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REPORT

The External Review of Job Corps: An Evidence Scan Report

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I. INTRODUCTION

Job Corps, a program administered by the U.S. Department of Labor's (DOL) Employment and Training Administration (ETA), is the nation's largest and most comprehensive residential education and job training program for at-risk youth. Originally established by the Economic Opportunity Act of 1964, the program currently operates under the provisions of the Workforce Innovation and Opportunity Act (WIOA), which was enacted in 2014. Studies of Job Corps have found promising results especially for older youth (Schochet et al. 2001).

As economic conditions change and the research literature evolves, there is a need to assess current best practices for serving today's youth and consider options for enhancing the Job Corps program. To fulfill this need, DOL's Chief Evaluation Office contracted with Mathematica Policy Research and its subcontractor, Decision Information Resources, Inc., to conduct an external review of the Job Corps program. The goals of the external review are to (1) document what is known about Job Corps and other similar programs, (2) identify promising evidence-based practices that Job Corps might consider for the future, and (3) present options for future research and evaluation. The external review project does not include an implementation or impact analysis of the Job Corps program.

The external review covers a broad range of topics that are relevant to the Job Corps program, including program operations and services. This report provides a high-level summary of the current research across more than 25 topics that are relevant to Job Corps today. The topics were informed by discussions with national Job Corps staff and an expert working group that was convened to brainstorm current practices that the Job Corps program might want to consider. However, this report neither provides a systematic review of the literature nor recommends which of the many programs and concepts discussed Job Corps should implement. An accompanying report, "The External Review of Job Corps: Directions for Future Research" (Lee et al. 2018), outlines high-level design options for future research on these topics.

A. The Job Corps program

Job Corps is a national program providing academic instruction, vocational training, and supportive services to youth, primarily through its 125 residential centers. The program's ultimate objective is to help disconnected youth become more responsible, employable, and productive citizens. Successful Job Corps students might enter the workforce, join the military, or seek higher education. Each year, the program serves more than 60,000 disadvantaged young people, although, at any one time, the program serves about 38,000 youth (Department of Labor 2016; Fernandes-Alcantara 2015). Since 1964, the program served more than 2.5 million youth.

Defining characteristics of the Job Corps program include its (1) administrative or operational structure, (2) participant characteristics, (3) program components, (4) behavior and discipline policy, and (5) performance monitoring.

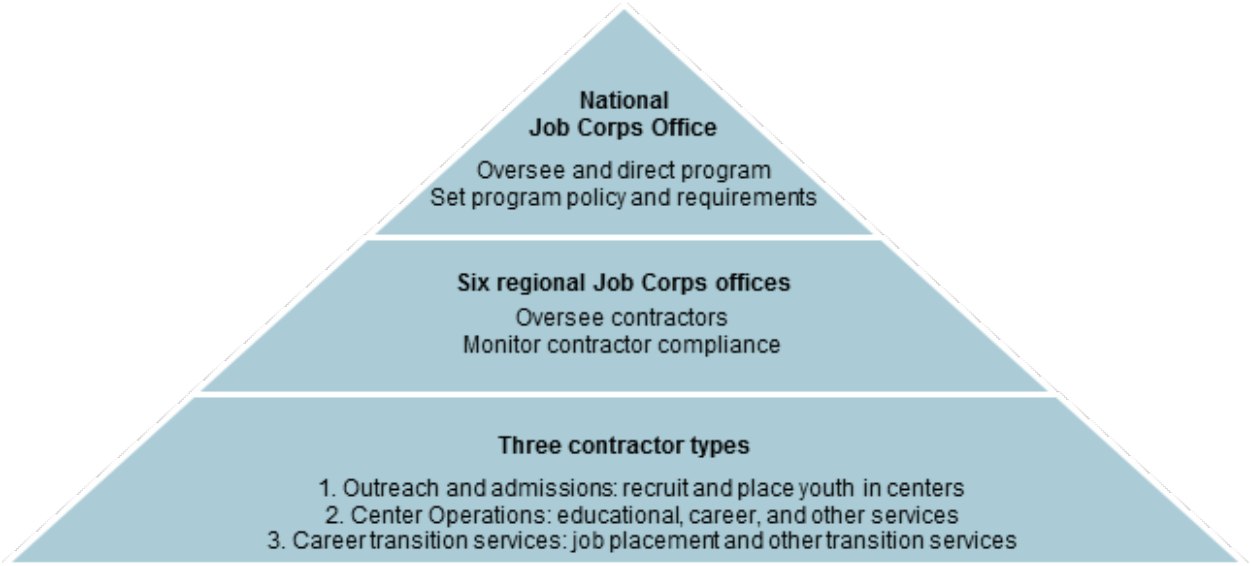
1. Administrative or operational structure

Job Corps, a federally administered program, has three organizational levels (Figure I.1). At the top, the staff at the national Job Corps office oversee and direct the program, and they also set policy and requirements for the contractors that provide the program and its services. Staff

oversee the program budget ($1.7 billion in Program Year (PY) 2016), and collects and analyzes performance measures. National staff also author and maintain the *Policy and Requirements Handbook*, which details the required activities, services, and policies for the program and its contractors. In addition, the national office holds contracts with organizations that provide national assistance on data systems, outreach, performance management, and research and data analysis. Within ETA, two additional offices have responsibility for Job Corps program administration: the Office of Contract Management manages procurement activity (solicit contractors and develop contracts), and the Office of Financial and Administrative Management provides oversight of accounting, budgets, and financial systems.

Staff at the six regional Job Corps offices across the country oversee the contractors in their region and monitor compliance with the national office policies. The regional offices are located in Atlanta, Boston, Chicago, Dallas, Philadelphia, and San Francisco.

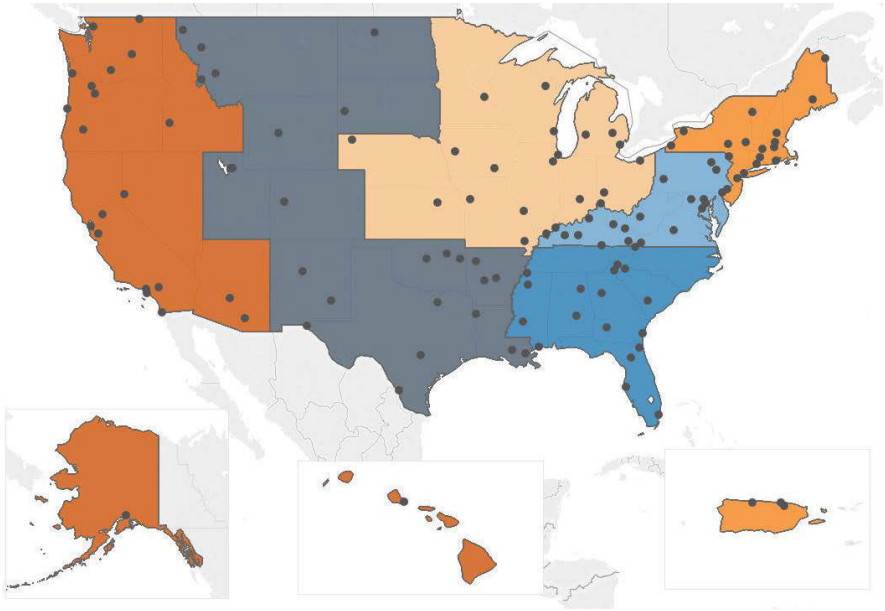
Figure I.1. The three levels of the Job Corps program



Contractors then deliver Job Corps services directly to students. The Operations budget funds the direct services; these contracts account for 94 percent of the Job Corps budget. There are three basic types of contractor activities: (1) outreach and admissions (OA); (2) center operations, which include career preparation and career development; and (3) career transition services (CTS). Contracts are solicited for each type of activity separately, although some contractors hold contracts for more than one type of activity. For example, some contractors hold a combination of OA, center operations, and CTS contracts. The service contracts are primarily cost-reimbursement contracts with fixed and incentive fees based on performance measures, designed to meet WIOA accountability requirements.

Center operations activities, namely the career preparation and development services, are offered at federally-owned and contractor-operated Job Corps centers. Many of the buildings are former military or educational institutions. In fall 2016, 24 center contractors delivered services at 125 centers across the country (Figure I.2); the majority are located in small or large metro areas (Table I.1).

Figure I.2. Location of Job Corps centers, 2017



More than 70 percent of center contracts are held by six organizations: the U.S. Department of Agriculture (USDA) under an interagency agreement with DOL and five private, for-profit contractors (Table I.1). The USDA centers, called Job Corps Civilian Conservation Centers, are operated by the Forest Service on public lands (mostly national forests or grasslands); they have historically offered training in forestry and other conservation-related careers (Dawson and Bennett 2011). The five large contractors operate centers across the country and range from exclusively providing Job Corps services to having other lines of business. WIOA specified that center operations contracts be for two years, with three one-year renewal options.

Table I.1. Center characteristics as of fall 2016

	Percentage of all centers
Center contractors/operators	
U.S. Department of Agriculture	21.1
Management Training Corporation	14.6
Adams and Associates	12.2
ResCare Workforce Services	8.9
Minact	8.1
Career Systems Development Corporation	7.3
Other	27.6
Urbanicity	
Rural	16.3
Suburban	15.5
Small metro	33.3
Large metro	35.0

Source: Center Information System (November 2016).

Note: N = 123 centers. The official Job Corps count is 125 centers, but the table combines primary and satellite centers and excludes temporarily closed centers.

OA and CTS services are provided and monitored separately from the center contractors. Depending on their relationship with the center contractors and the work, the OA and CTS

contractors might or might not have a presence at the centers. In PY 2015, there were 73 active OA contractors and 78 active CTS contractors (Office of Job Corps 2016a; Office of Job Corps 2016b). Several contractors hold both OA and CTS contracts.

2. Participant characteristics

Generally, youth eligible for Job Corps are (1) 16 to 24 years old on the date of enrollment; (2) low income; and (3) either deficient in basic skills, school dropouts, homeless, parents, or individuals who require education, training, or skills to obtain and retain employment. Certain eligibility rules may be relaxed for veterans or people with disabilities, but all Job Corps participants must be authorized to legally work in the United States. In addition, they must adhere to the program's rules of behavior, which include no drug use, no court or active institutional supervision, and no court-imposed fines that exceed $500. Students younger than 18 must have signed parental or legal guardian consent to participate, and parenting students must have a child-care plan for their dependent children.

Many Job Corps participants face significant barriers to education and employment (Table I.2). About 25 percent of students self-reported that they had a disability, such as a cognitive or mental health disability. About 25 percent of students entered Job Corps without having progressed beyond the ninth grade, and the mean reading and math skills of students were below the eighth-grade level. Eight percent identified as English-language learners. A majority of students were nonwhite: nearly half were African American and 20 percent were Hispanic.

Table I.2. Characteristics of students enrolled in Job Corps in fall 2016

	Percentage of students (unless otherwise noted)
Age at entry	
16 – 17	23.2
18 – 20	50.6
21 and older	26.2
Gender	
Male	63.2
Female	36.8
Race/Ethnicity	
Hispanic	18.4
White	23.9
African American	45.8
Other	11.9
English language learners	7.6
Number of dependents	
0	95.3
1 or more	4.7
Highest grade completed	
Less than 9th grade	12.4
9th grade	15.1
10th grade	15.2
11th grade	14.6
12th grade	42.7
More than 12th grade	0.0
TABE score	
Mean reading score at entry (mean grade level)	7.6
Mean math score at entry (mean grade level)	7.8

TABLE 1.2 (CONTINUED)

	Percentage of students (unless otherwise noted)
Employment at entry	58.8
Disability (multiple disabilities possible)	
No disability	73.9
Cognitive	20.6
Drug/alcohol	0.2
Medical	4.6
Mental health	9.3
Physical	1.2
Sensory	0.5
Spectrum disorders	0.9
Foster youth	0.9
Homeless youth	3.2
Live in same state as center	74.7

Source: Center Information System (November 2016).

Note: N = 30,793 enrolled students.

TABE = Test of Adult Basic Education.

3. Program components

Job Corps students receive individualized services that are organized into four service periods: (1) outreach and admission, (2) career preparation, (3) career development, and (4) career transition services. Job Corps allows students to enter and exit at any point in the calendar year, according to center openings and the enrolling students' discretion. All contractors are required to have effective program management practices and hire and retain qualified staff.

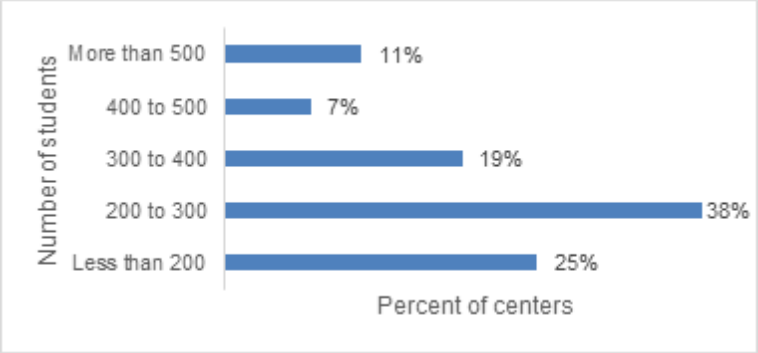
Outreach and admission. The responsibilities of OA contractors and their counselors are to (1) disseminate information about Job Corps to youth and throughout the community, (2) describe to potential students their responsibilities to the program and the program's responsibilities to them, (3) assess potential students' eligibility and help youth determine their career interests through career exploration, and (4) place students at centers that offer training most aligned with their interests. As required by WIOA, OA counselors must assign students to the center closest to their home—whether the center is in students' home state or a nearby state—that offers the training aligned with the students' goals and interests. In addition, the Secretary may waive the "closest center" requirement for good cause. In PY 2015, 75 percent of students were assigned to a center located in their home state (Table I.2).[1] The national office also supports and coordinates broader outreach efforts to youth through national communications contracts with public relations firms.

