dubuque Senior HS	Dubuque CSD	City		
Westside Community Schools	Westside YCC	Westside HS	Westside Community Schools	City		

Source: Schools were identified by using the Participant Tracking System as of September 20, 2016.

Note: Numbers in parenthesis show the total number of entities listed.

APPENDIX C

DATA COLLECTION AND ANALYSIS METHODS

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Appendix C provides details on the five data sources collected and analyzed for this report.

1. **Round 1 of the grantee survey** collected quantitative information about YCC—as implemented at the school with the largest enrollment that started in the earliest grade—for each of the 24 grantees. Information reflects implementation about one year after the grants were awarded (data collected May to September 2015).
2. **Site visits** to 11 districts and 17 high schools collected information on YCC as offered by the 10 grantees considered for inclusion in a randomized controlled trial (which is no longer included in the impact evaluation). The visits focused on implementation, and the information collected during the visits provides in-depth qualitative insights into YCC policies, practices, and implementation about two years after the grants were awarded (data collected December 2015 to March 2016).
3. **Quarterly Progress Report (QPR) narratives** include the qualitative information submitted by all grantees to DOL as part of performance reporting. The information covers about two years of YCC operation (data collected last quarter 2014 [December 2014] through first quarter 2016 [March 2016]).
4. **Participant Tracking System (PTS) records** include the quantitative information collected by grantees on individual student participants as part of performance measurement. Data in this report cover participants enrolled in YCC programs offered by 23 grantees after about two years of funding (data collected April 1, 2014, to the end of the 2015–2016 school year).
5. **Baseline information forms (BIFs) of parents and students** who participated in YCC starting in fall 2016 at one of 8 grantees; the 8 grantees for whom BIFs were collected were a subset of the 10 grantees who participated in site visits. The forms provide information on student and household characteristics, education plans, activities, and work experience for a nonrandom sample of students prior to their enrollment in YCC (data collected fall 2015 through summer 2016 [the school's application period]).

In Table C.1, we show the grantees, schools, and high school districts included in the grantee survey, visits, PTS, and BIFs. We do not include the QPR narratives because each grantee was required to complete it for performance measurement. If a school or district is not listed, this means it is only included in this report as part of the grantee's QPR narrative.

The data sources were intentionally structured to highlight different dimensions of YCC, to provide information on different samples, and to include both quantitative and qualitative information. It is this complementarity that allows us to triangulate information about YCC and provide a robust analysis of implementation. A complete copy of all instruments (and data elements for the PTS) appears in the YCC evaluation design report (Maxwell et al. 2017).

Table C.1. Grantee and school participation in data collection activities

Grantee	School name	High school district	Grantee survey	Visits	PTS	BIFs
Academia de Directores Médicos de Puerto Rico, Inc.	Escuela Superior Lila María Mayoral	Puerto Rico Department of Education	X		All schools	
Anson County Schools	Anson HS	Anson County Schools	X		All schools	
Board of Education, Buffalo, NY	MST–Math, Science, Technology School	Buffalo Public SD	X	X	All schools	
Bradley County School District	Bradley Central HS	Bradley County SD	X		All schools	
Colorado City ISD	Colorado Career Academy Wallace HS	Colorado City ISD	X		All schools	
East San Gabriel Valley ROP	Baldwin Park HS	Baldwin Park USD	X		All schools	
Galveston ISD	Ball HS	Galveston ISD	X		All schools	
Ivy Tech Community College of Indiana	Heartland Career Center	Heartland Career Center	X		All schools	
Jobs for the Future, Inc.	Brockton HS	Brockton SD		X	All schools	X
	Marlborough HS	Marlborough SD	X			
Kentucky Educational Development Corporation	Johnson Central HS	Johnson County SD	X		All schools	
	Pulaski County HS Southwestern HS	Pulaski County SD		X X		X X
Laurens County School District 56	Clinton HS	Laurens District 56		X	All schools	X
	Laurens HS	Laurens District 55		X		X
	Ridge View HS	Richland District 02	X			
Los Angeles Unified School District	Bernstein HS STEM Academy of Hollywood	Los Angeles USD	X		All schools	
	Teacher Preparatory Academy					X
	Sylmar Biotech Health Academy			X		X
	School of Business and Tourism (Contreras Learning Center)			X		X
	School of Medicine, Arts and Technology (Manual Arts HS)					X
Manufacturing Renaissance	Austin Polytechnical Academy	Manufacturing Renaissance	X	X	All schools	X
Metropolitan SD of Pike Township	Pike HS	Metropolitan SD of Pike Township	X	X	All schools	X
New York City Department of Education	Energy Tech HS	New York City Department of Education		X	All schools	
	City Polytechnic HS of Engineering, Architecture, and Technology		X			
	MECA			X		
Pima County	Rio Rico HS	Santa Cruz Valley USD	X	X	All schools	X

Table C.1. *(continued)*

Grantee	School name	High school district	Grantee survey	Visits	PTS	BIFs
Prince George's County Economic Development Corporation	Fairmont Heights HS	Prince George's County Public Schools	X		All schools	
Putnam County Board of Education	Putnam County HS	Putnam County SD	X		All schools	
Rosemount ISD 196	Apple Valley HS	Rosemount ISD 196	X		All schools	
St. Paul ISD 625	Como	St. Paul ISD 625	X			
SD Number 1 in the City and County of Denver	Martin Luther King Early College	SD Number 1 in the City and County of Denver	X			
Toledo Public Schools	Bowsher HS	Toledo Public Schools		X	All schools	X
	Scott HS			X		X
	Start HS		X	X		X
	Woodward HS			X		X
Upper Explorerland Regional Planning Commission	North Fayette HS	North Fayette Community School District	X		All schools	
Westside Community Schools	Westside HS	Westside Community Schools	X		All schools	
Total	**38**	**28**	**24**	**17**	**23**	**16**

The remainder of this appendix provides a detailed description of the processes used to collect information from each source: grantee survey (Section A), site visits (Section B), QPR narratives (Section C), PTS (Section D), and BIFs (Section E). Tables use the following acronyms:

HS	high school
ISD	independent school district
NA	not available
PS	public school
PTS	Participant Tracking System
ROP	regional occupational program
SD	school district
STEM	science, technology, engineering, and mathematics
USD	unified school district

A. Grantee survey

The grantee survey was fielded to and completed by all 24 YCC grantees in summer 2015.[8] 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 (Table C.2).

[8] Most surveys were completed between May and July 2015, with two completed in August and September 2015.

Table C.2. Grantee survey topics and constructs captured

Topical area	Constructs measured
Organization and administrative structure	Grades covered, length, experience in offering YCC-related services, and funding
Partners	Institutions of higher education, employers, supportive service organizations, and local workforce development boards
YCC features	Career focus, recruitment methods, application processes, and service offerings, such as college visits, information on postsecondary schools and financing, job shadowing, mentoring, internships, and job search and other workforce preparation activities
Curriculum	Types of standards and assessments, academic courses, career and technical courses, and curriculum integration
Employer engagement	Development, support, and workforce preparation activities provided by employer partners
Career and academic counseling	Availability of dedicated counselors and coaches, frequency of students' contacts with counselors, and counselors' roles in identifying education and career goals and helping students meet those goals
Work-based learning	Skills students gain from YCC (such as technical skills), understanding of workplace behavioral expectations, culture and communication, and performance expectations
Support services	Availability of academic, career preparatory, financial, and health services
Small learning communities	Courses targeting YCC students, project-based learning activities, and availability of physical space devoted to YCC
Professional development	Types of professional development and number of hours provided to YCC staff

Grantees tailored YCC to the different districts, schools, or student populations for whom they offered it. Recognizing that visits or QPR narratives are best able to capture the complexities of this customization, we streamlined the survey to focus on only one high school for each grantee. We instructed grantees offering YCC in several schools to select the school with the earliest program start grade (usually 9); if multiple schools offered YCC beginning in that grade, we asked grantees to select the school with the largest YCC enrollment. An evaluation team member worked with grantees to help them select the school that would be described in the survey in order to ensure that the survey yielded information for a consistently defined set of programs and schools. In Table C.3, we list the schools in the survey and their starting grades. We see that 17 of the 24 schools started YCC in grade 9, 4 started in grade 10, and 3 started in grade 11.

Table C.3. Schools included in the grantee survey

Grantee name	District name	School name	Starting grade
Academia de Directores Médicos de Puerto Rico, Inc.	Puerto Rico Department of Education	Escuela Superior Lila María Mayoral	10
Anson County Schools	Anson County Schools	Anson HS	9
Board of Education, Buffalo, New York	Buffalo City SD	Math, Science and Technology Preparatory School	9
Bradley County SD	Bradley County Schools	Bradley Central HS	10
Colorado City ISD	Colorado City ISD	Colorado Career Academy Wallace HS	9
East San Gabriel Valley ROP	Baldwin Park USD	Baldwin Park HS	10
Galveston ISD	Galveston ISD	Ball HS	9
Ivy Tech Community College of Indiana	Ivy Tech Community College – Grantee	Heartland Career Center	11
Jobs for the Future, Inc.	Marlborough PS	Marlborough HS	9
Kentucky Educational Development Corporation	SD of Johnson County	Johnson Central HS	9
Laurens County SD 56	Richland SD 2	Ridge View HS	9
Los Angeles Unified SD	Los Angeles USD	Bernstein HS STEM Academy of Hollywood	9
Manufacturing Renaissance	Chicago PS	Austin Polytechnical Academy	9
Metropolitan SD of Pike Township	Metropolitan SD of Pike Township/Pike	Pike HS	9
New York City Department of Education	New York City Department of Education	City Polytechnic HS of Engineering, Architecture, and Technology	9
Pima County	Santa Cruz Valley Unified	Rio Rico HS	9
Prince George's County Economic Development Corporation	Prince George's County PS	Fairmont Heights HS	9
Putnam County Board of Education	Putnam County Charter School System	Putnam County HS	10
Rosemount ISD 196	ISD 196	Apple Valley HS	11
St. Paul ISD 625	St. Paul PS	Como Park HS	9
SD Number 1 in the City and County of Denver	SD Number 1 in the City and County of Denver	Martin Luther King Early College	9
Toledo PS	Toledo Public SD	Start HS	9
Upper Explorerland Regional Planning Commission	Upper Explorerland Regional Planning Commission	North Fayette HS	11
Westside Community Schools	Westside Community Schools	Westside HS	9

Although the focus on a single high school allows us to capture comparable information across grantees and reduced the burden of data collection, it limits our ability to generalize findings to implementation in all environments because the schools reflected in the survey are not necessarily typical of all schools offering YCC (Table C.4). Information generally pertains to a school with students who started in grade 9 (71 percent) and who were expected to take four years to complete the YCC program (71 percent). Grantees typically offered YCC in only one district (70 percent) but in several schools within that district (71 percent). The schools with YCC enrolled about 21 percent of their students in the program.

Table C.4. Characteristics of YCC schools selected for the grantee survey

Characteristics	Percentage
Lowest grade in which YCC began	
9	70.8
10	16.7
11	12.5
Average number of years to complete YCC	
Fewer than 4	25.0
4	70.8
More than 4	4.2
Number of school districts offering YCC	
1	69.6
2	8.7
More than 2	21.7
Number of schools offering YCC	
1	28.6
2	19.0
More than 2	52.4
Percentage of all students in the school in YCC	20.8

We administered the survey by emailing a fillable PDF file to the main YCC contact, typically the YCC director. For most grantees, a single respondent completed the survey. Some of the larger grantees could have had more than one person contribute to the survey, however, because we encouraged grantees to enlist the person with the most knowledge to complete each relevant section. We achieved an overall response rate of 100 percent.

We analyzed the survey data by using percentage distributions to describe characteristics and services measured with categorical variables and by using means to describe factors measured with continuous variables. We treated item-specific nonresponse—including invalid responses or outliers—as missing data.

Despite the richness of the information in the grantee survey and its inclusion of all grantees, the results of the analysis must be interpreted in light of the limitations of the data:

- **We have a limited ability to generalize findings** because the schools described in the survey are not necessarily typical of schools offering YCC.
- **We have no way to verify the accuracy of the information provided.** Grantees self-selected respondents to complete the survey, and we have no way of assessing either their level of knowledge about YCC or the accuracy of the data they provided. We have no reason to suspect that the information contains a relatively high degree of error, however.

B. Site visits

Between December 2015 and March 2016, the study team visited 10 grantees that they worked with for potential participation in the randomized controlled trial component of the impact study. The selection criteria included (1) the potential for demonstrating clear differences between YCC and programs in which students were likely to enroll in the absence of YCC (for example, other programs in the same schools) and (2) the potential for generating excess demand for YCC.

Grantees that met these criteria did not necessarily meet them in all schools in which they offered YCC. As a result, for some grantees, we visited the only school in which YCC was implemented; for other grantees, we visited more than one school; and, for one grantee, we visited two schools located in two districts, selecting schools that best met the selection criteria for inclusion in the randomized controlled trial. In Table C.5, for each of the 10 grantees scheduled for visits, we list the location, the number of districts and schools involved in YCC, and the number of districts and high schools visited. In total, the 10 grantees implemented YCC in 61 schools, and we interviewed individuals in 17 of these schools.

Table C.5. Grantees visited

Grantee (10)	State (9)	Locale	Number involved		Number visited	
			Districts (28)	Schools (61)	Districts (11)	Schools (17)
Board of Education, Buffalo, New York	New York	City	1	1	1	1
Jobs for the Future, Inc.	Massachusetts	Suburban	3	3	1	1
Kentucky Educational Development Corporation	Kentucky	Rural/ town	8	10	1	2
Laurens County School District 56	South Carolina	Rural/ suburban	3	4	2	2
Los Angeles Unified School District	California	City	1	7	1	2
Manufacturing Renaissance	Illinois	City	1	1	1	1
Metropolitan school district of Pike Township	Indiana	City	1	1	1	1
New York City Department of Education	New York	City	1	18	1	2
Pima County	Arizona	City/town	8	11	1	1
Toledo Public Schools	Ohio	City	1	5	1	4

Note: Numbers in parenthesis show the total number of entities.

Although our reliance on the above criteria to select grantees and schools for visits suggests those schools visited by the team might not be typical of all schools offering YCC, two factors suggest the grantees visited have much in common with other YCC grantees:

1. Document analysis of the QPR narratives (Section C) submitted by all 24 grantees suggests that the schools visited might be similar to those not visited in terms of the successes and challenges faced during design and implementation. For example, almost all of the 10 grantees visited indicated that establishing and facilitating dual-credit opportunities for YCC

students was a significant accomplishment and reported major difficulties in setting up internship opportunities for YCC students. These successes and difficulties were also reflected in the QPR narrative information provided by grantees not visited.

2. The schools visited showed diversity in many areas, and taken as a whole, they may share some characteristics with the broader group of YCC grantees. The grantees visited were located throughout the country and in city, suburban, town, and rural areas. Some offered YCC in single schools, whereas others offered YCC in several schools across a single district or in many schools across several districts (Table C.5).

A team of two researchers conducted two-day visits in one to four schools for each grantee. Three grantees implemented YCC in only one school, and we visited that school. The visits examined how the organizations running YCC structured their program, the partnerships involved in delivering YCC, the flow of participants through YCC, service design and delivery strategies, and successes and challenges associated with YCC implementation. We also sought to understand how each grantee designed and delivered YCC. To that end, we carefully identified core topics and key stakeholders who could provide insights into the topics (Table C.6).

To ensure consistency in data collection and a shared understanding of what needed to be accomplished on site, the study team prepared semistructured protocols by topic and respondent type to guide on-site activities. The protocols promoted uniform data collection that addressed the implementation study research questions while ensuring sufficient flexibility to pursue open-ended discussions with respondents as needed. Visitors participated in training geared toward using the protocols, understanding YCC's major program components, and identifying key respondents to be interviewed. Training for the visits drew on existing information (such as grant applications, information from the grantee survey, and the PTS) and was designed with the goal of providing information for the implementation study that would support and inform the impact study.

Table C.6. Protocol structure

Core topics	Interview respondent
Local context Local economic context School district context School context and climate	YCC coordinator/manager
Organization and administrative structure Grantee characteristics Grant administration and leadership Budget and funding Staffing Design YCC service model Planning process Grant management	YCC coordinator/manager
Recruitment and enrollment Eligibility, recruitment, application Student characteristics	YCC coordinator/manager YCC staff for school services
Integrated curriculum Integrated YCC classes YCC curriculum Postsecondary services Assessments Contrast with non-YCC offerings	YCC coordinator/manager YCC staff for school services Staff in alternative programs at school Postsecondary partners
Connecting to career-track employment Employer engagement Work-readiness training Work-based learning, career exploration Contrast with non-YCC offerings	YCC coordinator/manager YCC staff for school services Staff in alternative programs at school Employer partners
Academic and nonacademic support Counseling services Individual Development Plans Academic counseling Career counseling Small learning community Wraparound services Contrast with non-YCC offerings	YCC coordinator/manager YCC staff for school services Staff in alternative programs at school Supportive service provider partners
Professional development Professional development offerings Contrast with non-YCC offerings	YCC coordinator/manager YCC staff for school services

While on site, visitors gathered data through two primary means: (1) semistructured one-on-one and small-group interviews with respondents identified in Table C.6 and (2) document collection and review. In total, visitors interviewed 184 respondents. Visitors coordinated with staff before the visits to identify interview respondents with in-depth knowledge of YCC. Types of respondents included the following:

- **YCC coordinators/managers** responsible for administering and managing the YCC grant and overseeing YCC operations**.** Interviews with these 25 individuals gave the study team an understanding of how YCC was planned, how it was administered and implemented, the differences between YCC services and other services in the schools and districts, and the partnerships involved in YCC.

- **YCC staff responsible for delivering services at the schools**, including teachers, counselors, and work-based learning (WBL) coordinators. Interviews with these 97 individuals gave the study team insight into how YCC was implemented at each school.
- **Partner organization staff members,** including key individuals from organizations that provided YCC services to participants. Organizations included community colleges, the local workforce development board (LWDB), and other community-based organizations. Interviews with these 49 individuals provided the study team with information about the nature of the partnerships, how linkages were developed, and the role of partners in providing services to YCC participants.
- **Employers who were engaged in program development and WBL.** Interviews with these nine individuals provided details about the types and extent of employers' engagement in the planning, curriculum development, and workplace opportunities provided to YCC participants.
- **Career and technical education program staff who had knowledge of alternative programs.** Interviews with these four individuals provided information about alternative programs that might be of interest to YCC students (such as schools with specialized career academies) and how they may differ from YCC.

During the visits, the study team also collected documentation on YCC policies and practices, such as student handbooks, manuals, grant proposals to DOL, bell schedules, staffing and organizational charts, IDP templates, YCC recruitment materials, and YCC application forms. Study team members reviewed the documents to closely examine the policies and practices discussed by respondents during interviews.

To analyze the qualitative information collected from the visits, the study team reviewed the raw notes and materials and synthesized them into detailed write-ups based on a standardized template shared across the study team. The write-ups grouped information according to the YCC program elements identified in Figure I.1 in Chapter I (integrated curriculum, WBL, work-related classes, work-readiness training, individualized counseling, SLCs), context, accomplishments, challenges, successes, and sustainability. The implementation study team's lead (or the YCC evaluation project director if the lead was a site visitor) reviewed the write-ups completed by the study team for completeness, thoroughness, and accuracy. Visitors 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 subtheme, permitting cross-site comparisons. The study team used codes to cluster findings by core topics of interest and by themes. This allowed us 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 QPR narratives that had been organized by grantee, date of submission, and key topics summarized in the reporting template.