Job Corps center services. Center contractors and, often, their subcontractors provide the students with the full array of centers' educational and residential services. These services include assistance obtaining a high school diploma or courses toward a high school equivalence diploma and career and technical education and training, as well as health care, counseling, food, clothing, security, social skills training, parenting classes, world-of-work classes, and other support services. Most centers allow students to live at the center, and most students elect to do

[1] Youth are referred to the Job Corps center closest to their home. For youth who live near state borders, the closest center may be in another state.

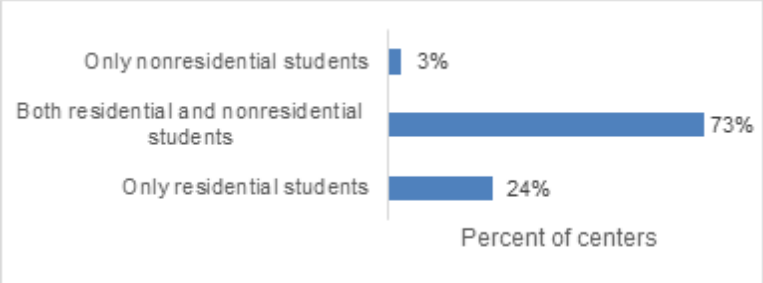
so. Throughout their training, students receive small biweekly basic living allowances directly from the national Job Corps office. The amount increases as the students' training progresses. At the end of their Job Corps training, students receive a transition payment that varies depending on whether they completed their education or training components. The centers' capacity range from less than 200 to more than 500 students (Figure I.3), and 73 percent offer services to both residential and nonresidential students (Figure I.4).

Figure I.3. Center capacity



Source: Center Information System (November 2016). N = 123 centers.

Figure I.4. Population served



Source: Center Information System (November 2016). N = 123 centers.

Center contractors oversee both the career preparation and career development service periods:

- **Career preparation:** During the first 60 days in Job Corps, students take the Test of Adult Basic Education (TABE) to determine their academic achievement and competency. They also submit to medical and counseling assessments to determine their other needs. Following these assessments, students create and commit to a Personal Career Development Plan to guide their future training activities. Centers also must provide new students with career exploration activities, such as using labor market information to identify available career opportunities and assessing their own interests and skills when making career choices.
- **Career development:** Students receive targeted academic instruction and career and technical education and training in their chosen career. Job Corps offers training in more than 70 careers, but each center offers only a subset of trainings. As part of their training, students often obtain hands-on experience through real-world projects in the community. Most centers offer training for careers in construction and health care training (Table I.3).

Table I.3. Career and technical education and training programs offered as of fall 2016

	Percentage of all centers
Construction	96.7
Health care	83.7
Finance and business	68.3
Hospitality	65.9
Advanced manufacturing	50.4
Automotive and machine repair	38.2
Security	37.4
Transportation	31.7
Information technology	24.4
Renewable resources and energy	18.7
Retail sales and service	14.6

Source: Center Information System (November 2016).

Note: N = 123 centers. The official Job Corps count is 125 centers, but the table combines primary and satellite centers and excludes temporarily closed centers. Percentages do not sum to 100.

The time a student spends in Job Corps varies, depending on his or her personal career plan and the goals set in the plan. The average stay in Job Corps is about 8 months, but program duration varies considerably: in PY 2015, about 18 percent left within 2 months and more than 20 percent stayed more than 12 months. Of those students who separated from the Job Corps program in PY 2015, 59 percent successfully graduated. To graduate, students must have, while in the Job Corps program, received a high school diploma or high school equivalency, or finished their training program. Other program exiters include (1) "former enrollees" who enrolled in the program for at least 60 days and who voluntarily left Job Corps before completing their education or training (18 percent) or (2) "uncommitted students" who left within the first 60 days of enrolling or were dismissed for a serious infraction (23 percent) (Table I.4).

Table I.4. Experiences of Job Corps students who separated in Program Year 2015

	Percentage of students (unless otherwise noted)
Lived at center	84.5
Separation Status	
Graduate	59.1
Former enrollee	17.6
Uncommitted student	23.3
Length of stay	
Less than 2 months	17.8
2–6 months	25.9
6–9 months	20.5
9–12 months	15.5
More than 12 months	20.3
Mean (months)	7.8
HSD or HSE attainment, among students without a HSD/HSE at entry	57.7
CTT completion (all students)	60.2
CTT completion and HSD/HSE attainment, among students without a HSD/HSE at entry	50.5

Source: Center Information System (November 2016).

Note: N= 55,588 separated students. Former enrollees left voluntarily before completing their education or training. Uncommitted students left the program within two months of enrolling.

HSD = high school diploma; HSE = high school equivalent; CTT = career technical training

Career transition services. Graduating students and former enrollees receive placement assistance to find jobs or pursue additional training. Contractor staff also help these students find living accommodations, transportation, and the family support resources needed to enable them to continue working. Uncommitted students do not receive placement assistance.

4. Behavior and discipline policy

Following two violent events at Job Corps centers in 2015, Job Corps has faced increased scrutiny of its discipline policies and concern about the safety of its students. An OIG report in 2015 highlighted several challenges to promoting safe and secure environments within Job Corps centers, including underreporting of serious infractions, inconsistent classification of violent offenses that led to removal, and a lack of oversight to detect center noncompliance with the discipline policy (Office of Inspector General 2015).

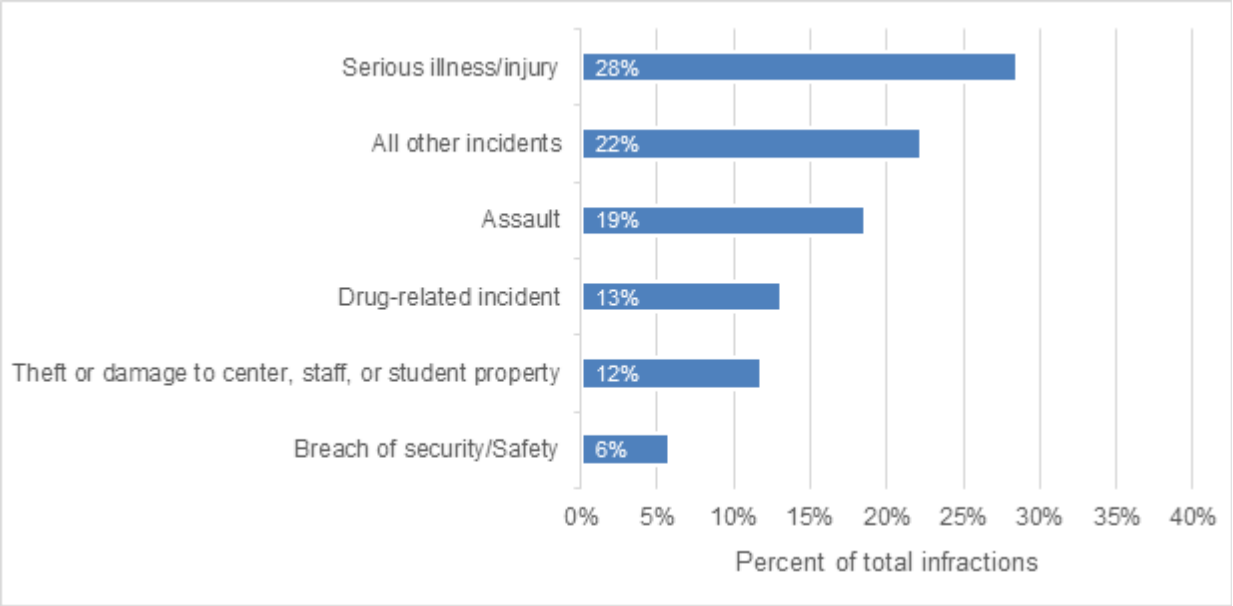
Current Job Corps policy takes a "zero tolerance" approach to violence and alcohol- and drug-related incidents. These are the most severe infractions. The *Policy and Requirements Handbook* categorizes all infractions based on their severity and consequences:

- Level I zero-tolerance infractions include assault, possession of a weapon, and drug infractions; if found responsible, the offending student is discharged from the program. The incident is reported through the Significant Incident Reporting (SIR) system to the national and regional offices. For most of these infractions, the student cannot be readmitted to Job Corps. Among the students that left the program in one year, 11 percent left due to a Level I zero tolerance infraction.[2]
- Level II infractions include possession of a potentially dangerous item, sexual harassment, bullying, and gang activity. These infractions will result in a Fact-finding Board and may result in program termination. Eleven of 16 Level II infractions require a corresponding SIR. A student discharged for a Level II offense is eligible for readmittance to Job Corps after one year.
- Minor Infractions include use of profanity, refusal to follow instructions, and violation of dress codes. Centers are not required to report these infractions via the SIR system, but more than four minor infractions in less than 60 days results in an automatic Level II infraction.

Although extremely violent events such as homicide are rare, disruptive incidents such as assaults are not. GAO recently analyzed Job Corps incident data from the past ten years (Barnes 2017). Of the almost 50,000 safety and security incidents reported by Job Corps centers between January 1, 2007 and June 30, 2016, 28 percent (or 14,194 incidents) were for serious injury or illness, 19 percent (or 9,299 incidents) were for assault, and 13 percent (or 6,299 incidents) were for drug-related incidents (Figure I.5). All other incidents include motor vehicle accidents, danger to self or others, alcohol-related incidents, sexual assault, missing person, inappropriate sexual behavior, and incident involving law enforcement (comprising 22 percent, or 11,062 incidents, all together).

[2] In July 2016, the discipline policy was changed to broaden the types of infractions in Level I, and moving several infractions that had been Level II to Level I (Barnes 2017).

Figure I.5. Types of safety and security incidents reported at Job Corps centers (January 1, 2007 – June 30, 2016)



Source: Barnes, 2017.

5. Performance monitoring

Each contractor type has a different set of quantitative performance measures that are used to assess the contractors' work. The performance of OA and CTS contractors are summarized in an OA report card and a CTS report card, respectively. Center contractor performance measures are listed in two report cards: (1) the center report card, which looks at performance measures for all students who attended that center, and (2) the career technical training (CTT) report card, which only includes students who participated in CTT. Examples of measures for each type of contractor are included in Table I.5.

For each measure, the national office sets specific goals. Some measures, such as the target graduation rate, have standard national goals; other measures, such as the target average hourly wage for graduates, have individual goals for each contractor. For those measures with center-specific goals, the goals are adjusted statistically to account for factors outside of the contractor's control, such as student demographics, so that more accurate comparisons can be made across contractors. Each report card gives an aggregated rating of performance, based on the weighted average of the individual measures. Weights are based on the relative importance of each measure, as determined by the national office.

Table I.5. Examples of performance measures, by contractor type

OA	Center	CTS
Total arrival rate: number of arrivals divided by the total contracted quota	Career technical training (CTT)completion rate: number of students who complete CTT divided by the total number of separated students	Graduate average hourly wage at placement: sum of hourly wages of graduates placed in job or military divided by the number of graduates placed in job or military
Arrivals with 90-day commitment rate: number of students staying for 90 days divided by the total number of arrivals	High school diploma or high school equivalency attainment rate: number of students who attain either divided by the number of students with neither at enrollment	Graduate full-time job placement rate: number of graduates placed in full-time job or military divided by the number of graduates placed in job or military

Source: Policy and Requirements Handbook (PY 2016).

The Job Corps national office uses its outcome measurement system (OMS), of which the report cards are a key part, to identify performance issues at particular centers and across centers, and it ranks centers based on performance. Contractors' performance in this system can affect their awards for future contracts.

All youth training programs authorized by WIOA, including Job Corps, must collect data on six common performance measures: (1) the percentage of youth in education, training, or unsubsidized employment in the second quarter after exit; (2) the percentage of youth in education, training, or unsubsidized employment in the fourth quarter after exit; (3) median earnings of youth in the second quarter after exit; (4) credential attainment; (5) skill gains; and (6) effectiveness in serving employers. The WIOA common measures for youth are similar to the Job Corps performance measures already in the existing report cards, but differences exist in, among other things, the universe of youth included in the calculations and the timing of data collection. Job Corps contractors started reporting the new common measures in PY 2016, but national performance targets will not be set until sufficient annual data have been collected. In the interim, OMS reports are used for decision-making. WIOA also requires that centers ranked in the lowest 10 percent of centers by performance two years in a row be considered low performing. A low-performing center has one year to improve its performance; if it again fails to meet standards, the contractor loses its contract to operate the center. Currently, Job Corps is in the process of setting up and implementing a new Performance Improvement Plan System to support struggling centers.

B. National Job Corps Study

In 1993, DOL commissioned Mathematica to conduct a randomized evaluation of Job Corps. The evaluation randomized more than 11,000 youth seeking entry into 119 centers in 48 states. Eligible youth were randomly offered Job Corps admission; youth not offered admission became members of the control group. This rigorous study provided information about the effectiveness of Job Corps in improving behavioral, social, academic, and labor market outcomes.

The study's findings were encouraging. The study found that youth who attended Job Corps had significantly higher earnings and worked more hours than the control group (Schochet et al. 2001). The study also found that Job Corps improved students' education, high school

equivalence diploma attainment, training, and literacy, and also reduced arrests. These impacts were similar for males and females. A cost benefit analysis using survey data found the program's benefits outweighed its costs for the older students, and the program was beneficial from the students' and society's perspectives for students of all ages (McConnell and Glazerman 2001). However, a follow-up study using administrative data from five to seven years after randomization found Job Corps participants overall had similar earnings and employment as compared to nonparticipants, indicating the short-term impacts did not persist (Schochet et al. 2003). The earnings impacts were shown to have persisted for older youth (ages 20 to 24) (Schochet et al. 2003). Mathematica recently authored a working paper using data from the Job Corps evaluation that examined the labor market outcomes of youth with medical limitations and found a large increase in earnings and a decrease in disability benefits in the four-year period after enrollment for this subgroup (Hock et al. 2017).

C. The Evidence Scan report

The purpose of this report is to provide a broad scan of the research literature and existing publically and privately run programs in two main domains: (1) services for at-risk youth and (2) program operations. The chapters throughout the report provide a high-level summary of the available literature and existing programs with an eye to how they relate to the Job Corps program, rather than provide an exhaustive literature review of each of the topics. The intent is that the review will provide DOL with a starting point for further exploration of topics of interest for modernizing and reforming Job Corps. When appropriate, we place these topics within the context of the current Job Corps policies and procedures. However, it was outside the scope of this report to collect information to describe the implementation of the Job Corps program across its 125 centers. Thus, we acknowledge that contractors and centers might already have adopted some of the promising practices discussed in the report, especially some practices discussed in the first domain.

To provide input on topics included in this evidence scan, we assembled an expert panel that included (1) subject matter experts on Job Corps and similar programs and (2) Job Corps staff. The panel was convened in Washington, D.C., in November 2016. The information that was assembled was used to develop or refine programmatic and organizational ideas for strengthening Job Corps and to identify areas for which members thought additional research was needed (see Appendix A for the subject matter experts). In addition, we conducted interviews with four national Job Corps office staff to learn about their work and areas of improvement they had identified for the Job Corps program.

We divided this report into two parts, one for each of the two key domains. In Part I, four chapters explore topics related to providing youth services: (1) approaches to working with youth to help them reach their potential; (2) approaches to creating and ensuring a safe environment for youth; (3) methods of providing training and work-preparation services; and (4) ways to organize the youth for receipt of services. Within each of these chapters, we describe multiple concepts or programs that were identified by experts, Job Corps staff, or through our literature search.

In Part II, three chapters explore topics related to program operations including: (1) the optimal location for centers; (2) approaches to program innovation; and (3) alternative arrangements for providing Job Corps services.

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PART I: YOUTH SERVICES

Part I of this report focuses on promising practices related to the youth experience in Job Corps. Within each of the following four chapters, we provide a description of promising practices and interventions that might be worthy of consideration for the Job Corps program. Appendix B provides a list of the programs described in the four chapters of this section of the report.

- **Chapter II: Engaging Disconnected Youth**

  In this chapter, we describe four different approaches that focus on how staff or educators engage youth to help them reach their potential. The following approaches have been described in the literature as effective or promising in improving youth outcomes:

  1. Cultivating positive youth development
  2. Communicating high student expectations
  3. Fostering growth mindsets
  4. Creating a trauma-informed environment

- **Chapter III: Creating a Safe and Supportive Environment**

  In this chapter, we identify and describe current theory and research about creating and ensuring a safe environment for youth. This includes examining strategies to prevent behavioral issues, and monitor and address behavioral infractions. We explore the following three approaches:

  1. Positive behavioral interventions and supports
  2. Restorative practices
  3. Building self-regulation skills

- **Chapter IV: Preparing Youth for Careers**

  Young workers need specific skills and training to obtain a job with wages to sustain a family and build a long-term career. This chapter describes the current research on training and elements of training aimed to improve productive employment:

  1. Career pathways programs
  2. Micro-credentials
  3. Work-based learning and work experience
  4. Apprenticeship and pre-apprenticeship programs

- **Chapter V: Organizing Youth Services**

  Youths' experience in a program can be affected by the peer groups they form. This chapter describes different group settings in which youth interact with each other and summarizes the literature on their advantages and disadvantages. In this chapter, we examine the group structure and formation by:

1. Age of participants
2. Gender of participants
3. Residential environment
4. Learning in groups of different sizes
5. Enrollment practices

II. ENGAGING DISCONNECTED YOUTH

Many youth who enroll in the Job Corps program have had difficulties engaging in school and work. These difficulties might stem, in part, from the challenges that they have encountered, such as living with a disability or in low-income communities. In Job Corps, staff work with enrolled youth to identify these challenges and develop a Personal Career Development Plan, establishing goals for attaining education and/or vocational skills.

Working with disconnected youth, that is, youth who are not in school and not working, or youth who are at risk can be challenging. These youth may have had negative life experiences or face significant barriers to education and employment. For example, 26 percent of Job Corp youth have disabilities, 9 percent of youth have mental health challenges, and 8 percent are English-language learners (Center Information System 2016).

This chapter discusses four concepts or approaches and related practices for how to engage disconnected youth and improve their education and employment outcomes:

1. **Cultivating positive youth development.** Programs use various strategies to promote positive youth development, including activities, services, approaches, and frameworks for proactively supporting youth development and fully preparing youth for adulthood.
2. **Communicating high student expectations.** Words and actions communicate academic and behavioral expectations. Teachers and other staff can be taught to use certain techniques to communicate high expectations to students.
3. **Fostering growth mindsets.** Students can be taught to have a growth mindset—the belief that intelligence and ability are not fixed and can be changed over time.
4. **Creating a trauma-informed environment.** Under this approach, staff members acknowledge the challenges and traumas that youth may have experienced and create an environment where youth are supported and not judged for their past behaviors.

For each approach, we first describe the concept and the theory behind it—that is, how the concept is expected to affect disconnected youths' outcomes. We then identify different programs and interventions that have been used and/or tested to determine their effectiveness on youth. We also include promising interventions even if we were unable to identify rigorous studies of effectiveness. When possible, we have highlighted programs in text boxes similar to Job Corps that have adopted the described practices. We acknowledge that the practices or principles described in this chapter may already be implemented to some extent in Job Corp centers across the country. Our intent in describing them here is to provide the Job Corps program with the theory and evidence behind some of these most promising practices.

A. Cultivating positive youth development

Positive youth development (PYD) strategies generally refers to activities, services, approaches, and frameworks to proactively support youth development and fully prepare youth for adulthood. PYD programs implement a range of these PYD strategies, though the field does not provide a single definition of PYD programs or a single list of PYD programmatic elements

or strategies (Roth and Brooks-Gunn 2016). The federal Interagency Working Group on Youth Programs (IWGYP), defines positive youth development strategies as:

> "an intentional, prosocial approach that: engages youth within their communities, schools, organizations, peer groups, and families in a manner that is productive and constructive; recognizes, utilizes, and enhances young people's strengths; and promotes positive outcomes for young people by providing opportunities, fostering positive relationships, and furnishing the support needed to build on their leadership strengths." (IWGYP 2016)

1. Theorized elements required for successful PYD programs

Experts have theorized six attributes that signal healthy youth development: competence in a range of social and cognitive areas; confidence; connections with individuals and institutions; character; compassion for others: and contributions to self, friends and family, and society as a whole (Lerner et al. 2000).

Researchers have proposed the required elements for programs to help youth achieve these attributes. Eccles and Gootman (2002) suggest that PYD programs should create:

- Emotional and physical safety
- Appropriate program structure
- Supportive relationships for youth
- Opportunities for youth to belong
- Positive social norms
- Support for efficacy and mattering
- Skill-building tasks
- Integration of family, schools, and community efforts

Similarly, Roth and Brooks-Gunn (2003) emphasize that the atmosphere of PYD programs should communicate to youth that they are important and valuable and include activities that allow youth to be actively involved and challenged. Lerner (2004) proposes that PYD programs should include ongoing and positive relationships with adults, life-skill development opportunities, and real-life activities in which youth use their newly developed life skills and play a leadership role. In addition, researchers stress the importance of working with youth using an asset-based approach as opposed to a deficit-based approach; that is, starting from youths' strengths rather than their needs and problems (IWGYP 2016; Howse et al. 2010).

2. Evidence for PYD programmatic elements or strategies

The empirical evidence is limited regarding which of the PYD program elements—alone or in combination with others—is effective (Roth and Brooks-Gunn 2016), but a few key elements are promising:

- **Relationships with adults:** Multiple qualitative and associational studies have noted the importance of strong, healthy relationships with adults (Fredericks et al. 2010; Perkins et al.

2007). Two cross-sectional studies found further empirical evidence that adult relationships are critical to programs that are effective at engaging youth and improving outcomes (Greene et al. 2013; Mahoney et al. 2002). Some programs specifically implement a formal mentoring program to promote relationships with adults. Big Brothers/Big Sisters, the most well-known mentoring program, had a positive impact on academic and behavioral outcomes (Tierney et al. 1995; Thompson and Kelly-Vance 2001). A meta-analysis focused solely on youth programs found more modest impacts overall, with more favorable impacts on at-risk youth (DuBois et al. 2011).

- **Youth-adult partnerships:** Unlike traditional youth-adult relationships, in youth-adult partnerships: (1) youth and adults have decision-making power; (2) mentoring is natural and unstructured; (3) youth and adults teach and support each other; and (4) the partnerships build a community network (Zeldin et al. 2013). One research study found youth-adult relationships had favorable impacts on youth empowerment and community connectedness (Zeldin et al. 2015). Additional research on the four key components of partnerships suggests the components have a positive impact on youth (Zeldin et al. 2013).
- **Engaging and challenging activities:** Youth may see academic gains through participation in activities that are interesting and that challenge them. Two studies found that self-reported or teacher-reported higher engagement (including enjoyment, effort, interest, and concentration) during activities at after-school programs led to improved academic outcomes (Mahoney et al. 2005; Shernoff 2010).
- **Youth agency:** Youth agency refers to the ability of youth to have control and decision-making power over their lives. In a program, this concept can mean that youth have some say in how they spend their time in the program and/or that youth can be involved in shaping the program design and implementation. Research suggests that allowing youth some choice and control in how they spend their time in the program increases their sense of belonging, engagement and motivation (Toshalis and Nakkula 2012). Youth involvement in program decision making is associated with increased youth motivation and skill building (Akiva et al. 2014). In YouthBuild, current and former students have a voice in shaping the YouthBuild field through the Young Leaders Council and the National Alumni Council.
- **Culturally relevant and responsive:** Instruction and pedagogy that is culturally relevant and responsive means that teachers validate and leverage cultural differences to deepen learning. A review of the literature concluded that culturally relevant and responsive education resulted in positive student academic and behavioral outcomes (Aronson and Laughter 2016).

To be the most effective, programs may need to weave together PYD programmatic elements and more traditional risk-prevention programmatic elements (for example, drug use prevention programming). Addressing or attempting to prevent negative youth behaviors or outcomes is generally not thought to be a part of the PYD field. However, these more traditional risk-prevention programs often include various programmatic elements, including some that are associated with PYD (Roth and Brooks-Gunn 2016). Data show increases in positive behavior do not always result in decreases in negative behavior (Phelps et al. 2007; Lewin-Bizan et al. 2010; Schwartz et al. 2010). This research suggests that PYD and more traditional youth risk-prevention programs can work hand-in-hand to encourage positive behavior and discourage negative behavior (Roth and Brooks-Gunn 2016).

Blueprints for Healthy Youth Development is an initiative to identify, promote, and create a registry of broadly defined PYD programs with evidence of effectiveness. Researchers have thus far reviewed more than 1,400 programs and have identified 74 programs as meeting minimum evidence criteria. The full list of programs is available at http://www.blueprintsprograms.com/.

Positive outcomes for two programs with PYD elements

The evidence-based YVLifeSet program, which supports young adults aging out of the foster care and juvenile justice systems, includes key PYD elements. Since its inception the program has served 9,000 youth (Youth Villages n.d.). Services are delivered during weekly, hour-long sessions and usually include general life-skill development, counseling, real-life activities (such as opening a bank account), and access to education coordinators. Youth are also encouraged to attend group gatherings and activities. As a whole, the program improved earnings in the first year, but these impacts faded somewhat in the second year (Valentine et al. 2015; Skemer and Valentine 2016). The program did improve economic well-being, housing stability, and healthy outcomes in its first year (there was no information about these outcomes for the second year) (Valentine et al. 2015; Skemer and Valentine 2016). The program had no impact on education or criminal justice involvement (Valentine et al. 2015; Skemer and Valentine 2016).

The Career Academies program, in which students receive a combination of academic, career and technical, and work-based training, incorporates PYD elements. The program is organized into small groups of high school students and teachers, which allows students to develop deep relationships with adults and each other. A randomized controlled trial found that Career Academies increased interpersonal relationships and participation in career preparation activities (Kemple and Snipes 2000). Among students at highest risk of dropping out, Career Academies increased attendance and decreased dropout rates (Kemple and Snipes 2000). As a whole the program has been shown to increase earnings, especially among young men (Kemple

B. Communicating high expectations for students

Expectations are beliefs—conscious or unconscious—that individuals have about their and others' abilities, future actions, or outcomes. Studies that have taken place in different settings have demonstrated that individual and group beliefs about a person's ability impact that person's actual outcomes, although the exact causal mechanisms are often only theorized (Rosenthal and Jacobsen 1968; Rosenthal 2003). An overarching theory is that individuals change their behavior in response to cues in their environment, and higher achievement results due to the expectations of others (Jussim and Harber 2005).