The similarities between the grantees visited and those not visited, the broadly representative nature of schools visited, and the rich, descriptive information about YCC operations, structure, design, implementation, and successes and challenges from the site visits provide insights into

early implementation of YCC. Nonetheless, we suggest caution when analyzing information from the visits because the data have several limitations:

- **The study team was unable to visit all 24 grantees.** YCC implementation varies greatly across grantees, and we were unable to visit all of the schools involved in YCC among the 10 selected grantees. Thus, our analysis covers only a small slice of the schools implementing YCC.
- **We interviewed only those respondents who were available and willing to be interviewed.** Although none of those asked for interviews refused, we may have introduced some self-selection bias into the interviews because some respondents were not available for an interview at the time of our visit.
- **The majority of the grantees had not yet launched the full array of YCC services at the time of the visit.** Many YCC activities and services, such as WBL opportunities, were in the nascent stages of development or still being planned at the time of the visits, limiting our ability to compare and contrast YCC across grantees. Also, grantees continued to modify their YCC services after our visits were completed.

C. QPR narratives

The study team reviewed, coded, and analyzed the QPR narratives for all 24 grantees. To coincide with the timeline of the visits, we reviewed all the QPR narratives from the last quarter of 2014 (December 2014) through the first quarter of 2016 (March 2016), or approximately 144 QPR narratives. The narratives summarized the grantees' progress and challenges in the relevant quarter as well as the activities planned for the upcoming quarter. Data in the QPR narratives provide a rich summary of grantees' progress in implementing YCC, particularly the activities, accomplishments, and challenges for *all* schools funded to implement it, even schools that the study team did not visit. Still, the QPR data have several limitations:

- **The narrative form did not allow us to confirm the information collected on site visits.** Even if we were to constrain the data set to the subset of grantees associated with the visits, those grantees' narratives addressed schools not visited or discussed during the visits.
- **The narrative form allowed for a free discussion of successes and challenges,** making the results inconsistent across grantees in the level of detail and topics discussed. We cannot report consistent data across the grantees and instead must use the data items to add richness to and provide some confirmation of patterns that emerged from the site visit data.

D. Participant Tracking System

DOL required all grantees to use the PTS to report to DOL on program performance throughout the grant period. DOL required grantees to provide 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 YCC.

Although the PTS contains information on all students who have ever enrolled in YCC programs, we limited our analysis to students who had done the following:

- **Participated in YCC between April 1, 2014, and the start of a district's 2016–2017 school year.** This restriction ensured that our sample had an opportunity to participate in YCC activities. If we had analyzed information from all students who had enrolled in YCC to date, our analysis might have included students who were starting YCC in fall 2016 and had not yet received services.
- **Enrolled in YCC with an executed memorandum of understanding or informed consent agreement with DOL** that allowed Mathematica to access individual-level data in the PTS. Only 1 of the 24 grantees did not have such an agreement in place at the time of data analysis.

The resulting sample included 13,073 students. The large variation in the number of students enrolled by each grantee meant that students were not evenly distributed across grantees (Table C.7).

Table C.7. Number of PTS records for each grantee

Grantee	Number of PTS records
Academia de Directores Médicos de Puerto Rico, Inc.	345
Anson County Schools	168
Bradley County School District	475
Buffalo Board of Education	286
Colorado City Independent School District	295
East San Gabriel Valley Regional Occupational Program	813
Galveston Independent School District	410
Ivy Tech Community College of Indiana	148
Jobs for the Future, Inc.	345
Kentucky Educational Development Corporation	751
Laurens County School District 56	451
Los Angeles Unified School District	1,869
Manufacturing Renaissance	159
Metropolitan School District of Pike Township	1,030
New York City Department of Education	1,597
Pima County	256
Prince George's County Economic Development Corporation	443
Putnam County Board of Education	202
Rosemount Independent School District 196	200
St. Paul Independent School District 625	NA
School District Number 1 in the City and County of Denver	1,998
Toledo Public Schools	338
Upper Explorerland Regional Planning Commission	307
Westside Community Schools	187
Total	**13,073**

Note: Numbers reflect students enrolled from April 1, 2014, the start of the grant, through the end of the summer following the 2015–2016 school year. St. Paul Independent School District 625, the district not included in this analysis, has about 2.5 percent of total YCC enrollment.

We used information from the PTS to describe students'

- **Characteristics at enrollment**, including demographic characteristics and YCC career focus in which the student enrolled;
- **YCC services**, including core services received, YCC-specific course participation, and internship placement; and
- **Short-term outcomes and post-exit outcomes**, including satisfaction with YCC, work readiness for internships, attainment of postsecondary credit, and attainment of industry-recognized credentials; other outcomes include placement in unsubsidized employment, postsecondary education, registered apprenticeships, and occupational skills training

We analyzed the PTS data by using percentage distributions to describe characteristics and services measured with categorical variables and by using means to describe factors measured with continuous variables. Given that the grades in which students enrolled in YCC varied by grantee and school (Table C.1), we analyzed characteristic and service receipt data for all YCC students (that is, in the aggregate) and separately by grade.

We treated item-specific nonresponse—including invalid responses or outliers—as missing data. Missing data were largely associated with data fields that DOL considered optional for grantees to report. Required fields had more complete information.

Despite the richness of the PTS data, results from the analysis must be interpreted in light of the limitations of the data:

- **The PTS relied on grantee data entry.** Given that DOL holds grantees to performance requirements, grantees have an incentive to report accurate and complete information; however, staff frequently reported that they had relatively large caseloads of YCC students and struggled to find the time and resources required to report all activities in detail and in a timely fashion. In addition, staff may lack experience in tracking participants in a grant-funded program. In fact, experience shows that individuals often face a relatively steep learning curve when entering data into a PTS.
- **The PTS, as extracted, includes only students enrolled between April 1, 2014, and the first day of the 2016–2017 school year.** As a result, some students will have participated in YCC for a short time (as little as one month), and some will have participated for two years. Because some of these students will ultimately participate in YCC for four years, we are understating the ultimate receipt of YCC services.
- **The PTS includes only a subset of grantees for any particular grade.** Grantees serving students in grades 9 and 10, for example, may not have had any grade 11 or 12 students in YCC in the 2015–2016 school year. As a result, we do not have a consistent set of grantees across grades, limiting the ability to make comparisons across grades.
- **The PTS collects post-exit outcomes.** Staff might experience particular difficulty in determining post-exit outcomes. For example, staff might be unable to determine a student's outcome if a family moved away and the student left YCC. Furthermore, we cannot verify that staff confirmed outcomes (for example, confirmation of self-reported wages with pay stubs or direct report of earnings from employers).

E. Baseline information forms

We administered BIFs to parents (that is, the "primary adult" who completed the form) and YCC students in 8 of the 10 grantees visited [9] with the intent of capturing information about students before they started their YCC program, generally at the time students applied to YCC for the 2016–2017 school year. In most cases, the student's mother completed the parent BIF (79 percent), although the father (15 percent), grandparent (2 percent), or someone else (2 percent) completed forms for some students. The parent BIF collected student household information as well as the reasons the parent wanted his or her child to enroll in YCC. The student BIF collected information on education, employment, and life stability (Table C.8) and asked questions about activities, school behavior, and motivation. Both BIFs collected several forms of contact information for use in future surveys.

Table C.8. Topics covered in BIFs

Topical area	Constructs measured
Student	
Education	School engagement, satisfaction, and behavior; importance of grades; highest degree expected to complete; participation in school-organized extracurricular activities; satisfaction with school, school behavior, hours spent on homework; and motivation
Employment	Work experience in paid and unpaid jobs
Life stability	Number of times ever arrested; used alcohol and drugs in previous month or ever; whether the student is a parent
Parent	
Demographic and household characteristics	Household structure; income sources;, parent/guardian education level, employment status, primary language spoken at home
Education and expectations	Number schools child has attended starting with 1st grade, degree expectations for child, talked to child about education after high school, reasons the parent thinks the child joined YCC,

For seven grantees (and 12 of these grantees' schools), program staff administered BIFs during the application period. In these schools, staff asked parents to provide consent for their students to participate in the evaluation and to complete a hard-copy form. Parents received a $5 gift card if they provided consent for their student to participate in the YCC evaluation. The students of parents granting consent were asked to complete the hard-copy BIF. Although parents simply returned the form to YCC staff, students were told to return their BIF in a sealed envelope to help ensure that parents or YCC staff did not modify student responses. The staff responsible for collecting the student forms were instructed not to review them and instead to collect and securely store them until a Mathematica employee picked them up.

[9] The New York City Department of Education's research review board would not release contact information for students applying to YCC until the receipt of parent consent, but we could not obtain consent without the contact information, which precluded us from administering BIFs. The Buffalo Board of Education uses a choice-based lottery system to assign students to programs, and its structure made it impossible to identify students who might enroll in YCC during the application period when BIFs were administered.

For the eighth grantee, Los Angeles, district rules prevented Mathematica from administering the BIFs to those expressing interest in YCC during the application period. As a result, the district relied on several methods to administer surveys:

- It mailed BIFs to parents of all grade 8 students who lived in a geographic area served by a YCC school. An accompanying letter explained the evaluation and asked parents to provide consent and complete a BIF. Mathematica identified YCC participants after enrollment.
- It worked with the grantee to distribute BIFs to parents at school or during events. The schools distributed BIFs at events, such as back-to-school night.
- It used school record information to locate parents and students in person but outside of school. After locating parents, Mathematica obtained consent for the student to participate in the evaluation and then administered a BIF.