Much of the discussion and evidence presented here is focused on teacher expectations because that is the focus of most of the literature. However, general evidence from the broader fields of high expectations and self-fulfilling prophecies suggests that one individual's expectations of another individual impacts the second individual's outcomes (Rosenthal and Jacobsen 1968; Rosenthal 2003; Madon et al. 2011). It is therefore likely that the expectations of other staff (not just teachers) may also be important in shaping youth outcomes.

1. Theory behind the effect of expectations on student performance

Pulling these theories into the education world, Rosenthal and Jacobsen (1968) proposed that teacher expectations of students' performance would affect students' outcomes. They tested this in a landmark randomized controlled trial examining the impact of elementary school teachers' expectations on their students' intelligence quotient (IQ) scores. The authors told first grade teachers that 20 percent of their students were likely to do well academically; however those students were simply chosen at random. After eight months, the students that teachers

expected to do better had higher IQ test results than the others. These differences were small but persisted when measured again two years later. While methodological critiques of the Rosenthal and Jacobson study exist, many researchers agree that teacher expectations can impact student outcomes (Raudenbush 1984; Rubie-Davies et al. 2014; Papageorge et al. 2016; Jussim and Harber 2005). Indeed, more recent and higher-quality studies (described later in this section) have found similar results, indicating that there is a causal relationship between teacher expectations and student outcomes (Lavy and Sand 2015, Rubie-Davies et al. 2014, Yeager et al. 2014).

Two frameworks in the education setting—Rosenthal (1973) and Brophy (1983)—attempt to describe how and why teacher expectations affect student outcomes. Rosenthal hypothesized four mechanisms through which teacher expectations affect student performance:

1. **Climate**: Teachers have warmer verbal and nonverbal communication with students they expect to do better (high-expectation students).
2. **Input**: Teachers tend to teach additional academic material to high-expectation students.
3. **Output**: Teachers are more likely to call on their high-expectation students.
4. **Feedback**: Teachers are likely to provide different feedback based on their expectations for students. Specifically, teachers are more likely to accept substandard answers from students whom they do not expect to do well.

Using meta-analysis techniques, Harris and Rosenthal (1986) derived measures of the importance of each of these factors. This analysis found that all four factors were associated with better student outcomes but climate and input factors may be the most related to positive outcomes.

In contrast, Brophy (1983) reviewed the research literature and identified 17 detailed mechanisms through which teacher interactions affect student outcomes. Brody suggested that a variety of teacher behaviors related to communication, attention, and grading differ for students with low and high expectations, and these behaviors impact student outcomes.

2. Evidence of the effect of expectations on student performance

Although the research demonstrates a relationship between the theorized mechanisms and the outcomes through which expectations affect performance, it cannot draw causal conclusions from the current data. The primary challenge is that researchers cannot easily rigorously test the causal effects of the theorized mediating factors on student outcomes (Rosenthal 2003). For example, researchers would have difficulty randomly assigning students to teachers who have "warm" eye contact with all students and to those who have "warm" eye contact only with students for whom they have high expectations.

Teachers' expectations are sometimes created based on student characteristics, especially race and gender. A series of meta-analyses found evidence that teachers have higher expectations of Asian and white students than African American and Latino students (Tenebaum and Ruck 2007). The same study found that teachers use more positive and neutral speech with white students than with African American and Latino students.

Differences in teacher attitudes toward students of different races and the resulting different expectations contribute to observed differences in student academic outcomes (Van Den Bergh et al. 2010; Papageorge et al. 2016). Research also has demonstrated that teachers have higher expectations of boys, especially in math and science courses, which leads to higher achievement among boys as compared to girls (Lavy and Sand 2015).

Implicit bias: an underlying factor in all individuals and organizations

Implicit bias means unconscious attitudes that influence actions and decisions. A summary of the research found implicit biases are present in everyone, significantly impact actual behavior, are distinct from expressed and explicit biases, and are malleable (Staats 2014). Individuals tend to have implicit biases that favor groups to which that individual belongs. Implicit racial biases have been measured in children as young as six (Staats 2014). Implicit biases partially explain differences in the quality and quantity of education and employment opportunities available to different individuals (Staats and Patton 2013; Staats 2014).

Research suggests the following debiasing techniques can reduce implicit bias: (1) exposing people to information counter to their implicit biases; (2) building connections between individuals of different groups; (3) trainings on implicit bias; (3) increasing accountability to others; (4) imagining others' perspectives; and (5) self-reflecting on potentially biased attitudes in the midst of decisions and actions (Staats 2014).

Research suggests that teachers could try to use behaviors that communicate high expectations to students. A recent randomized controlled trial tested whether training teachers to emulate the practices of high-expectation teachers, as identified through previous research, would affect student outcomes. The Teacher Expectation Project (TEP) was developed based on the literature describing the attitudes and practices of teachers with high expectations (Rubie-Davies et al. 2014). Through trainings at four workshops, teachers were taught about high expectations; how expectations are communicated verbally and nonverbally; and specific techniques, like avoiding grouping students by ability, creating a warm environment for all students, using goal setting to motivate students, and improving feedback to students. Teachers were filmed four times, and each time they reviewed and analyzed their own verbal and nonverbal cues to students. Researchers randomly assigned 46 teachers to participate in TEP and found that students with teachers in TEP had significantly higher mathematics scores one year later. There was no impact on reading scores.

Other research suggests that "wise feedback" notes to students increase motivation and grades. In one study (Yeager et al. 2014), students randomly received one of two notes attached to their teacher's normal, nonrandom feedback on a report. The high expectations note read: "I'm giving you these comments because I have very high expectations and I know that you can reach them." The low expectations note read: "I'm giving you these comments so that you'll have feedback on your paper." African American students who received the high expectations note were more likely to revise and resubmit their paper, and the authors concluded that the note increased student motivation. The study also found that African American students who received the high expectations note earned significantly higher grades on their revised essays.

Incorporating high expectations for students has been integrated into the charter school movement. Several of the most high-profile charter schools, including the Knowledge Is Power Program (KIPP) network, emphasize creating a culture of high expectations for students. In KIPP schools, expectations for students, teachers, and parents are communicated through

"learning pledges" that each stakeholder must sign. Students commit to attending school, working hard, completing homework assignments every night, asking questions, addressing teacher concerns, acknowledging mistakes, and behaving appropriately (KIPP Commitment to Excellence n.d.). When bundled with other promising charter school practices, high expectations have been shown to increase math achievement in traditional school settings (Fryer 2014).

A high school framework that incorporates high expectations

High expectations for students figure prominently in the High Schools that Work (HSTW) program, a holistic school reform framework. For example, students are required to redo assignments if the work is not satisfactory initially. The Southern Regional Education Board has published many resources for schools implementing the HSTW framework, including a description of 10 strategies for creating a high expectation culture in a school (Reynolds n.d.). The actions specifically related to helping students meet high academic expectations include:

1. Don't accept inferior work.
2. Show students what is expected of them prior to assignment by sharing rubrics and examples of answers/assignments.
3. Always share the big picture with students so that they know if and how assignments build on each other.

The other strategies for a high expectations culture include actions such as continually talking with parents and students about progress, using homework and feedback to engage students and keep them on track, and giving useful feedback on a regular basis.

Two studies produced some, although weak, evidence on the effectiveness of the full HSTW model. One study using a pre-post design found positive impacts on test scores (Kaufman et al. 2000). Another study compared schools that had been using the HSTW model for a while to schools that were just beginning to implement the model (Frome 2001). This study found no difference in outcomes among programs that had been implementing the program for a while and programs that were newly implementing the program (Frome 2001). The study did find an association between higher levels of fidelity of program implementation and student outcomes (Frome 2001). These studies did not separate effects for the model's high expectations component.

C. Fostering growth mindsets

Brain science has shown intelligence and ability can change over time. When measuring IQ scores and gray matter density in the brain over time for the same individuals, neuroscience researchers have found that intelligence and gray matter can and do change during the teenage years (Ramsden et al. 2011). However, not everyone knows this; many people believe that intelligence is fixed. People who believe that intelligence is mutable and can change over time have a "growth mindset"; those who believe it cannot change over time have a "fixed mindset" (Dweck 2006). Students with growth mindsets are more likely to demonstrate resiliency and grit, that is, they are more likely to continue working on something despite obstacles (Duckworth and Eskreis-Winkler 2013). Having a growth mindset seems to be related to positive outcomes.

1. Theory behind growth mindsets' effects on student performance

The concept of growth versus fixed mindsets can be extended to students' academic success. Under this theory, students with growth mindsets believe that they can improve; as a result, they extend more effort and consider failure to be valuable feedback. Students with fixed mindsets do

not believe that their effort will translate into success and see failure as confirmation of their lack of ability and intelligence, which could limit their academic success (Blackwell et al. 2007).

Based on tests of association, data show students with growth mindsets tend to get better grades and have higher standardized test scores than students with fixed mindsets (Blackwell et al. 2007; Romero et al. 2014; Claro et al. 2016). Students with growth mindsets may get higher grades because they believe hard work will increase their intelligence and ability (Blackwell et al. 2007), and so they seek out challenges to enhance their skills (Mueller and Dweck 1998; Romero et al. 2014). Brain science research measuring brain signals suggests that individuals with growth mindsets may have higher academic achievement because they have a greater ability to focus on mistakes and take corrective action, which can improve subsequent performance (Mangels et al. 2006; Moser et al. 2011). The research also suggests that students from lower-income families are less likely to have growth mindsets than students from higher-income families (Claro et al. 2016).

2. Evidence for improving performance through growth mindsets

The research shows that mindsets, like intelligence, can be changed (Aronson et al. 2002; Blackwell et al. 2007; Paunesku et al. 2015). Several interventions that aim to increase students' growth-mindset attitudes have been tested among students of different ages and have been shown to result in changes in mindsets, which could correlate with gains in intelligence and academics. The research literature suggests that growth mindsets can be cultivated among youth with fixed mindsets by two practices: teaching youth about intelligence and praising legitimate effort.

- **Teaching that intelligence is malleable**. Multiple rigorous studies have found that teaching youth about growth mindsets and malleable intelligence can improve academic outcomes (Aronson et al. 2002; Blackwell et al. 2007; Paunesku et al. 2015). Generally, these interventions teach youth the basic concepts of the research on mindsets and intelligence, and these youth are then told to apply what they learned to their own lives and school work.
- **Applauding process, not intelligence**. Based on a series of small studies with various designs, researchers have concluded that praising students for legitimate effort and process increases students' motivation, persistence, enjoyment, and performance during difficult tasks as compared to lauding students for their performance (Mueller and Dweck 1998). This suggests that individuals working with youth should avoid congratulating students for being smart; instead, they should notice and encourage effort and strategy. In an experimental, educational video game setting, awarding video game points to students based on their effort, strategy, and process instead of performance resulted in more effort, more engagement, and more persistence (O'Rourke et al. 2014). Despite the evidence for praising the process, one leading scholar argues that applauding ability is still important for boys and men of color who do not hear this message from society (Wood 2017).

Growth mindset interventions have been found to be especially effective at improving academic outcomes among youth at risk of underperforming, including African Americans and individuals from low-income families (Aronson et al. 2002; Claro et al. 2016; Paunesku et al. 2015). Students with growth mindsets have a greater ability to respond positively to more difficult tasks and, as a result, fare better during academic transitions (Blackwell et al. 2007; Yeager et al. 2016). In addition, very little time is required to cultivate growth mindsets and to

see results; sometimes only one or two sessions with the youth is sufficient (Paunesku et al. 2015; Yeager et al. 2013).

Changing youths' mindsets in a New York City school

At one middle school in New York City, low-achieving seventh graders attended eight 25-minute growth-mindset workshops led by academic researchers during the spring semester (Blackwell et al. 2007). Through readings, activities, and discussions, youth learned about the malleability of intelligence and that it can be developed. Three weeks after attending the workshops, students reported more attitudes in line with having a growth mindset. For the rest of the spring semester, students showed increased motivation to complete academic work. Comparing final grades for the spring semester, youth that attended these workshops had higher math grades than students that did not attend the workshops.

Developing growth mindsets in YouthBuild

Growth-mindset training is also being used and implemented in YouthBuild, a national program that provides its youth participants training in construction skills, classroom instruction to attain their high school diploma or equivalent, and opportunities for community service (YouthBuild USA 2015). At least three YouthBuild sites have integrated growth-mindset training into their curriculum. To build growth mindsets, YouthBuild USA suggested that sites: (1) help youth see the purpose of education, training, and effort; (2) establish clear goals for youth; (3) give feedback on effort and strategies, not praise of results; (4) encourage youth to view failure as an opportunity to learn; and (5) teach youth how intelligence can change. An early report from an ongoing evaluation of the entire program, not just the growth-mindset component, found that YouthBuild improved educational outcomes, employment, and earnings (Miller et al. 2016).

D. Creating a trauma-informed environment

Trauma can result from exposure to a threatening or harmful event, such as witnessing or being the victim of violence or larger community events like natural disasters (National Child Traumatic Stress Network 2003). Trauma can have significant negative impacts on attention, cognition, self-concept, and behavior in the short- and long-term.

Although the number of Job Corps youth who have experienced trauma is unknown, it is likely that some participants have experienced threatening, harmful, or upsetting events that may result in trauma. Nationally representative studies estimate that 41 percent of children and youth were the victim of a physical assault, and 22 percent witnessed violence in the last year (Finkelhor et al. 2013). System-involved youth have higher rates of trauma and violence exposure: 94 percent of justice-involved youth have experienced at least one trauma and 46 percent have post-traumatic stress disorder (PTSD) (Rosenberg et al. 2013); 80 percent of foster care youth aging out of child welfare had experienced at least one traumatic event in their lifetime and 15 percent met the criteria for a PTSD diagnosis (Salazar et al. 2013).

In recent years, children and youth programs have increasingly adopted different types of trauma-informed care approaches, which seek to support individuals who have experienced trauma or distressing events in their lives. The implementation and impact of some of these trauma-informed care approaches has been studied and documented in the literature.

1. The effects of trauma on youth

Traumatized children experience impaired brain development and physiological and psychological symptoms, including changes in sleeping and eating, depression, anxiety, inability to focus, and behavioral changes (National Child Traumatic Stress Network 2003; De Bellis and Zisk 2014). These reactions are a normal response to a traumatic event, but the symptoms become a problem when they persist past the initial event and interfere with daily life; in extreme cases, traumatized children are diagnosed with PTSD (National Child Traumatic Stress Network 2003).

Trauma can have deep and wide impacts on youth. Experts have identified seven impairment domains to categorize the impacts on children and adolescents (Cook et al. 2005):

1. **Attachment**: distrust of others, difficulty reading social situations, and challenges defining appropriate boundaries for relationships
2. **Biology**: difficulty with coordination and balance, and increased medical problems
3. **Affect regulation**: challenges acknowledging and expressing thoughts, wishes, and feelings
4. **Dissociation**: amnesia and detachment from emotions
5. **Behavioral control**: aggression, inability to moderate impulses, and oppositional behavior
6. **Cognition**: lack of curiosity, inability to focus, and stunted language development
7. **Self-concept**: feelings of shame, guilt, and low self-esteem

Learning can be particularly difficult for traumatized youth, as trauma is related to a reduced ability to pay attention, process information, develop boundaries, and control emotions—including aggressiveness (Cook et. al. 2005). Other research has indicated that trauma impacts a young person's ability to form and build relationships, sense of security, and trust in others (IWGYP 2013). Traumatized youth may have a constant fight-or-flight mentality, be unable to control their anger, and try to ignore upsetting feelings.

Federal focus on trauma-informed care practices

Many federal agencies, including the Administration for Children and Families (ACF), Centers for Medicare and Medicaid Services, Department of Justice, and the Department of Education, have created trauma resources and invested in or otherwise implemented trauma-informed approaches. For example, the Interagency Working Group on Youth Programs held a webinar titled *Implementing a Trauma-Informed Approach for Youth Across Service Sectors* (IWGYP 2013) and, in 2016, the U.S. Department of Education awarded $5 million to three school districts to establish programs to promote resilience among traumatized youth (U.S. Department of Education 2016). The Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, has led the federal effort for trauma-informed approaches, creating several resources and materials and funding the Child Traumatic Stress Network. ACF has also complied trauma resources specifically for programs serving youth.

2. Evidence on trauma-informed therapies and approaches

The literature describes two types of efforts to support and help trauma-affected individuals (Hanson 2016): trauma-informed therapy and more holistic trauma-informed approaches. Trauma-informed therapy is usually administered by a clinical professional and may be

conducted in individual or group settings. The length and duration of sessions varies by program and individual. Therapy can be delivered in a variety of institutional and organizational settings.

"Trauma-informed approaches" is an umbrella term that includes trauma-informed services and other interventions at the individual or systems level that integrate trauma sensitivity with other services like education. Most activities of trauma-informed approaches include training and awareness for staff, adaptation of services to be sensitive to trauma, and efforts to change organizational culture, policies, and practices. A single intervention may include multiple components.

A scan of the literature identified different approaches, some of which have been rigorously evaluated and some that have not. Two evaluated approaches include the evidence-based Attachment, Self-regulation, and the Competency (ARC) framework and the Sanctuary Model, which has been adapted for schools:

- **ARC framework**. The framework focuses on improving three development areas that are affected when youth experience trauma: attachment (for example, building safe connections to others), self-regulation, and resiliency. Within these three domains, 10 building blocks, such as executive functioning and affect expression, act as intermediary targets and together create a guiding structure for youth and counselors (Hodgon et al. 2013). The approaches that programs use to achieve these markers varies widely (Hodgon et al. 2013). Young children to young adults have participated in the program in residential treatment facilities, schools, and community organizations. One program implemented ARC in groups where youth would practice self-regulation, learn about a specific ARC skill, and then practice self-appraisal (Hodgon et al. 2013). Using a pre-post analysis of youth ages 13–19, researchers found ARC implementation reduced PTSD and improved child behavior (Hodgon et al. 2013).
- **The Sanctuary Model.** This model focuses on changing systems and organizational culture, and it has shown some positive impacts (Bloom 2003; Rivard et al. 2005). While initially developed in an adult, inpatient psychiatric facility, it has been adapted for youth and children in schools and can be used in a variety of organizational settings (Bloom 2003). The model includes: (1) developing a shared understanding of the organization's actors and trauma's impact on them, (2) creating safety through the adoption of shared principles, (3) utilizing a framework for dealing with disruption, and (4) relying on a toolkit for implementation. Staff at different levels participate in a series of meetings to discuss and implement these ideas through trainings and with the help of the toolkit. The program is typically implemented over a three-year period (Sanctuary n.d.).

  A combined experimental and quasi-experimental study found no differences at baseline or the three-month follow-up period, but by the six-month follow-up period youth in centers that implemented the Sanctuary Model had higher self-control, reduced verbal aggression, and used fewer negative coping strategies as compared to youth in control centers (Rivard et al. 2005). Another study, using a pretest-posttest design found a juvenile justice facility was safer for youth and staff after the program was implemented (Elwyn et al. 2015). These evaluations did not examine academic outcomes.

Other approaches identified in the literature have not yet been rigorously evaluated and are primarily staff training interventions. These include:

- **Think Trauma**, a two-day training for staff working in residential juvenile justice residential centers. The curriculum has modules that cover (1) trauma and its connection to delinquency, (2) the impact of trauma, (3) trauma coping strategies, and (4) self-care (Marrow et al. 2012).
- The **Child Welfare Trauma Training Toolkit**, which contains a sample presentation, training instructions, a participant manual, handouts, readings, and other resources for a two-day training designed specifically for child welfare professionals (Child Welfare Collaborative Group 2013).
- **Risking Connection**, a staff training and implementation framework designed for use by a variety of organizations. The training includes information about trauma, trauma-informed care, and how to change organizational culture. Staff are encouraged to build Respect, Information, Connection, and Hope (RICH) relationships with clients (Brown et al. 2012).
- The **Restorative Approach** is a trauma-informed framework for dealing with problematic behaviors. Through training, staff learn how to respond to misbehavior and how to teach children to resolve conflicts (Wilcox 2012).

Two other notable models have been proposed for schools. The Massachusetts Advocates for Children and Harvard Law School created a guide and framework for creating trauma-sensitive schools that detail specific policy and practice changes to implement at the school and classroom levels (Cole et al. 2009). At the school level, the authors recommend that schools (1) create an ongoing group leading the implementation of a trauma-informed network, (2) regularly assess and fulfill staff training needs, (3) revise internal policies, and (4) work with the larger community (Cole et al. 2009). From Washington State, the Heart of Learning provides a list of instructional practices, topics for discussion, and other specific strategies for teachers and others working in schools (Wolpow et al. 2016). The guide recommends teachers avoid yelling and making threats because this imitates the behavior of traumatizers. Teachers should also let youth know that they are aware of the huge challenges the youth face and mediate students' relationships with each other to reinforce appropriate behavior. Across all the different types of programs studied in the literature, several best practices have emerged from the data. These include providing for:

- **Universal screening for trauma**. This allows more youth in need of services to be identified (Ko et al. 2008). The Adverse Childhood Experience test, developed by the Center for Disease Control, is one way to measure the number of traumatic experiences a child has experienced. A high score is associated with a number of negative health outcomes in adulthood (Gilbert et al. 2015).

- **In-person trainings for staff**. Training staff is a key part of any effective intervention, especially when the interventions are related to sensitive topics like trauma. In-person training as opposed to web-based training appear more effective at supporting high-quality implementation (Cohen et al. 2016; Beidas and Kendall 2010).

- **Ongoing consultations between staff and experts**. These regular consultations appear effective (Hodgdon et al. 2013), especially as compared to one-time trainings (Cohen et al. 2016).

Strong evidence exists for four types of therapy provided by trained professionals

A significant body of literature describes therapies used by professional therapists to support individuals who have experienced trauma. We describe the techniques here but acknowledge that their implementation requires professionals and significant resources to implement.

- Trauma-Focused Cognitive Behavior Therapy (TF-CBT) provides services and professional therapy to both parents and children through 12–18 weekly sessions. The TF-CBT model has been implemented in schools, foster care settings, and youth residential facilities by professional therapists. Several randomized controlled trials have found TF-CBT effective at reducing PTSD among youth, especially among youth exposed to sexual abuse (Cohen et al. 2005; King et al. 2000; Cohen et al. 2011; Mannarino 2012). The evidence-based YVLifeSet program screens all youth for trauma and offers TF-CBT to all youth that show signs of trauma (Skemer and Valentine 2016).
- Prolonged Exposure Therapy for Adolescents (PE-A) encourages youth to repeatedly discuss past traumatic events and experience situations that remind youth of traumatic events during therapy sessions with professionals once or twice a week over 2 to 4 months. A randomized controlled trial among female youth seeking care at a rape crisis center found that PE-A reduced PTSD symptoms (Foa et al. 2013).
- In Eye Movement Desensitization and Reprocessing (EMDR) therapy youth are asked to focus on past traumas while following the movements of an object during 3 to 12 weekly therapy sessions with professional counselors. EMDR has been used in schools and residential care facilities. A randomized controlled trial among males ages 10 to 16 with behavior problems found reductions in distress, PTSD symptoms, and behavior problems (Soberman et al. 2002). Another randomized controlled trial found decreases in anxiety and PTSD among traumatized females ages 16 to 25 (Scheck et al. 1998).
- Cognitive Behavioral Intervention for Trauma in Schools is a trauma-specific therapy designed specifically for use among youth in schools. Participants attend weekly group therapy sessions with five to seven other students and a few individual therapy sessions over 10 weeks. Mental health professionals conduct the sessions. A randomized controlled trial among younger youth (10 to 12 years old) found that the treatment group had lower rates of depression, psychosocial depression, and PTSD, but there was no change in learning and behavior issues as compared to youth in the control condition (Stein 2003). Another randomized controlled trial among a wider range of ages (9 to 16 years old) found a similar reduction of PTSD symptoms following a traumatic community event (Jaycox et al. 2010).

E. Summary

Many thousands of disadvantaged youth have participated in Job Corps over its more than 50-year history. These youth bring to Job Corps their past experiences, including their successes and challenges at school, home, and work. Although overall Job Corps has demonstrated success in improving participants' employment outcomes (Schochet et al. 2003), current research literature indicates that that there may be new approaches or concepts that could inform how Job Corps centers work with youth.

The four types of approaches discussed in this chapter—positive youth development, high expectations, growth mindsets, and trauma-informed care—have shown some promise in the research literature. Positive youth-adult relationships and engaging, challenging activities appear to be effective positive youth development strategies implemented by other programs. Teacher

expectations impact student outcomes, and teachers can communicate high expectations to students through simple activities like including a "wise feedback" note. Students who believe that their intelligence is malleable are more likely to do well, and research suggests adults can foster this "growth mindset" by teaching students that intelligence is malleable and applauding process, not intelligence. In addition, literature suggests some youth are significantly impacted by trauma and that adults and programs can be designed and trained to be sensitive to youths' challenges and the traumatic events that they may have experienced.

Moving forward, Job Corps could consider systematically collecting information from contractors about their interest in implementing these strategies and the extent to which they are already implementing the strategies. Some contractors (or indeed individual staff) may already be implementing some of these promising approaches. With this information, Job Corps could more strategically consider the various promising approaches, and ultimately determine if one (or a combination) of the promising approaches could be implemented.

Before committing to widespread implementation, the Job Corps program could implement and evaluate one of these promising approaches in a small set of centers to test their effectiveness in the Job Corps context. For example, some centers could be selected to implement a certain approach, such as a growth mindset training, and their outcomes compared to the outcomes of youth in matched comparison centers or, within selected centers, youth could be randomly assigned to receive the particular instruction or intervention or not. Implementation of an approach could be informed by other programs similar to Job Corps, and even Job Corps centers that have already incorporated one of them into their interactions with their youth. For example, some YouthBuild sites have added growth-mindset training into their services and the KIPP network of schools includes high expectations as one of their tenets.

Still, implementing any one of these approaches in centers would require several steps. First, staff and instructors would require high-quality training and support, a key element in all of the effective interventions for engaging youth. The level of training would range, however, with perhaps high-expectation interventions requiring less training initially than a trauma-informed intervention. Alternatively, for some strategies, like trauma interventions, it may make sense to hire staff with specialized credentials. Second, screening of students is important for understanding the youth and their needs—for example, understanding the youth who have fixed mindsets or the traumas the youth have experienced. Finally, monitoring the programs to ensure their successful implementation is critical, and ongoing training might be needed to ensure that they are implemented with fidelity.

III. CREATING A SAFE AND SUPPORTIVE ENVIRONMENT

Ensuring that Job Corps centers are safe environments for students and staff is a critical prerequisite for program success. An analysis of student satisfaction survey data from Job Corps participants between 2007 and 2017 found that while a majority of students feel safe at Job Corps centers, 35 percent have thought about leaving Job Corps because of a personal safety concern, 37 percent had seen a physical fight between students at a center in the last month, and 38 percent do not believe that the zero tolerance policy is applied equally to all students (Barnes 2017). Fair and effective discipline policies may improve center climate, bolster students' feelings of belonging and safety, and ultimately prevent misbehavior and violence. Currently, Job Corps has a zero-tolerance policy for serious offenses, such as violent and drug-related incidents (see Chapter I). A policy change in July 2016 expanded the zero-tolerance response to a broader set of infractions. At the same time, concerns about automatic penalties for nonviolent behavior and racial disparities in enforcement have prompted the federal Departments of Education and Justice to provide resources for school districts to move away from zero-tolerance policies and toward models of discipline that promote safe and supportive environments for students (Executive Office of the President 2016).