In addition to the differences in BIF administration in Los Angeles (from other districts), the logistics of administering the BIFs varied at other schools in three ways (Table C.9):

1. **Timing.** Given that the timing of the application process differed across districts, BIFs were administered from fall 2015 through October 2016.
2. **Packaging.** In all but one school, BIFs were distributed as part of the YCC application package, such that students did not know if they would be selected to enroll in YCC. One school distributed the BIFs after the application process but before acceptance and enrollment.
3. **Follow-up.** YCC staff varied in the level of effort associated with administering BIFs. Staff in some schools followed up with both parents and students to ensure BIF completion, but some did not.

Table C.9. Grantee's process for distributing BIFs

Grantee (1)	Schools included	Dates completed	Administration
Jobs for the Future, Inc.	Brockton High School	February–April 2016	After application process, before enrollment
Manufacturing Renaissance	Austin Polytechnical Academy	November 2015–April 2016, September 2016	Part of the application process, heavy oversight for its completion
Metropolitan school district of Pike Township	Pike High School	November–December 2015	Part of the application process, heavy oversight for its completion
Laurens County School District 56	Clinton High School Laurens High School	February–June 2016	Part of the application process
Los Angeles Unified School District	School of Medicine Arts and Technology Sylmar Biotech Health Academy School of Business and Tourism Teacher Preparatory Academy	April–December 2016	After students assigned to programs, with rules limiting method of distribution

Table C.9 *(continued)*

Grantee (1)	Schools included	Dates completed	Administration
Kentucky Educational Development Corporation	Pulaski High School Southwestern High School	August–September 2016	Part of the application process, with heavy oversight for its completion
Toledo Public School	Bowsher High School Scott High School Start High School Woodward High School	February–April 2016	Part of the application process, with heavy oversight for its completion
Pima County	Rio Rico High School	February–April 2016	Part of the application process; cultural and language barriers made consent difficult

Note: Numbers in parenthesis show the total number included.

The logistical differences among the grantees translated into varying rates of survey participation. Overall, we received 513 BIFs from the 962 students and 535 BIFs from parents (Table C.10). The rate of completion represents 53 percent of students and 56 percent of parents who filled YCC slots in the 2016–2017 school year in the eight grantees in which we administered the BIF.

Table C.10. BIF participation rates

	Completed BIFs		YCC slots filled (from grantee)	Consent (parent) and assent (student) rates		BIF participation rates	
Grantee	Parent	Student		Parent	Student	Parent	Student
Jobs for the Future, Inc.	73	73	90	81%	81%	81%	81%
Kentucky Educational Development Corporation	66	57	66	100%	95%	100%	86%
Laurens County School District 56	56	55	124	46%	45%	45%	44%
Los Angeles Unified School District	54	48	319	18%	16%	17%	15%
Manufacturing Renaissance	24	21	27	89%	85%	89%	78%
Metropolitan School District of Pike Township	162	161	162	100%	94%	100%	94%
Pima County	44	42	80	66%	53%	55%	53%
Toledo Public Schools	56	56	100	86%	84%	56%	56%
Total	**535**	**513**	**962**	**60%**	**57%**	**56%**	**53%**

Note: The table compares parents and students who enrolled in YCC for the 2016–2017 school year with number of slots filled at the start of the year. Participation rates are a function of both parent consent and student assent rates and BIF completion rates.

We analyzed the information from the BIF by using percentage distributions to describe characteristics measured with categorical variables and by using means to describe characteristics measured with continuous variables. We treated item-specific nonresponse—including invalid responses or outliers—as missing data.

Despite the student background information gained from the BIFs, results must be interpreted in light of the BIFs' limitations:

- **BIFs covered only eight nonrandomly selected grantees and did not cover all of the schools in which the selected grantees administered YCC.** When we compared the students in the BIF sample to the overall population of YCC students in the PTS, we found that the age and gender were similar, but their race and poverty status differed. Most notably, the BIF sample included a much larger share of black students (38 versus 26 percent) and smaller shares of white Hispanic students (18 versus 35 percent). The BIF sample also included a larger share of students who qualified for free or reduced-price lunch (75 versus 45 percent), compared to the overall YCC population.
- **BIFs covered only grade 9 and 10 students.** Some grantees serve students starting in grade 11, but BIF administration did not include these students.
- **BIFs attained a low survey participation rate for some grantees.** As a result, we suggest caution in generalizing findings from the BIF analysis even to the eight grantees.
- **BIFs covered YCC participants only during a single school year.** The group of students enrolled in YCC could change over time as the grant period unfolded, but information from the BIFs reflects only those participants who entered YCC in fall 2016.
- **BIFs asked about sensitive information (for example, drug use) that students might be reluctant to answer truthfully.** Despite the precautions we took to ensure confidentiality of students' responses to questions, students may have had concerns about confidentiality and distorted their answers to sensitive questions.

APPENDIX D

DATA TABLES

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This appendix contains data tables with information used to develop many of the figures and tables in the text. Tables are presented in the order in which they are referenced in the text, with data sources shown in table notes. Table D.1 supports Chapter I; Tables D.2 through D.15 support Chapter II; Tables D.16 through D.29 support Chapter III; Tables D.30 and D.31 support Chapter IV; and Tables D.32 and D.33 support Chapter V.

We used the following guidelines when developing the tables in this appendix:

- Although tables include the number of respondents, item-specific nonresponse reduces that number in some cells. We use *italics* to identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.
- Percentages may not sum to 100 because of rounding.
- Most tables present means and frequency distributions from closed-ended questioning. When tables include a response from the open-ended *other* category, the response is designated by the use of "(write-in)".
- Tables using information from the grantee survey and comparing YCC and non-YCC students draw on information from questions in which respondents were asked if YCC offered each activity or service to its students and if other non-YCC students at the same school had the activity or service available. In these tables,
  - The "YCC" column shows the percentage of grantees indicating that the activity or service was offered to YCC students;
  - The "All non-YCC" column shows the percentage of grantees indicating that the activity or service was offered to all non-YCC students; and
  - The "Some non-YCC" column shows the percentage of grantees indicating that the activity or service was offered to some non-YCC students.
- In tables using the PTS, the following applies:
  - Some students will have participated in YCC for a short time, and some will have participated for up to two years, because data include all students enrolled between April 1, 2014, and the end of the 2015–2016 school year regardless of the length of YCC participation.
  - The grade in the 2015–2016 school year is based on the student grade at enrollment and assumes that students make standard academic progress. For example, a student who enrolled in YCC as a grade 10 student in the 2014–2015 school year is considered a grade 11 student in the 2015–2016 school year.
- Acronyms include the following:

AJC	American Job Center
BIF	baseline information form
CS	community school
CTE	career and technical education

EDC	economic development corporation
FAFSA	Free Application for Federal Student Aid
GED	General Educational Development
IDP	Individual Development Plan
LEA	local education agency
LOA	letter of agreement
LWDB	local workforce development board
MOU	memorandum of understanding
NA	not available
PTS	Participant Tracking System
ROP	regional occupational program
SD	school district
SNAP	Supplemental Nutrition Assistance Program
SSDI	Social Security Disability Insurance
SSI	Supplemental Security Income
WBL	work-based learning
WDB	workforce development board
YCC	Youth CareerConnect

Table D.1. Description of YCC grantees

Grantee	Location	Lead applicant organization type	Grade(s) YCC starts	Funding
Academia de Directores Médicos de Puerto Rico, Inc.	San Juan, Puerto Rico	Nonprofit	11	$2,842,834
Anson County Schools	Wadesboro, North Carolina	LEA	9	$2,247,373
Bradley County SD	Cleveland, Tennessee	LEA	9	$4,499,121
Buffalo Board of Education	Buffalo, New York	LEA	9	$3,898,700
Colorado City Independent SD	Colorado City, Texas	LEA	9	$3,482,704
East San Gabriel Valley ROP	West Covina, California	LEA	10, 11	$4,499,251
Galveston Independent SD	Galveston, Texas	LEA	9, 10	$3,975,000
Ivy Tech Community College of Indiana	Kokomo, Indiana	Nonprofit	11	$3,273,878
Jobs for the Future, Inc.	Boston, Massachusetts	Nonprofit	9	$4,867,815
Kentucky Educational Development Corporation	Ashland, Kentucky	Nonprofit	9, 10, 11, 12	$5,520,019
Laurens County SD 56	Clinton, South Carolina	LEA	9	$6,890,232
Los Angeles Unified SD	Los Angeles, California	LEA	9, 10	$7,000,000
Manufacturing Renaissance	Chicago, Illinois	LEA	10	$2,670,909
Metropolitan SD of Pike Township	Indianapolis, Indiana	LEA	9, 10	$7,000,000
New York City Department of Education	New York, New York	LEA	9	$6,999,601
Pima County	Tucson, Arizona	WDB	9	$5,351,690
Prince George's County EDC	Largo, Maryland	WDB	9	$7,000,000
Putnam County Board of Education	Eatonton, Georgia	LEA	9	$2,418,343
Rosemount Independent SD 196	Rosemount, Minnesota	LEA	11, 12	$2,990,026
SD number 1 in the City and County of Denver	Denver, Colorado	LEA	9	$6,999,980
St. Paul Independent SD 625	St. Paul, Minnesota	LEA	9	$3,680,658
Toledo Public Schools	Toledo, Ohio	LEA	9, 10	$3,824,281
Upper Explorerland Regional Planning Commission	Postville, Iowa	WDB	11	$2,784,360
Westside CS	Omaha, Nebraska	LEA	9,10	$2,647,212

Source: Grantee application information from DOL.

Table D.2. Career focus

Career focus offered in:	Percentage
Health sciences	66.7
Science, technology, engineering, and mathematics	62.5
Information technology	54.2
Manufacturing	29.2
Architecture and construction	20.8
Transportation, distribution, and logistics	20.8
Agriculture, food, and natural resources	16.7
Arts, audiovisual technology, and communications	16.7
Business management and administration	16.7
Finance	16.7
Hospitality and tourism	16.7
Law, public safety, corrections, and security	16.7
Human services	12.5
Education and training	8.3
Automotive (write-in)	8.3
Marketing	4.2

Source: Grantee survey.