Zero-tolerance policies and criminal justice punishments are theorized to reduce offenses by setting clear penalties for specific infractions; potential offenders can weigh the costs of receiving the penalty against the perceived benefits of committing the offense (Nagin 2013). This theory—known as deterrence theory—implies that potential offenders must be aware of the penalty, be able to realistically assess the probability of being caught committing the offense, and compare the costs and benefits rationally. However, research suggests that adolescents and young adults are less able than adults to make the calculations of costs and benefits required for deterrence theory-based policies to be effective. For example, neuroscience research suggests that changes taking place in the adolescent brain make students more likely to engage in risky behaviors (Blakemore and Choudhury 2006). Bioecological theory stresses the importance of contextual factors in the development of children and adolescents (Bronfenbrenner and Morris 2006) and asserts that adolescents may be particularly influenced by peers and more likely to act impulsively than adults.

Critics of zero-tolerance policies cite their disproportionate suspensions and expulsions of minority students and students with disabilities, increased use of mandatory exclusionary discipline for less serious offenses such as insubordination, and detrimental effects on school climate and safety (Steinberg and Lacoe 2017). One non-experimental study examined the effect of mandatory expulsion laws on student behavioral outcomes using a nationally representative data set (Curran 2016). The results showed that the adoption of mandatory expulsion laws was related to increases in the proportion of students who were suspended, perhaps as intended. However, adoption was also related to increases in vandalism, robbery, and weapons offenses reported at school—the opposite of what would have been expected from an effective policy.

Research from several fields, including education and psychology, can inform Job Corps' disciplinary policy and practice. Three promising approaches to discipline and violence prevention that are frequently discussed in the context of schools and youth programs are:

1. **Positive Behavioral Interventions and Supports (PBIS)**. PBIS programs aim to improve school climate, promote student safety and belonging, and reduce misbehavior. The programs feature three tiers of activities: (1) activities for all students to understand behavioral expectations and consequences for misbehavior, (2) small-group activities for students identified as at-risk of academic failure or behavioral problems, and (3) targeted interventions for students in need of one-on-one support.
2. **Restorative practices**. Programs that employ restorative practices use a nonpunitive approach to dispute resolution and violence prevention. Restorative practices aim to build community, define shared values, repair harm between victims and offenders, and promote accountability and healing in the community.
3. **Self-regulation to prevent problem behavior**. Programs that strengthen self-regulation skills help people regulate and control their actions, focus on tasks, and understand their thoughts and actions to de-escalate potentially violent situations and avoid conflict.

In this chapter, we present the theory behind each approach, summarize the existing evidence of the effect of interventions using the approach on youths' behavior, and highlight promising interventions.

A. Positive behavioral interventions and supports

Programs employing PBIS, also called School-Wide Positive Behavioral Interventions and Supports (SWPBIS), use behavioral, social learning, and organizational behavioral principles to change school culture, promote student safety and sense of belonging, improve achievement, and reduce student misbehavior. The theory behind PBIS is that teaching students behavioral expectations in the same format as an academic subject will promote a safe and supportive school climate and prevent violent and disruptive incidents at school.

1. Core elements of PBIS

The core elements of the approach, as defined by Horner et al. (2015), are:

- *Primary tier (universal)*. In the primary tier, the school team defines and teaches behavioral expectations, establishes an award system for appropriate behavior, and clearly defines consequences for problem behavior. For example, the expectations developed by one high school implementing PBIS are: be caring, be academically engaged, be respectful, and be responsible (Bohanon et al. 2006). Schools also develop processes to identify youth who may be at risk of problem behavior, through data systems, observations, and/or universal behavioral screening instruments, such as the Systematic Screening for Behavioral Disorders (Burke et al. 2012). In addition, school teams analyze data to assess and address schoolwide patterns. For instance, one middle school implementing PBIS adopted an online data collection and analysis tool that allowed school staff to analyze problem behaviors by infraction type, location, time of day, and other dimensions. (See this and other examples at https://www.pbis.org/school/tier1supports/case-examples.)
- *Secondary tier (small group)*. The secondary tier involves monitoring students identified as being at-risk of problem behaviors and developing low-intensity interventions for them. The interventions provide instruction in self-regulation and social skills, increase adult

supervision and feedback, link academic and behavioral performance, and increase communication between home and school. For example, Check and Connect, which is a strategy that has been shown to prevent school dropout (What Works Clearinghouse 2015), has been adapted for PBIS. The intervention involves daily monitoring of risk factors that may lead to school failure, such as attendance, office referrals, and academic performance. Check and Connect also aims to foster a relationship with a mentor to provide monitoring and support for students to achieve their goals. The secondary tier also involves continued collection and use of data for decision making.

- *Tertiary tier (individual)*. Students exhibiting chronic behavioral issues, resulting in referrals to the office and suspensions, are recommended by teachers or administrators for tertiary tier support. The tertiary tier involves a Functional Behavioral Assessment (which is the basis for a behavior intervention plan to address problem behavior) and the linking of academic and behavior supports. Team members (often behavior specialists) develop individualized plans to help youth identify problematic situations and contexts and develop skills and strategies for avoiding problem behavior. The plans also provide rewards for desired behavior and communicate the consequences for serious misbehavior, such as suspensions. Using data for decision making is also a core element of the tertiary tier.

These elements are integrated within a school through teams of administrators, teachers, and behavior specialists. The teams provide training and organizational supports for the implementation, application, and sustained use of the core elements (Sugai and Horner 2010). PBIS has been implemented in elementary, middle, and high schools, as well as in juvenile justice facilities and with at-risk youth populations (Jolivette et al. 2013). The core elements of the model remain the same for older, at-risk youth or those in secure facilities, although the practices within each tier may need to be intensified based on student behavior in these settings (Simonsen and Sugai 2013).

Check-in/Check-out: A secondary tier PBIS strategy in alternative education settings

Check-in/Check-out (CICO) is a version of Check and Connect that specifically targets students at risk of developing behavioral problems or struggling to meet behavioral expectations in a PBIS setting. It provides students with daily positive feedback from adults on their behavioral performance and goals. Experimental studies of CICO among students at risk of severe behavior problems have found improvements in problem behavior based on both standardized assessments and observations (Cheney et al. 2009) and improvements in off-task behavior during class (Simonsen et al. 2011).

An example of CICO in an alternative residential education setting is described by Swoszowski et al. (2013). CICO mentors received training on positive reinforcement and how to use the CICO point sheet, which assigns a score of 0, 1, or 2 (with 2 being the highest score) to each daily behavioral goal. Participating students checked in with their assigned mentor at the start of each day and discussed their behavioral goals for the day. At the end of each class period, students received feedback on their behavior using the point system; those receiving scores of 0 or 1 engaged in conversations with their mentors to identify strategies for improvement and receive encouragement. Students met with mentors at the end of the day to review their behavior and discuss situations in which they had low scores, and students who met their behavioral goals received rewards. Students then discussed their progress with their house leaders each day.

2. Evidence of the effect of PBIS on student safety and behavior

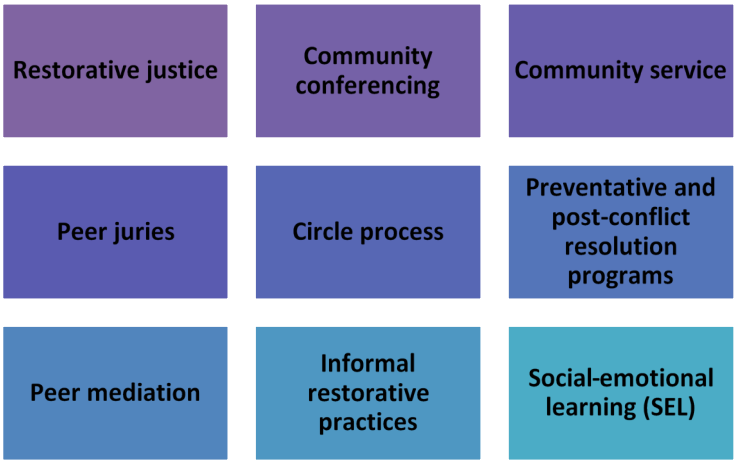
Two randomized controlled trials in elementary schools demonstrated positive impacts of PBIS on students' perceived safety, academic achievement, and problem behavior. Horner et al. (2009) used a randomized waitlist controlled trial to assess the effects of PBIS in elementary schools in two states. Students in schools implementing PBIS reported feeling safer at school, and they had higher reading performance, measured by the percentage of students meeting the state reading standard, than students in schools that had not yet implemented PBIS. Bradshaw et al. (2010) conducted a four-year experimental study among 37 elementary schools, randomly assigning some to implement PBIS and some to wait to implement PBIS for four years. The authors found that the implementation of PBIS decreased student suspensions and office discipline referrals and improved academic achievement.

Although the effectiveness of PBIS has only been rigorously tested in elementary school settings, descriptive studies provide insight into the application of PBIS in high schools, residential alternative education programs, and juvenile justice facilities. For instance, in a non-experimental study of PBIS in high schools, Flannery et al. (2013) found that students in schools implementing PBIS had fewer office referrals relative to students in comparison schools. Another descriptive study of PBIS in a Texas juvenile justice facility suggested that, after implementation of PBIS, the facility experienced reductions in total incidents and security referrals and increases in average school attendance and industry certifications (Johnson et al. 2013).

B. Restorative practices

Restorative practices are "peaceful and non-punitive approaches for addressing harm, responding to violations of legal and human rights, and problem solving" (Fronius et al. 2016). They are used in place of more traditional disciplinary responses with the aim of reducing suspensions, expulsions, and disciplinary referrals (The Advancement Project 2014). These practices are most commonly used in correctional settings, with both adults and juveniles, and in schools. Practices such as peace circles or healing circles, victim-offender mediation, and restorative conferencing aim to mend relationships between the individuals and/or communities involved in the incident, instead of applying blame and punishment (Figure III.1). Through the restorative practice, schools or other facilities aim to create a sense of community ownership among individuals to facilitate dispute resolution, improve feelings of safety, and reduce misbehavior and violence.

Figure III.1 Types of Restorative Practices



Source: The Advancement Project 2014.

1. Elements of school-based restorative practices

Schools use restorative practices to improve student behavior, disciplinary outcomes, academic achievement, attendance, and school climate. Restorative practices can take many forms and often include activities aimed at three goals (Jain et al. 2014):

1. *Community and relationship building.* The whole community engages in activities such as restorative conversations and classroom circles to strengthen relationships and create shared values.
2. *Restorative discipline*. Following a behavioral incident, restorative practices such as harm circles, mediation, and family-group conferencing can be used to respond to disciplinary issues and repair harm. The process focuses on the root causes of the harm, allows the offender the opportunity to be accountable for his or her actions, and promotes healing for all involved.
3. *Re-entry or reintegration*. One-on-one conversations with restorative justice counselors and re-entry or welcome circles support the successful reintegration of individuals after absences due to suspension or incarceration.

Implementation of restorative practices requires ongoing professional development and training for teachers and administrators in restorative techniques (Mayworm et al. 2016). Challenges implementing restorative practices in schools include limited staff time to engage in restorative practices, including time needed to engage parents and families; difficulty obtaining buy-in among all school staff to a model that gives power to youth to have a dialogue about harm; limited opportunities for training and capacity building for staff; and lack of clarity about which student offenses are appropriate for restorative practices and which should be sent to an administrator (Jain et al. 2014). Implementation guides and toolkits may facilitate successful implementation of restorative practices (Fronius et al. 2016). Examples of toolkits include Restorative Practices: Fostering Healthy Relationships and Promoting Positive Discipline in Schools (The Advancement Project 2014), Alameda County Health Care Services Agency, Restorative Justice: A Working Guide for Our Schools (Kidde and Alfred 2011), Restorative Interventions Implementation Toolkit (Beckman et al. 2012), Tutorial: Intro to Restorative Justice (Center for Justice and Reconciliation 2018), and Restorative Justice: Resources for Schools (Davis 2013).

2. Evidence of the effect of restorative practices on student safety and behavior

The empirical evidence of the effect of restorative practices is growing. Currently, experimental studies have only been completed outside of the United States. One study of police-led restorative justice programs in Australia and the United Kingdom based on 12 randomized control trials found that victims had short-term decreases in post-traumatic stress and fear, and offenders had reduced recidivism (Sherman et al. 2015). In Australia, the experiments tested the effect of diverting criminal and juvenile cases from prosecution to restorative justice conferences conducted by police facilitators. In the United Kingdom, the experiments tested supplementing traditional court proceedings for both criminal and juvenile defendants with restorative justice conferences. Offender participants were followed for up to 18 years. The effects of participating in the restorative justice conferences were greatest for high-frequency violent crime offenders; however, the authors did not find long-term effects on recidivism.

In the United States, Fronius and colleagues (2016) summarize a series of descriptive studies of restorative practices in schools. Overall, the studies documented decreases in student violence, office referrals, and the use of suspensions following the implementation of restorative practice programs. Some of these observational studies also found positive associations between restorative practices and school climate, student connectedness, community and parent engagement, academic achievement, and student behavior. Rigorous evidence of restorative practices in the United States is forthcoming. A cluster randomized trial of restorative practices in middle schools in Maine (Acosta et al. 2016) and an experimental evaluation of restorative practices in 22 schools in Pittsburgh (Acosta et al. 2015) are currently underway.

Whole School Restorative Justice in Oakland, California

The Oakland Unified School District started the Whole School Restorative Justice program in 2005 to focus on conflict resolution, community building, and successful reintegration of youth from the juvenile justice system (Jain et al. 2014). By 2013–2014, 24 schools had implemented restorative justice programs. The district hired a program manager, two specialists, and several coordinators to support school-level implementation of restorative practices.

Students involved in conflicts take several actionable steps as part of the restorative justice program: (1) making a list of what they can do to avoid future conflicts, (2) spending time with the person they were in conflict with, (3) apologizing, (4) informing friends of the new positive relationship, (5) attempting to understand the other student's motivation for their behavior, and (6) becoming friends or just being neutral acquaintances. In a descriptive study, the majority of students and teachers reported that restorative practices helped reduce disruptive behavior and repair harm caused by conflict (Jain et al. 2014).

C. Building self-regulation skills

Self-regulation skills are a set of cognitive skills that allow people to control their thoughts, emotions, and actions. Self-regulation skills include those that help people regulate and control their actions (executive function), attend to a task (selective attention), and understand their thoughts and actions (metacognition) (Dawson and Guare 2016). These self-regulation skills are believed to contribute to whether and how people set and pursue goals, and they are therefore often discussed in the context of learning and academic performance (Zimmerman and Schunk 2011). In fact, research has found that self-regulation skills predict or are associated with academic, employment, and health outcomes (Almlund et al. 2011; Borghans et al. 2008; Borghans et al. 2011; Heckman and Kautz 2012; Roberts et al. 2007). There is significant and growing evidence that self-regulation skills have a causal impact on earnings and employment (Kautz et al. 2014; Heckman and Kautz 2012).

The development of self-regulation skills can be affected by environmental factors in early childhood, such as poverty or other adverse childhood experiences, that can then affect people's ability to effectively self-regulate in adolescence and adulthood. Even with optimal developmental experiences, a person's exposure to stressful daily environments can influence their self-regulation skills. Promoting self-regulation of behavior, specifically, is critical to violence prevention (DeWall et al. 2007).

1. Self-regulation skills for youth

The continuing evolution of the brain in adolescence and early adulthood makes teaching self-regulation skills particularly important during adolescence (Murray and Rosanbalm 2017). Self-regulation skills that continue to develop during adolescence, displayed in Figure III.2, can promote persistence through high school and college, and provide skills for balancing work and school and staying out of trouble. Focusing on emotion regulation may be particularly salient for adolescents and young adults at risk of behavior problems or violence.

Figure III.2. Self-regulation skills during adolescence

Source: Murray and Rosanbalm 2017

2. Evidence of the effect of self-regulation skills on behavior

The ability to use self-regulation skills can change as people age, be impacted by external factors, and, in some contexts, be changed by interventions (Baumeister et al. 2006). Several techniques have been used to promote the development and use of self-regulation skills and are supported by experimental evidence (Cavadel et al. 2017):

1. *Cognitive behavioral therapy (CBT)*. CBT is a psychotherapeutic technique focused on changing people's thought patterns, beliefs, or attitudes in order to change their behavior and emotion (Beck 2005; Heller et al. 2013). CBT interventions aim to reduce errors in judgment and decision making that often lead to violence. A randomized controlled trial studying the impact of an intervention using CBT for youth in 18 schools in high-crime neighborhoods found that violent-crime arrests declined in the year following participation (Heller et al. 2013).
2. *Mindfulness*. These interventions teach people to purposefully direct attention and behavior to what is happening in the moment and away from something stressful or distressing, by learning to recognize distressing thoughts and separating those thoughts from immediate actions (Brantley 2005). Randomized control trials have found that mindfulness interventions can ameliorate the negative effects of stress and improve psychological functioning among urban youth (Sibinga et al. 2016). Meditation is one method used to improve mindfulness. Experimental studies in school contexts have shown that meditation increases test scores, decreases anger and fatigue among students, and improves attendance (Center for Wellness & Achievement in Education 2015).

3. *Attention bias modification (ABM).* ABM programs use self-administered, typically computer-based training modules to direct a young person's attention away from distracting or negative stimuli; this allows him or her to focus on more positive or adaptive behaviors (Bar-Haim 2010). An experimental study showed an ABM intervention was successful at helping chronically anxious youth disengage from threat and experience less anxiety (Bar-Haim et al. 2011).
4. *Motivational interviewing (MI)*. MI is a counseling method that takes a goal-oriented, client-centered approach that is intended to help clients overcome obstacles to achieve positive behavior change. Through conversation, counselors help clients generate motivation to change and achieve goals (Rollnick and Miller 1995). A randomized control trial found that a computer-based MI intervention for adolescents reduced peer violence one year following the intervention (Cunningham et al. 2012).
5. *Mental contrasting with implementation intentions (MCII)*. MCII is a strategy that helps people commit to and attain goals by first considering all the reasons why their current situation does not match their desired future and then forming an "if-then" statement that links a situation someone may encounter when pursuing a goal and a planned response to that situation (Oettingen and Gollwitzer 2010; Kirk et al. 2013). Teaching the strategy to adolescents has been shown through experimental research to improve academic effort (Duckworth et al. 2011).

A review of self-regulation programs found that programs for adolescents have not been found to be as effective as programs for younger children (Heckman and Kautz 2013). To effectively reach adolescents, programs may need to consider adolescents' desire for status and respect, create a climate that is respectful to adolescents, and promote the idea that people (and social status) can change (Yeager 2017).

Becoming a Man in Chicago, Illinois

Becoming a Man (BAM) provides in-school and after-school programming to expose youth to pro-social adults, occupy them during the high-risk hours after school, and implement aspects of cognitive behavioral therapy (CBT). BAM comprises weekly one-hour group sessions for 27 weeks during the school day over the school year. To help youth develop relationships, the intervention is delivered in groups of up to 15 youth. The BAM curriculum uses standard CBT elements to engage youth, including self-analysis check-ins, relaxation techniques, and stories and metaphors to illustrate how and when automatic behaviors or biased beliefs appear. Youth also participate in training in nontraditional sports (such as archery, boxing, or handball) that require focus and self-control, as way to reflect on automatic behaviors. Part of the BAM approach is to be understanding of why young men often want to fight when they are disrespected or otherwise provoked and offer alternative ways they can maintain status without resorting to violence (Yeager 2017). The program is manualized and can be delivered by college-educated people without specialized training in psychology or social work, although such training might be preferable (Heller et al. 2013).

Two randomized controlled trials have explored the impacts of BAM on disadvantaged youth participants in Chicago (Heller et al. 2013; Cook et al. 2014). The first found that BAM reduced rates of violence among participants and increased engagement in school, but it did not increase test scores (Heller et al. 2013). The second experiment tested the effects of BAM alone compared to BAM supplemented by an academic intervention involving small-group tutoring (Cook et al. 2014). The authors found that participation in BAM with or without the tutoring program increased math test scores, math grades, and expected graduation rates, relative to a control group that received neither intervention.

D. Summary

Job Corps must ensure that youth participants and staff members are safe and secure in Job Corps centers. Zero-tolerance may be a necessary response for the most serious violent offenses. The research literature suggests alternative approaches that Job Corps may consider to complement current discipline policies and help to prevent violent and disruptive behavior before it occurs. Many of the approaches are supported by high quality, experimental evidence, though most evaluate effectiveness within school contexts. Still, the findings may be instructive for Job Corps centers, as they consider how to build supportive communities, prevent misbehavior, and respond to violent events more effectively.

The approaches to discipline and violence prevention outlined in this chapter – PBIS, restorative practices, and self-regulation – need not be mutually exclusive. In fact, in school settings, PBIS and restorative practices are often paired together to improve school climate and promote community building. In some contexts, clearly communicated consequences for violent offenses (such as suspension or expulsion), in combination with PBIS, restorative practices, or self-regulation interventions may be appropriate. However, it may be difficult to fully adopt a restorative approach, for instance, if a zero-tolerance policy (even for the most extreme infractions) is in place (and was not agreed upon by the full community).

Before adopting one (or a combination) of these approaches, the Job Corps program could expand the student satisfaction survey to include both staff and youth and gather more information about the strengths and weaknesses within the culture of Job Corps centers. The

survey could include standardized metrics to gauge youth feelings of belonging and support, safety and security of youth and staff, and perceptions of problem behaviors and causes of violent and disruptive incidents. Engaging the full community within the Job Corps center in identifying issues around safety and security and problem-solving solutions may be one step toward building a stronger culture and climate that may contribute to violence prevention in the future. Further, centers may differ in the need for an alternative or additional approach, with some centers having already adopted aspects of these approaches, and any response should be targeted to the center.

Based on the administrative data and survey responses, Job Corps could select the centers in greatest need of support to pilot one (or more) of the approaches identified in the literature. Each of the approaches discussed requires strong implementation to be successful. Key implementation factors appear to be (1) appropriate and on-going staff training; (2) buy-in to the approach from staff, administrators, and youth to ensure that the approach permeates all settings (classroom, common areas, outside); and (3) customization of the approach, as needed, for the specific community. Therefore, providing the appropriate support, training, and facilitation, both at initial implementation and in an on-going capacity, will be necessary to garner the best outcomes.

IV. PREPARING YOUTH FOR CAREERS

The rapidly evolving skill requirements of the global economy pose challenges for young workers and businesses. Increasingly, workers of all ages must update their skills and credentials to obtain a job with family-sustaining wages, remain employable, or move ahead in a career. At the same time, businesses need a robust pipeline of qualified workers to meet the changing skill demands of their sector. Employers are generally looking for three types of skills in their entry-level employees: (1) employability or soft skills, (2) hard skills, and (3) occupation- or industry-specific skills (Casner-Lotto and Barrington 2006; Eisen et al. 2005; Rey-Alicea and Scott 2007; Holzer 1996). Employability or soft skills include professionalism, work ethic, attendance, timeliness, ability to learn, and ability to be part of a team. Hard skills include computer literacy, oral and written communication, reading and math proficiency, and critical thinking (Rey-Alicea and Scott 2007; Casner-Lotto and Barrington 2006; Eisen et al. 2005; Holzer 1996). Occupation- and industry-specific skills are those directly related to a particular job, such as proficiency in a specific computer software program or mastery of particular medical equipment.

Youth who participate in the Job Corps program can acquire all three types of skills in their chosen field of interest. After career assessment and assignment to a center, they learn hard skills and occupational skills in academic and job training courses and through work-based learning that gives them hands-on experience. Fifty-eight percent of youth who enter Job Corps without a high school degree or equivalent attain one while in Job Corps. Sixty percent of youth complete a career technical training (CTT) program by the time they leave Job Corps. Eighty percent of youth assigned to a CTT program attain an industry-recognized credential or complete a National Training Contractor program. The Job Corps program develops "soft skills" by offering youth residential living rules, conflict resolution training, and instruction on emotional and social well-being.

Multiple studies, including studies of Job Corps, have evaluated the effectiveness of job training programs and generally found modest positive impacts on the youth whom the programs focus on. For example, an interim impact report based on a randomized controlled trial found that participants in YouthBuild, a program that trains youth to work in construction and other high-demand industries, had higher rates of obtaining GEDs, enrolling in two-year colleges, participating in vocational training, and receiving training certificates (Miller et al. 2016). YouthBuild participants also had higher rates of employment and higher earnings than the comparison group of youth who were not selected to participate in the program. As another example, over 7,000 high schools nationwide operate Career Academies that combine academic instruction, vocational training, and work-based learning with business partners. A randomized controlled trial found that Career Academy participants earned more money per month than students in the control group did in the eight years following students' graduation (Kemple and Willner 2008).

Despite the evidence base for Job Corps, current literature in the field of career preparation and training suggests some additional approaches to consider, with four noteworthy concepts covered in this chapter:

1. **Career pathways programs.** A career pathway is designed to respond to local economic needs by offering a structured sequence of education, training, supportive services, and job linkages (Werner et al. 2013; Oates 2012).
2. **Micro-credentials.** Micro-credentials are evidence of possessing narrow, specific skills, such as project management, health care communications, or Android basics, and often can be "stacked" on top of other credentials. Micro-credentials can be earned over a short period of time, saving time and money in comparison with traditional credentials (Maxwell et al. 2017).
3. **Work-based learning and experience.** Through work-based learning, which is training and education that occurs at the place of employment during work hours, people gain experience in a specific field or discipline along with a general understanding of the workplace that can be valuable whatever job they pursue next. For youth who struggle to find work, work-based learning can be an important source of experience and connections with employers.
4. **Apprenticeship and pre-apprenticeship programs.** In apprenticeship programs, people earn money while learning on the job. Pre-apprenticeship programs prepare people to be in apprenticeship programs—for instance, by helping prospective apprentices earn GEDs and brush up on the basic math and literacy skills they need to enter apprenticeships in the skilled trades.

Some of these concepts are already woven into the Job Corps program. For example, the program incorporates several key elements of career pathways programs. Job Corps youth can earn credentials and gain work experience through work-based learning. Yet, there may be other opportunities for Job Corps to weave these concepts and practices more deeply into the program model.

A. Career pathways programs

A career pathway is a structured sequence of activities, including education, training, assessments, supportive services, work experience, and job linkages, which is designed to respond to local economic needs. Career pathways programs can have several different components, but four components distinguish them from other training programs: close partnerships with employers, several entry and exit points, an emphasis on useful and achievable credentials, and supportive services (Werner et al. 2013; Oates 2012).