Notes: Includes all 24 grantees. Career focus areas are those listed on the survey in prespecified categories selected by at least one grantee or entered as a write-in by more than one grantee.

Table D.3. Career focus areas selected by YCC students

	Grade in 2015–2016 school year				All grades
	9	10	11	12	
Career focus					
Percentage selecting a career focus	100.0	100.0	100.0	100.0	100.0
Percentage selecting the following industries[a]:					
Health care and social assistance	15.5	21.0	34.2	25.1	23.5
Professional, scientific, and technical services	15.0	21.3	22.7	22.3	20.1
Information technology	10.2	11.6	8.5	8.0	9.9
Manufacturing	8.1	7.2	9.2	11.5	8.6
Other services (except public administration)	14.3	6.9	5.1	0.3	7.5
Management of companies and enterprises	6.9	3.3	0.1	0.1	3.0
Unclassified	4.7	11.5	6.7	25.7	10.5
Percentage selecting the following occupations[b]:					
Architecture and engineering	27.6	25.0	12.2	12.0	20.5
Computer and mathematical	15.9	15.5	11.7	19.2	15.2
Health care practitioners and technical	11.8	12.6	16.1	15.6	13.8
Health care support	5.7	6.3	9.7	4.3	6.7
Business and financial operations	11.0	4.5	1.0	1.9	5.0
Student has not chosen	9.5	8.7	7.5	11.0	8.9
Percentage expecting an industry or occupational credential[c]	5.1	10.8	11.1	14.9	9.9
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**

Source: PTS.

Notes: The table includes all students enrolled in the PTS between April 1, 2014 (beginning of grants), and the end of the 2015–2016 school year regardless of length of participation in YCC. Some students will have participated in YCC for a short time; others may have participated for up to two years.

[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.

[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.

[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 D.4. Experience with key YCC activities

	Grantee	District	School
Providing CTE courses			
Percentage providing before grant	86.4	95.2	70.8
If provided, average years of experience	33.9	34.8	8.2
Integrating academic and CTE curricula			
Percentage providing before grant	91.3	91.3	70.8
If provided, average years of experience	17.3	18.0	2.6
Engaging employers in school-based programs			
Percentage providing before grant	95.7	100.0	70.8
If provided, average years of experience	22.1	19.9	3.6
Providing individualized career counseling			
Percentage providing before grant	81.8	81.0	70.8
If provided, average years of experience	16.2	15.4	3.2
Providing individualized academic counseling			
Percentage providing before grant	80.0	89.5	66.7
If provided, average years of experience	32.6	32.7	7.1
Providing WBL or exposure to the world of work			
Percentage providing prior to grant	86.4	90.5	62.5
If provided, average years of experience	24.2	23.4	3.8
Providing wraparound support services			
Percentage providing before grant	90.5	95.0	62.5
If provided, average years of experience	16.9	14.0	4.7
Offering small learning communities			
Percentage providing prior to grant	82.6	86.4	56.5
If provided, average years of experience	10.4	9.5	4.1
Providing internships outside of school			
Percentage providing prior to grant	72.7	71.4	43.5
If provided, average years of experience	19.8	18.6	4.9

Source: Grantee survey.

Notes: Includes all 24 grantees. The survey asked how much experience the program had. We interpret program in the context as the school.

Table D.5. YCC staffing

Staffing	Percentage at school	Percentage at central office/administration
Percentage with the following staff positions (several responses)		
Director		
Full-time	28.6	47.4
Part-time	10.0	35.0
Coordinator		
Full-time	42.9	21.1
Part-time	25.0	10.5
Work-based learning coordinator		
Full-time	35.0	25.0
Part-time	15.0	10.0
Career-technical education teacher		
Full-time	69.6	5.6
Part-time	33.3	0.0
Data specialist		
Full-time	10.0	27.8
Part-time	5.3	16.7
Other positions (write-in):		
Other administrator	16.7	8.3
Career coaches	16.7	4.2
Lead/core teachers	8.3	4.2
Support teachers	8.3	0.0
Other coordinator	0.0	8.3

Source: Grantee survey.

Notes: Includes all 24 grantees. The table presents staff positions listed in prespecified categories selected by at least one respondent or entered as a write-in by more than one respondent.

Table D.6. YCC partners

Partners	Employers	Institutions of higher education	Support service organizations	LWDB or AJC
Percentage with partners of this type	91.3	100.0	73.7	91.3
Of those with partnerships				
Average number of partners	18.8	2.6	*3.6*	1.3
Length of longest partnership (percentage)				
No months (all new)	*45.0*	*23.8*	*23.1*	*57.1*
1–12 months	*18.2*	*21.4*	*22.2*	*36.4*
13–36 months	*18.2*	*28.6*	*22.2*	*0.0*
> 36 months	*63.6*	*42.9*	*44.4*	*18.2*
Average percentage with an MOU or LOA in place	70.9	78.2	*91.7*	96.9
Average percentage grantee believes will continue post-grant	87.4	95.8	*100.0*	100.0

Source: Grantee survey.

Notes: Includes all 24 grantees. We can identify whether each grantee had at least one partner of each type. We cannot identify, for each grantee, the number of partners of each type. If all partnerships are new (resulting from YCC), the length of the longest partnership is zero months. For the length of longest partnership, the reported percentages do not sum to 100 percent because some grantees are missing data on length of partnership. For the percentage with an MOU or LOA in place and the percentage that the grantee envisions as continuing post-grant, we excluded grantees indicating over 100 percent.

Table D.7. Resources from YCC partners

Resources	
Budgets	
Average operating budget	$3,875,876
Range in operating budgets	*$1,768 to $25,000,000*
Number with in-kind funds provided	**18**
Among those receiving in-kind funds	
Percentage with in-kind funds from (several responses):	
Employers	100.0
Institutions of higher education	88.9
State or local government	55.6
Private foundation	33.3
School districts (write-in)	28.6
Number with financial resources provided	**17**
Among those receiving financial resources	
Percentage with financial resources from (several responses):	
State or local government	93.8
Private foundation	83.3
Institutions of higher education	40.0
Employers	28.6
School districts (write-in)	20.0

Source: Grantee survey.

Notes: Includes all 24 grantees. The table presents resources listed in prespecified categories selected by at least one respondent or entered as a write-in by more than one respondent. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table D.8. Employer engagement

Percentage agreeing/strongly agreeing the employer partner did the following	
Development and support	
Helped define strategies and goals	95.8
Actively participated on advisory board	95.8
Provided resources to support education/training	91.7
Provided leadership outside the advisory board	87.5
Served as informal advisor	83.3
Assisted with curriculum development and design	75.0
Served as outside grader or reviewer of classroom projects	63.2
Workforce preparation activities	
Provided field trips to employer's work site	91.3
Spoke at school to describe career fields	87.0
Engaged historically underrepresented populations (females and minorities)	*83.3*
Offered job shadowing opportunities	76.2
Provided students with mentors for less than one year	50.0
Provided project learning opportunities at workplace	50.0
Provided paid internships	45.0
Provided unpaid internships	42.1
Gave hiring preferences to students who completed YCC	*29.4*
Provided students with mentors for at least one year	16.7

Source: Grantee survey.

Notes: Includes all 24 grantees. Numbers reflect the percentage of respondents who agreed or strongly agreed that their employer partners engaged with YCC in the described capacities. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table D.9. YCC recruiting and application processes

Recruitment	
Percentage using each method to recruit students (several responses)	
Counselors	95.8
Self-referrals or walk-ins	70.8
Word-of-mouth referrals[a]	62.5
Flyers posted in high schools	58.3
Community outreach	58.3
School assemblies	50.0
Enrollment fairs	41.7
Flyers posted in middle or junior high schools	33.3
Certain students automatically enrolled	20.8
Did not actively recruit students	4.2
Other recruitment methods (write-in)	
Class visits	16.7
Other school events	12.5
Student meetings	12.5
Letters, emails, telephone calls	8.3
Application	
No formal application (percentage)	29.2 (7 schools)
Formal application (percentage)	70.8 (17 schools)
Percentage using each factor, if formal application (several responses)	
Academics and skills	
Grades above a minimum threshold	17.6
Test scores[b]	17.6
Special aptitudes, skills, or talents	11.8
Successful completion of prerequisite courses	11.8
Grades below a threshold	5.9
Background/characteristics	
Interest in subject matter	76.5
Grade level	58.8
Interview with staff member	29.4
Recommendation	29.4
Attendance record (either good or poor)	23.5
Special student needs (for example, disabilities)	5.9
Other application considerations (write-in)	
All accepted	8.3
Behavior/discipline	8.3
Essay	8.3
Participation in specific courses or activities	8.3

Source: Grantee survey.

Notes: Includes all 24 grantees. Recruitment methods and application considerations are those listed on the survey in prespecified categories selected by at least one grantee or entered as a write-in by more than one grantee.

[a]Word-of-mouth referrals could come from people in the community or former/current participants.

[b]Test score may include scores on placement tests, admission tests, or standardized achievement tests.

Table D.10. Parent-reported household and personal characteristics

Characteristics	
Household characteristics	
Number of individuals in household	
Adults, including primary adult, average (and range)	2.1 (1 to 6)
Children, not including YCC participant, average (and range)	1.9 (0 to 7)
Primary language spoken at home	
English	76.6
Spanish	17.5
Households reporting income from each source[a]	
Wage and salary	78.6
Food stamps or SNAP benefits	24.8
Medicaid	22.9
SSI, SSDI, or other disability benefits	10.5
Social Security or pension benefits	6.7
Welfare benefits or General Assistance	2.3
Unemployment insurance benefits	1.3
No household income	5.0
Highest education level of any adult in household	
Did not finish high school	*10.2*
Graduated from high school or received GED diploma	*32.9*
Graduated from a two-year school	*24.6*
Graduated from a four-year college	*18.3*
Advanced degree, such as a master's degree or Ph.D.	*14.1*
Parent (primary adult) characteristics[b]	
Relationship to student	
Mother (biological or adoptive)	78.7
Father (biological or adoptive)	15.2
Grandmother/grandfather	1.9
Holds a vocational certificate	25.5
Highest education level	
Did not finish high school	15.6
Graduated from high school or received GED diploma	39.5
Graduated from a two-year school	18.6
Graduated from a four-year college	15.6
Advanced degree, such as a master's degree or Ph.D.	10.7
Most recent period working for pay	
Last week	75.0
Last month	4.8
Last six months	1.4
More than six months ago	14.5
Never worked	4.4
Number of hours worked per week in most recent period worked[c]	38.2
Student mobility—changed schools since grade 1[d]	
Never	48.4
Once	22.2
Twice	11.8
Three or more times	17.6
Total number of parent respondents	**535**

Source: Parent BIF.

Notes: Percentages except where noted. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

[a]Includes sources of income received by anyone in the household in the last month.

[b]Parent (primary adult) is the individual who completed the BIF.

[c]Includes total hours worked in all paid jobs for individuals who reported ever working.

[d]School changes reflect the number of times a student has changed schools since grade 1, not counting structural moves (for example, "graduating" from an elementary school to a middle school) or moves occurring when schools were reconfigured (for example, when two schools merged).

Table D.11. Parent motivations for student to apply to YCC

Percentage reporting:	
Primary adult[a] was involved in decision to apply to YCC	72.9
Motivations, if adult involved in decision (several responses)[b]	
Will help student go to college	87.4
Will help student get more training	77.3
Will help student get a job	71.7
Will help student get his/her life on track	67.0
Best program in school	43.3
Only program available	18.0
Student's friends are joining it	8.6
Total number of parent respondents	**535**

Source: Parent BIF.

[a]Parent (primary adult) is the individual who completed the BIF.

[b]Percentages include primary adult respondents who indicated that each factor was "very important" in the decision to apply to YCC.

Table D.12. Parent- and student-reported expectations for students' educational attainment

Percentage reporting:	Parent-report	Student-report
Expect student to receive vocational certificate	*71.3*	*83.5*
Highest education level student expected to achieve		
High school diploma or GED diploma	4.4	3.0
Technical or trade school	3.3	1.3
Two-year college degree	7.9	7.4
Four-year college degree	40.3	39.4
Advanced degree, such as a master's degree or Ph.D.	43.4	48.9
Discussed postsecondary education with student		
Never	3.2	NA
Once or twice	14.5	NA
More than twice	82.3	NA
Total number of parent respondents	**535**	**NA**
Total number of student respondents	**NA**	**513**

Source: Parent and student BIF.

Note: Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table D.13. Student-reported work history

Work history	
Ever worked for pay (percentage)	13.8
Currently working, if ever worked	39.7
Timing of work, if ever worked	
During both summer and school year	47.6
During summer	39.7
During school year	11.6
If ever worked, average number of hours worked per week[a]	*11.0*
If ever worked, current or most recent occupation (percentage)[b]	
Personal care and service workers, other[c]	25.0
Grounds maintenance workers	23.3
Construction trades workers	6.7
Vehicle and mobile equipment mechanics, installers, and repairers	5.0
Other	40.0
Total number of student respondents	**513**

Source: Student BIF.

Note: Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

[a]Average hours worked per week includes the number of hours worked at all paid jobs; if not currently working, respondents provided the number of hours per week worked in their most recent job.

[b]Jobs are categorized according to three-digit Standard Occupational Coding system. Occupation codes that represent less than 5 percent of student responses are not shown.

[c]Most respondents in this category indicated their current or most recent job was babysitting.

[d]Many respondents in this category reported providing general help to their community.

Table D.14. Student-reported engagement with school

Engagement	
Percentage that say they	
Like school a lot	36.2
Like school	45.2
School is okay	17.4
Don't like school at all	1.2
Percentage that say grades are	
Very important	80.7
Important	17.5
Somewhat important	1.8
Not important at all	0.0
Average student grit score[a]	3.7
Average number of hours spent on homework per week	
During school hours (for example, study hall)	1.8
Before or after school hours on weekdays	3.2
During weekend	2.2
School activities participated in over past 12 months	
Percentage that participated in at least one school-sponsored activity	98.4
Participated in sports	56.5
Number of activities, if participated	2.1
Percentage that participated in music or drama[b]	43.3
Number of activities, if participated	1.6
Percentage that participated in a vocational education club or student organization[c]	36.7
Number of activities, if participated	1.7
Percentage that participated in clubs[d]	36.0
Number of activities, if participated	1.9
Percentage that participated in an honor society[e]	14.3
Number of activities, if participated	2.1
Percentage that participated in student government	11.6
Number of activities, if participated	1.3
Total number of student respondents	**513**

Source: Student BIF.

[a]Student grit score is computed by using Angela Duckworth's short (eight-item) grit scale (Duckworth and Quinn 2009). Students answer eight questions, each of which is scored from 1 to 5. A student's overall grit score is the average of his or her scores across all eight questions. Scores range from 1 ("not at all gritty") to 5 ("extremely gritty"). The table excludes students who did not answer all eight grit questions. For the questions and information about scoring, see https://examinedexistence.com/wp-content/uploads/2014/09/grit-vs-iq-angela-duckworth.pdf.

[b]Activities include band, orchestra, chorus, choir, school plays, and musicals.

[c]For example, Future Farmers or Homemakers of America, Vocational Industrial Clubs of America.

[d]For example, service clubs, academic clubs, hobby clubs, and school publications.

[e]For example, National Junior Honor Society.

Table D.15. Student-reported negative behaviors

Behaviors	
Negative student behaviors occurring in past three months (percentage)	
Late for school	
Ever happened	48.1
Happened three or more times	16.4
Had an unexcused absence from school	
Ever happened	37.4
Happened three or more times	9.1
Got in trouble for not following school rules	
Ever happened	25.9
Happened three or more times	5.3
Cut or skipped class	
Ever happened	5.7
Happened three or more times	1.2
Suspended or put on probation	
Ever happened	5.5
Happened three or more times	1.6
Alcohol and drug use (ever) (percentage)	
Ever drank alcohol	2.2
Drank last month, if ever drank	45.5
Ever used or tried marijuana	2.4
Used marijuana last month, if ever tried	41.7
Ever used or tried another type of drug	0.8
Used another drug last month, if ever tried	100.0
Criminal activity (ever)	
Ever arrested or taken into custody for a crime/offense (percentage)	1.2
Number of times arrested, if ever arrested	*1.0*
Total number of student respondents	**513**

Source: Student BIF.

Note Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table D.16. Academic and career courses

Percentage agreeing/strongly agreeing that with the statement	
Standards and assessments	
Curriculum and instructional materials in career-related classes were based on industry standards	100.0
Academic curriculum aligned to state career and college-ready standards	95.8
Academic courses	
Coursework reached high levels of English and mathematics (four years in each)	100.0
YCC graduates expected to complete coursework successfully to attend two-year college or apprenticeship training programs	*100.0*
Flexibility provided to students with special needs[a]	100.0
YCC graduates expected to complete coursework successfully in order to attend four-year colleges	*81.3*
Career and technical education courses	
Distinctive career theme integrated across all years of YCC	100.0
CTE courses sequenced to build technical skills from year to year	100.0
Students took courses for a career ladder in H-1B industry or occupation[b]	100.0
Aimed at developing career-specific skills needed to enter the field	100.0
Aimed at developing technological (for example, computer) skills	100.0
YCC students able to demonstrate knowledge of a variety of careers and related educational requirements in career field	95.5
Sequence of CTE courses enabled students to obtain skill certifications recognized by employers	90.5

Source: Grantee survey.

Notes: Includes all 24 grantees. Numbers reflect the percentage of respondents who agreed or strongly agreed that their YCC curriculum exhibited these characteristics. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

[a]For example, English-language learners, students in special education, students in Advanced Placement courses, students in International Baccalaureate courses.

[b]H-1B industries and occupations qualify nonimmigrant foreign workers for H-1B visas.

Table D.17. Curriculum integration and assessment

Percentage agreeing/strongly agreeing with the statement	
Curriculum integration	
Career-focused classes also taught academic skill building	100.0
Students were shown how their academic subjects relate to each other and apply in the context of adult professional work	95.8
Students engaged in projects that applied skills from several courses (for example, senior or capstone projects)	95.0
Academic courses used examples related to career theme	85.0
Assessment	
Workplace skills incorporated and assessed	95.8
Competency-based assessments offered	95.5
Several assessments reflected practices in career field	80.0

Source: Grantee survey.

Notes: Includes all 24 grantees. Numbers reflect the percentage of respondents who agreed or strongly agreed that their YCC curriculum exhibited these characteristics.

Table D.18. Integrated academic and career skill building offered to YCC students and students outside YCC

Percentage offering each activity	YCC	All non-YCC	Some non-YCC
Instruction	**95.8**	**19.0**	**90.5**
Project-based learning used in courses	95.7	9.5	81.0
Occupational skills training	70.8	11.8	58.8
Students complete capstone course that brings together knowledge learned	38.1	5.0	45.0
Certifications and credentials	**75.0**	**10.5**	**73.7**
Courses leading to industry-recognized credential	73.9	5.3	63.2
Preparation for certification examination	60.9	5.6	61.1
Stackable credentials	50.0	*5.9*	*41.2*
Skill badges	13.6	*6.7*	*20.0*
Work-readiness training	**83.3**	**45.0**	**80.0**
Work-readiness assessments (for example, WorkKeys)	69.6	*27.8*	*44.4*
Citizenship training[a]	69.6	*17.6*	*52.9*
Training in decision making and determining priorities	68.2	*20.0*	*40.0*
Peer-centered activities (peer mentoring or tutoring)	65.2	*17.6*	*52.9*
Community service learning	65.2	*25.0*	*60.0*
Organizational and teamwork training	60.9	*15.4*	*38.5*

Source: Grantee survey.

Notes: Includes all 24 grantees. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

[a]Citizenship training may include life skills such as parenting, work behavior, and budgeting of resources.

Table D.19. Participation in industry-specific courses

	Grade in 2015–2016 school year				All grades
	9	10	11	12	
Percentage taking industry-specific courses	62.9	68.5	77.1	78.1	70.7
If took industry-specific courses:					
Enrollment restrictions (percentage)					
Course open only to YCC students	81.4	85.1	54.1	39.7	65.8
Course open to non-YCC students	18.6	14.9	45.9	60.3	34.2
Average number of courses taken	2.0	3.2	3.3	3.7	3.0
Percentage taking:					
1 course	40.8	27.0	28.6%	23.3	30.2
2 courses	34.4	21.3	26.4%	20.8	25.8
3 courses	14.6	15.8	13.8%	17.9	15.3
4 courses	5.6	10.7	8.6%	10.6	8.9
More than 4 courses	4.6	25.2	22.6%	27.4	19.9
Percentage completing:					
0 courses	51.5	48.4	39.0%	37.9	44.8
1 course	32.7	25.3	24.5%	18.5	25.7
2 courses	12.8	13.3	14.7%	13.9	13.7
3 courses	2.6	6.5	10.2%	10.9	7.3
4 courses	0.4	4.3	2.8%	5.3	3.1
More than 4 courses	0.0	2.2	8.8%	13.5	5.4
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**

Source: PTS.

Table D.20. Academic and postsecondary supports offered to YCC students and students outside YCC

Percentage offering the following activities:	YCC students	All non-YCC students	Some non-YCC students
Academic support	**82.6**	**38.1**	**81.0**
Developmental or special education	81.8	25.0	70.0
Individualized tutoring	72.7	15.8	78.9
Homework assistance	66.7	15.8	73.7
Acceleration strategies to get lower-performing students up to speed by graduation	57.1	27.8	66.7
College visits	**79.2**	**26.3**	**73.7**
College faculty or representatives visited high school classes	70.8	22.2	66.7
Campus visits to two-year colleges	70.8	15.8	63.2
Campus visits to four-year colleges	62.5	21.1	63.2
Postsecondary preparatory coursework	**79.2**	**27.3**	**77.3**
Courses articulate to a two- or four-year college program	65.2	10.0	55.0
Dual-enrolled coursework	62.5	5.3	68.4
Advanced Placement coursework	50.0	15.0	65.0
College entrance examinations preparation courses	41.7	*18.8*	*50.0*
Postsecondary financial assistance	**45.8**	**40.0**	**55.0**
Financial aid planning assistance	37.5	35.0	50.0
Assistance with FAFSA completion	37.5	35.0	55.0
Tuition or financial assistance	33.3	26.3	47.4

Source: Grantee survey.

Notes: The total number of respondents is 23; one grantee did not provide information for any of the questions in this table. The percentage listed in the major heading (in bold) indicates the percentage of grantees offering one or more of the activities/services listed under the heading. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table D.21. Work-readiness training offered

Percentage agreeing/strongly agreeing that students are taught the following:	
Workplace behavioral expectations	
About work expectations for attendance and the need to adhere to them	100.0
About work expectations for punctuality and the need to adhere to them	100.0
To dress appropriately for a position and duties	100.0
Workplace culture and communication	
To speak clearly and communicate effectively–orally and non-orally	100.0
To accept direction, feedback, and constructive criticism with a positive attitude and use information to improve work performance	95.5
To demonstrate understanding of workplace culture and policy	91.3
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
Workplace performance expectations	
To relate positively with co-workers and work productively with individuals and in teams	95.7
To participate fully in a task or project from initiation to completion	91.3
To meet quality standards	87.0
To exercise sound reasoning and analytic thinking to solve workplace problems	82.6

Source: Grantee survey.

Notes: The total number of respondents is 23; one grantee did not respond to any of the questions on which the table is based. Numbers reflect the percentage of respondents who agreed or strongly agreed that YCC students are taught these skills.

Table D.22. Community service and leadership development activities

	Grade in 2015–2016 school year				All grades
	9	10	11	12	
Community service learning[a]					
Percentage participating in community service learning	11.6	21.2	26.3	24.7	20.4
If participated					
Average number of quarters	1.6	1.7	1.8	1.4	1.7
Average months in YCC before first service	8.1	9.5	14.8	9.4	11.8
Leadership development activity[b]					
Percentage receiving leadership development	34.8	50.5	44.9	48.6	44.5
If received					
Average number of quarters	2.2	2.3	2.0	2.3	2.2
Average months in YCC before first service	7.7	12.3	13.2	10.7	11.2
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**

Source: PTS.

[a]Community service learning incorporated participant reflection and is designed to develop work-readiness skills and positive behaviors, such as leadership, time management, teamwork, and respect for authority and fellow participants.

[b]Leadership development includes (1) exposure to postsecondary educational opportunities; (2) community and service learning projects; (3) peer-centered activities, including peer mentoring and tutoring; (4) organizational and teamwork training, including team leadership training; (5) training in decision making, including determining priorities; and (6) citizenship training, including life skills training such as parenting, work behavior training, and budgeting of resources.

Table D.23. Workforce-related activities offered to YCC students and students outside YCC

Percentage offering each activity	YCC students	All non-YCC students	Some non-YCC students
Connecting to employers: Internships	**58.3**	**5.6**	**61.1**
Unpaid internships	39.1	*5.9*	*41.2*
Paid internships	37.5	*6.7*	*26.7*
Internships at a place of work, but not required	27.3	*0.0*	*41.2*
Required internships at a place of work	21.7	*0.0*	*23.5*
Virtual internships	14.3	*7.1*	*7.1*
Connecting to employers: Other WBL	**91.7**	**20.0**	**70.0**
Field trips to workplaces	87.5	10.0	65.0
Job shadowing for individual students	69.6	5.6	38.9
Group job shadowing	60.9	5.6	38.9
Connecting to employers: Mentoring	**87.0**	***0.0***	***64.7***
Group mentoring	65.2	*0.0*	*53.3*
Individual mentors	56.5	*0.0*	*60.0*
Connecting to employers: Other school-based activities	**91.7**	**26.1**	**56.5**
Speakers to describe workplaces and careers	91.7	*26.1*	*56.5*
Other workforce preparation activities	**79.2**	**19.0**	**81.0**
Résumé-writing workshops	52.2	5.6	66.7
Mock interviews staged by industry professionals	50.0	*5.9*	*58.8*
Attendance at conferences of trade associations or professional organizations	56.5	*0.0*	*76.5*
Connecting students to a training program	43.5	*12.5*	*50.0*
Referral to programs at an AJC	9.5	*0.0*	*26.7*
Apprenticeships	4.5	*0.0*	*14.3*

Source: Grantee survey.

Note: Includes all 24 grantees. Activities listed on the survey in prespecified categories selected by at least one grantee or entered as a write-in by more than one grantee. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table D.24. Work-based learning activities

	Grade in 2015–2016 school year				All grades
	9	10	11	12	
Employer service provided (in a school setting including career fairs, career exploration talks, and mock interviews)					
Percentage with employer providing a service	25.6	39.9	45.5	39.3	37.4
If employer provided a service:					
Average number of quarters employer service provided	2.0	2.6	2.5	2.5	2.4
Average time in YCC before first employer service (months)	6.5	9.5	10.5	9.9	9.5
Mentoring[a]					
Percentage receiving mentoring services	25.7	33.8	28.8	27.8	29.5
If received:					
Average number of quarters	1.9	2.3	2.0	1.9	2.1
Average months in YCC before first service	8.2	12.5	10.8	10.5	10.8
Internships					
Percentage participating in internships	1.8	9.3	21.9	33.4	14.1
If participated in internships:					
Percentage with more than one internship	7.9	14.0	25.2	23.2	21.5
Percentage with a paid internship	61.9	35.4	35.6	61.1	45.5
Percentage with an unpaid internship	39.7	66.7	67.3	41.0	57.0
Percentage with an internship with an employer partner	44.4	46.3	47.7	62.5	52.5
Percentage with an internship in student's chosen field/industry	38.1	53.2	64.0	72.5	63.8
Percentage with an internship in student's occupation focus	28.6	27.0	15.6	14.1	17.9
Percentage completed an internship	98.4	93.4	88.2	96.3	92.5
Average number of quarters participated in an internship	1.0	1.1	1.2	1.2	1.2
Average time in YCC before first internship (months)	9.6	14.0	12.0	12.4	12.5
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
If received work experience:					
Average number of quarters received work experience	1.8	2.0	1.8	1.9	1.9
Average time in YCC before first work experience (months)	4.9	7.3	7.5	7.3	6.8
Total number of participants	3,523	4,232	3,364	1,950	13,073

Source: PTS.

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

Table D.25. Small learning community structures offered to YCC students and students outside YCC

Percentage offering the following:	YCC students	All non-YCC students	Some non-YCC students
Small learning community for students	**87.5**	**27.3**	**59.1**
Students attend a school within a school	66.7	20.0	35.0
Students are scheduled to take classes together as a cohort at each grade level	52.2	0.0	38.1
Students have a physical space available only to them	41.7	11.1	22.2
Students attend a separate small school	4.3	0.0	10.0
Small learning community for teachers	**87.0**	**42.9**	**57.1**
Teachers are scheduled to work with a specific group of students	78.3	15.8	47.4
Teachers in YCC have a regularly scheduled common planning period	66.7	44.4	38.9

Source: Grantee survey.

Notes: Includes all 24 grantees. The percentage listed in the major heading (in bold) indicates the percentage of grantees offering one or more of the activities/services listed under the heading.

Table D.26. Career and academic counseling

Counseling	
Type of counselors (several responses) (percentage)	
Had no counseling	4.2 (1 school)
Had academic counselor(s) whose duties were separate from a career counselor	54.2 (13 schools)
Had career counselor(s) whose duties were separate from an academic counselor	62.5 (15 schools)
Had counselor(s) who fulfilled both academic and career counseling duties	62.5 (15 grantees)
Among those with counselors providing only academic counseling	
Average student-to-counselor ratio	244.5
Percentage working exclusively with YCC students	38.5
Percentage of students required to meet with academic counselors on a regular basis	72.7
Average number of times per year required to meet with counselor, if required to meet	11.4
Among those with counselors providing only career counseling	
Average student-to-counselor ratio	119.2
Percentage working exclusively with YCC students	78.6
Percentage of students required to meet with career counselors on a regular basis	71.4
Average number of times per year required to meet with counselor, if required to meet	6.2
Among those with counselors providing both academic and career counseling	
Average student-to-counselor ratio	216.9
Percentage working exclusively with YCC students	20.0
Percentage of students required to meet with these counselors on a regular basis	76.9
Average number of times per year required to meet with counselor, if required to meet	3.0

Source: Grantee survey.

Note: Includes all 24 grantees.

Table D.27. Counseling services provided to YCC students

Counseling services provided in:	Percentage providing	Percentage providing more than once a year
Individual Development Plan		
Working with students to develop an IDP	95.5	12.5
Reviewing and updating a student's IDP	95.5	*26.7*
Educational and career goals		
Helping students identify feasible educational and career goals	100.0	16.7
Providing career interest inventories	85.7	6.7
Assessing students' ability to identify and obtain employment in chosen career	66.7	*12.5*
Providing occupational information based on local labor market conditions	50.0	25.0
Educational and career planning and preparation		
Assisting students in selecting courses that meet career and educational objectives	100.0	23.5
Identifying work-based learning experiences to complement career aspirations	77.3	30.8
Assisting students in selecting and applying to postsecondary education	77.3	46.2
Assisting students with resume preparation or interview skills	75.0	*22.2*
Working with students to determine ways to finance postsecondary education or training	71.4	*36.4*
Assisting students in selecting and applying to postsecondary training opportunities	70.0	*37.5*
Helping with job search and placement	65.0	*25.0*
Facilitating a relationship with or identifying resources at AJCs	36.8	*33.3*
Supporting special populations		
Providing for unique needs of students with physical or learning disabilities	100.0	*53.3*
Encouraging and supporting low-income and underrepresented students to enroll in YCC	100.0	*53.3*
Providing for unique needs of English-language learners	90.0	*58.3*

Source: Grantee survey.

Notes: Includes all 24 grantees. Numbers reflect the percentage of respondents indicating that counseling was provided in a specific area. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table D.28. Counseling and support services received

	Grade in 2015–2016 school year				All grades
	9	10	11	12	
Percentage of participants completing initial IDPs[a]	*25.3*	*41.8*	*55.7*	*59.4*	*43.5*
Percentage of participants completing FAFSA	*0.0*	*0.2*	*15.5*	*31.4*	*8.7*
Career/academic counseling					
Percentage of participants receiving career/academic counseling	79.7	86.0	86.4	85.8	84.4
If received career/academic counseling:					
Average number of quarters	2.7	4.0	4.4	4.2	3.8
Average months in YCC before first service	3.6	4.7	3.3	4.1	3.9
Support services[b]					
Percentage of participants receiving support services	31.1	36.4	36.5	37.9	35.2
If received support services:					
Average number of quarters	1.9	1.9	2.1	2.3	2.0
Average months in YCC before first service	3.7	8.2	8.8	8.2	7.3
Total number of participants	**3,523**	**4,232**	**3,364**	**1,950**	**13,073**

Source: PTS.

Note: Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

[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.

Table D.29. Personal supports offered to YCC and non-YCC students

Percentage offering the following:	YCC students	All non-YCC students	Some non-YCC students
Individual Development Plans	**87.5**	***47.1***	***23.5***
Financial support	**83.3**	**52.6**	**63.2**
Transportation	70.8	*25.0*	*31.3*
School supplies	60.9	*25.0*	*31.3*
Work clothes or uniforms	52.2	*7.1*	*21.4*
Costs related to credential attainment for individual participants (for example, fees for certification examinations)	50.0	*13.3*	*33.3*
Work-related equipment (for example, personal computer)	45.5	*21.4*	*21.4*
Fees associated with other tests or examinations (for example, ACT)	37.5	27.8	44.4
Child care	13.6	*0.0*	*7.1*
Other dependent care (for example, elder care)	0.0	*0.0*	*7.7*
Health and well-being support	**77.3**	**68.4**	**36.8**
Psychological counseling (in-house or as referral)	71.4	55.6	33.3
Health care services/referrals	63.6	57.9	26.3
Support for special populations	**83.3**	**66.7**	**42.9**
Services for students from low-income families	83.3	66.7	33.3
Services for students with disabilities	83.3	66.7	33.3
Services for English-language learners	75.0	60.0	40.0
Services for pregnant and parenting students	68.2	52.4	38.1

Source: Grantee survey.

Notes: Includes all 24 grantees. The percentage listed in the major heading (in bold) indicates the percentage of grantees offering one or more of the activities/services listed under the heading. Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

Table D.30. Absences and exits

Absences and exits	Grade in 2015–2016 school year				All grades
	9	10	11	12	
Average percentage of school days absent	6.7	6.9	8.1	7.9	7.3
Percentage leaving YCC	13.9	16.9	13.9	59.5	21.7
If left YCC					
Average length of time in YCC (months)	6.5	12.3	11.5	17.8	13.4
Reason left (percentage)[a]					
Completed YCC	0.0	0.7	4.1	60.9	25.8
Dropped out of YCC but remain in high school	29.2	43.1	43.6	18.9	30.8
Dropped out of YCC program and high school	1.6	4.6	12.2	1.9	4.2
Other reason[b]	68.8	50.7	38.6	18.0	38.4
Total number of participants	3,523	4,232	3,364	1,950	13,073

Source: PTS.

[a]Reasons for exit are shown only if they apply to at least 5 percent of participants.

[b]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 D.31. YCC participant short-term outcomes

	Grade in 2015–2016 school year				All grades
	9	10	11	12	
Percentage with postsecondary credit attainment[a]	2.3	13.5	40.1	53.2	23.2
If earned postsecondary credit:					
Average number of credit hours earned	3.0	5.5	5.6	4.1	4.9
Percentage earned credit while in high school	98.8	95.3	88.1	90.5	90.6
Percentage earned credit while in college	1.2	7.4	16.2	18.7	15.0
Percentage entering unsubsidized employment during YCC participation	0.3	2.1	10.5	13.7	5.5
If entered unsubsidized employment:					
Average time in YCC before unsubsidized employment (months)	10.8	11.4	12.4	11.6	12.0
Percentage with employment in student's chosen field/industry	99.7	98.5	90.8	89.0	95.4
Percentage with employment in student's occupation focus	99.7	98.4	90.2	87.1	94.9
Percentage whose employment is a summer job	0.2	0.8	2.1	2.8	1.3
Percentage of students satisfied with YCC at:					
End of Year 1	*N/A*	*92.5*	*94.7*	*96.7*	*94.5*
End of Year 2	*98.9*	*98.2*	*98.6*	*97.8*	*98.4*
Total number of participants	3,523	4,232	3,364	1,950	13,073

Source: PTS.

Note: Italics identify cells in which fewer than 75 percent of respondents who were supposed to answer a question actually answered it.

[a]Postsecondary credit attainment reflects completion of a course that could lead to postsecondary credits.

Table D.32. Professional development opportunities offered

Professional development	
Offered no professional development in the last year (percentage)	4.2 (1 grantee)
Offered professional development in the last year (percentage)	95.8 (23 grantees)
Among those providing professional development:	
Percentage offering opportunities in (several responses)	
Project-based learning	78.3
Collaborating and establishing communities of practice with other teachers or partners	69.6
Training in incorporating specific industry focus areas into core curriculum	56.5
Individualized mentoring or coaching by master teachers or industry experts	43.5
Training in the skills and competencies of the YCC career focus	43.5
Industry site-based residencies or externships	26.1
Intensive industry-focused training	17.4

Source: Grantee survey.

Note: Includes all 24 grantees.

Table D.33. Professional development activities and attendance

	All grantees
Average number of professional development activities per school year[a]	
2014–2015	44.4
2015–2016	54.0
Percentage of professional development sessions focusing on:	
Academic and career-focused learning	64.4
Work-based learning and the world of work	32.3
Individualized career and academic counseling	27.5
Program performance and reporting	24.9
Employer engagement	24.5
Other topics	23.4
Staff attendance at professional development activities	
Activities overall	
Average number attending	6.7
Percentage of activities with at least 5 people attending	40.3
Percentage of activities with at least 10 people attending	17.2
Professional development on academic and career-focused learning	
Average number attending	8.1
Percentage of activities with at least 5 people attending	67.9
Percentage of activities with at least 10 people attending	50.4
Professional development on work-based learning and the world of work	
Average number attending	6.6
Percentage of activities with at least 5 people attending	80.0
Percentage of activities with at least 10 people attending	73.4
Professional development on individualized career and academic counseling	
Average number attending	6.3
Percentage of activities with at least 5 people attending	81.4
Percentage of activities with at least 10 people attending	76.9
Professional development on program performance and reporting	
Average number attending	6.2
Percentage of activities with at least 5 people attending	85.5
Percentage of activities with at least 10 people attending	79.8
Professional development on employer engagement	
Average number attending	7.2
Percentage of activities with at least 5 people attending	84.5
Percentage of activities with at least 10 people attending	80.0
Professional development on other topics	
Average number attending	5.1
Percentage of activities with at least 5 people attending	82.7
Percentage of activities with at least 10 people attending	79.2
Total number of grantees	**23**

Source: PTS.

[a]School years are based on individual school districts or school calendars and therefore vary across grantees.

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