Close partnerships with employers along the pathway—from curriculum and credential development to job experience and career advancement—are key. Employer-informed education and training ensures that the training workers are receiving is relevant to current job opportunities, and thus will give people the best chance at employment. These partnerships allow education and training providers to respond to shifting labor demand and close the gap between the credentials workers earn and the skills employers need (Manyika et al. 2012; Woolsey and Groves 2010).

Career pathways programs offer curricula and training that can be "chunked" into shorter modules to allow participants several entry and exit points. This flexibility allows people to: (1) enter at the appropriate level based on their skills and knowledge, thereby avoiding unnecessary retraining; (2) leave the program at any time to pursue employment or other training

opportunities; (3) re-enter the program at any time to continue advancing along the career pathway; and (4) continue training and education as needed in the future as their careers progress.

Career pathways programs emphasize useful, achievable, and stackable education and training credentials. By offering a series of increasingly valuable certificates, certifications, and degrees, career pathways programs enable workers to progress along a career trajectory with marketable evidence for each incremental improvement in their skills. This allows workers to focus on a near-term goal while also working toward a longer-term career goal. Industry validation of the credentials assures employers that workers have the skills they need for a job (U.S. Department of Labor 2015).

To support participants, career pathways programs offer a range of supportive services, which are built into the program model and help workers with low incomes deal with some of the challenges they face (Stephens 2009; Werner et al. 2013). Supportive services may include case management, academic and career counseling, financial aid or income support, and other social supports including, for example, child care and transportation (Foster et al. 2011; Scrivener and Weiss 2009).

Youth-Focused Program Integrating Career Pathway and Credentialing Concepts

The Integrated Basic Education and Skills Training (I-BEST) program in Washington State, developed in response to employers' reports of inadequate skills among job applicants, integrates basic skills education into college-level occupational classes for low-skilled adults. Students earn short-term certificates connected to high-demand jobs, creating a fast pathway to employment. Students who do not meet certain academic standards and would have been required to enroll in a basic skills class in the past instead enroll in a college-level occupation class. These classes are co-taught by a basic skills instructor and an occupational instructor, both of whom are in the room for at least 50 percent of the time. Typically, the co-instructors modify the existing occupational training to include the basic skills instruction. Unlike the traditional model, in which students must first pass basic skills courses, this model allow students to begin gaining credit toward their degree immediately, shortening the time needed to graduate. Students are also able to see the results of their work faster. As in many career pathways programs, students receive supportive services, including help accessing financial aid and proactive advising. Health care is the most common field of study. A non-experimental study found I-BEST had positive impacts on academic outcomes, and no impact on earnings (Zeidenberg et al. 2010).

Although there is currently limited evidence on the effectiveness of career pathways programs, a few career pathways evaluations have promising interim findings. The rigorous Green Jobs and Health Care Impact Evaluation found positive impacts of a green jobs and health career pathways program on receipt of vocational credentials in all four sites; positive impacts were found for a health care career pathway program in one site in Kern County, California, on employment and earnings at 18 months of follow-up (Martinson et al. 2016). In addition, the Pathways for Advancing Career and Education (PACE) is currently evaluating the impact of nine different career pathways programs on participants' education, employment, and earnings. Early interim impact estimates from two of the sites suggest positive impacts on hours of training received and credentials earned (Farrell and Martinson 2017; Gardiner et al. 2017). One site showed increases in the percentage of participants working in a mid-skill job along, with

increases in the percentage of participants working in the health care field (Farrell and Martinson 2017).

B. Micro-credentials

Studies have found positive economic returns for workers with traditional credentials, like associate's or bachelor's degrees (Crissey and Bauman 2010; Ewert 2012; Ewert and Kominski 2014; Marcotte et al. 2005; Prince and Jenkins 2005; Ryan and Siebens 2012; Stevens et al. 2014). However, acquiring these credentials is expensive, especially for people with low incomes; tuition cost on average just over $25,000 per year at a four-year institution in 2014-2015 (U.S. Department of Education 2016). Students pursuing bachelor's degrees must also invest significant time over several years, sometimes even longer than four years. About 60 percent of students have not earned a degree within four years of beginning full-time enrollment (U.S. Department of Education 2016). Lastly, some students are not academically prepared for success in traditional credential programs, and must take remedial courses at the beginning of their studies.

The growing field of micro-credentials is designed to address these challenges by creating alternative and complementary credentials. Micro-credentials demonstrate proficiency in a specific and specialized job skill. These credentials can generally be obtained in a short period of time and can sometimes be "stacked" along with other credentials as part of one's career pathway. The literature describes three types of micro-credentials (Maxwell et al. 2017):

- **Certificates** are awarded by academic or training institutions upon completion of a single or series of trainings or courses. Many short-term programs at community colleges would be considered certificates. Certificates are typically awarded for life.
- **Certifications** are awarded upon completion of an examination demonstrating that the individual has a certain set of skills or knowledge**.** Some certifications also require a person to demonstrate that he or she has relevant work experience. These include the Automotive Service Excellence and the Certified Information Systems Security Professional certifications. Many certifications are time-limited and require reassessment when that time limit has been reached.
- **Badges** indicate skills achievement and can be obtained in a wide variety of settings. For example, Pearson has a series of badges that help demonstrate readiness for college and/or a career, including badges for grit, basic professionalism, teamwork, critical thinking, communication, and social responsibility (Pearson n.d.). A variety of organizations, including businesses, industry organizations, and training providers, offer badges. Some governments even offer badges: the youth in a summer employment program in Detroit can earn badges in conflict resolution and financial literacy (City of Detroit 2017). Badges are often awarded and stored electronically and may be connected to digital resumes. Sometimes digital badges are an electronic way to represent other credentials.

A scan of the field has identified several key advantages to expanding the use of micro-credentials (Maxwell et al. 2017). Because they are narrowly focused and are not subject to accrediting regulations, micro-credentials can easily and quickly change requirements to match labor market needs. Micro-credentials can also be used to show and build competency in a broad

spectrum of skills, from general work skills to more technical, occupation-specific skills. As compared with traditional, educational degrees, micro-credentials are easier to stack because different micro-credentials are geared toward people with different skill levels. Lastly, micro-credentials can often be obtained in a short period of time and cost significantly less than obtaining a traditional degree.

Research has identified challenges with micro-credentials as well (Maxwell et al. 2017). The large number of micro-credentials and training providers makes it difficult for employers and job-seekers to identify the appropriate credentials for their field. Furthermore, the lack of accrediting regulations means the quality of micro-credentials varies widely; this limits the extent to which employers and job-seekers are willing to rely on these credentials to truly demonstrate a potential employee's ability. Another challenge is the entrenched preference of employers for traditional educational degrees in their hiring policies and practices. Moreover, obtaining a micro-credential may be difficult for people without some basic skills, including English language proficiency, basic literacy and numeracy, computer literacy, and executive functioning skills. Finally, although the time and financial requirements are less than for traditional degrees, some people may still not have the time or money to obtain a micro-credential. These challenges suggest that micro-credentials may not be appropriate for certain individuals who face particular barriers.

Unfortunately, rigorous evidence on micro-credentials' impacts on labor market outcomes, whether for young or older workers, does not yet exist. Potential research projects, such as testing whether people who are offered vouchers to participate in a course offering micro-credentials have better outcomes than people participating in traditional courses, may help answer questions about their effectiveness (Maxwell et al. 2017).

IBM Open Badge Program

In response to changes in technology, the workforce, and the labor market, IBM realized it needed to change how it develops and recognizes skills (Leaser 2017). To do this, IBM created a series of badges that could be earned by completing free online trainings. Students can earn five different types of badges: knowledge, skills, proficiency, certified, and general. Individual badges describe narrow and specific IT skills. An online platform allows job-seekers to earn and store badges and allows employers to verify badges. IBM has designed the badges to be "timely, verifiable, portable, discoverable, and differentiating" (Leaser 2017). After the badges were introduced, enrollment increased by 129 percent, completions increased by 226 percent, and the pass rate for the exam at the end of the courses increased 255 percent (Leaser 2017).

C. Work-based learning and work experience

Work-based learning is a broad term referring to training and education that occurs at the place of employment during work hours. People learn by doing actual work for companies and organizations and thereby building connections with employers in their field of interest. The work is often, but not always, connected to classroom-based training, and may be paid or unpaid. The training and education may be informal—that is, unplanned or unstructured—or it may be a formal program. An instructor may provide the training, or a more experienced worker could simply mentor the trainee through the course of regular work. A variety of activities can fall

under the work-based learning umbrella, including internships, community service programs, cooperative educational experiences that combine traditional education and vocational training, apprenticeship programs, career academies, and vocational programs (Swail and Kampits 2004). A leading organization suggests that effective work-based learning programs must: "support entry and advancement in career track; provide meaningful job tasks that build career skills and knowledge; offer compensation; identify target skills and how gains will be validated; reward skill development; support college entry, persistence, and completion; and provide comprehensive student supports" (Cahill 2016).

Work-based learning programs give students valuable work experience, which can translate into long-term success in the labor market. Reviews of the research on work experience have found positive short-term and long-term impacts on youths' academic outcomes, employment, and earnings (U.S. Department of Labor et al. 2014; Ross and Kazis 2016). This may be because employers seem to prefer candidates with work experience. A study in the auto services and IT industries found that employers had a strong preference for candidates with work experience (Bartlett 2004). Another study found that employers see more value in experience gained through work or internships than in academic credentials such as grade point average or college major (*The Chronicle of Higher Education* and American Public Media's Marketplace 2012). Yet young workers can struggle to get their first opportunity. For them, work-based learning offers a valuable way to gain work experience.

Research on work-based learning programs for youth has shown several positive impacts on their educational attainment and earnings. One study based on a quasi-experimental design revealed that 11th and 12th grade students who participated in industry training labs taught by educators and professionals and gained hands-on work experience entered college at twice the rate of their counterparts (Forbes 2011). Three studies that have demonstrated positive impacts of work-based learning include (see box below): (1) a random assignment impact study of Career Academies that showed that participants, especially young men, experienced greater earnings in the long term (Kemple and Willner 2008) (2) an early report from an ongoing evaluation of YouthBuild that found positive impacts on educational outcomes, employment, and earnings (Miller et al. 2016); and (3) a randomized controlled trial of Year Up that found positive employment outcomes three years after participants had enrolled in the program (Roder and Elliott 2014). Another study, a random assignment impact study of New York City's Young Adult Internship Program, found youth that were offered internships received more employment support and had higher employment rates during the program duration, as compared to the control group. However, in the first quarter after random assignment, the two groups had similar employment rates (Skemer et al. 2017).

Other research found no long-term impacts of programs that provided temporary work experience that was not tied to the classroom, suggesting the importance of linking industry- and occupation-specific education to work experiences. For example, many cities and states subsidize youth employment in private organizations during the summer (Ross and Kazis 2016). Youth who participate in these programs gain work experience, earn wages, and—through an orientation and educational workshops—learn about personal finances, work readiness, career planning, postsecondary education opportunities, and personal health maintenance. Unlike some other youth work-based learning programs, these programs typically do not offer education specific to industries or occupations. Furthermore, these programs are designed to be short-term,

and there are scant opportunities for continued employment after the summer ends. An experimental evaluation of the New York City Summer Youth Employment Program (SYEP) found that SYEP youth have higher rates of employment and higher earnings while they participate in SYEP, but these effects fade when the program is over (Valentine et al. 2017). This result echoes the results of other research on summer youth employment programs, which found positive short-term employment and academic outcomes, but little to no impact on long-term labor market outcomes (Schwartz et al. 2015; Gelber et al. 2014).

Youth-Focused, Work-Based Learning Programs

Career Academies offer work-based learning opportunities for high school students through partnerships with different local employers (Kemple et al. 1999). These employers participate in career awareness and development activities, advise on curriculum, and provide work-based learning activities; their staff hold workshops, mentor youth, and provide supervision. Liaisons coordinate activities between employers and the Academies, and are integral to effective communication and strong partnerships. The work-based learning is designed to give students opportunities to learn about a specific job and other jobs available in the company or industry.

In another program, YouthBuild, youth complete vocational, on-the-job training, mostly in construction. Certain programs offer training for in-demand occupations in other industries, like health care and information technology. Interim results from a randomized controlled trial suggest the program increased participants' rates of obtaining GEDs, their enrollment in two-year colleges, their participation in vocational training, and their receipt of training certificates, employment, and earnings (Miller et al. 2016).

In the Year Up program, disadvantaged youth with high school degrees are trained in a wide range of technical and professional skills. Year Up relies on strong partnerships with employers to develop trainings and provide six-month internships for youth. Youth receive stipends during the program. Year Up uses a point system to encourage and reinforce leadership, self-regulation and executive functioning skills. Youth lose points for inappropriate behavior and gain points for positive behavior. If a youth ever hits zero points, then the youth must leave the program. A randomized controlled trial found that the program increased participants' annual earnings and hourly wages, and this persisted for at least three years after they enrolled in the program (Roder and Elliott 2014).

D. Apprenticeship and pre-apprenticeship programs

Apprenticeship programs teach youth occupation- and industry-specific skills. Programs often give structured on-the-job training, related technical instruction, incremental wage increases as skills are attained, and, upon completion, nationally recognized certification in the chosen career area. Apprenticeship programs are one to six years long and are offered in about 1,000 occupations, such as electrician, plumber, truck driver, child care worker, nursing aide, and correctional officer. Apprenticeship programs are one type of "Earn and Learn" program in which individuals earn wages while in training.

The Registered Apprenticeship program is a U.S. DOL career-training apprenticeship program designed to produce well-trained workers whose skills are in high demand. Nationally, Registered Apprenticeship has almost 450,000 apprentices in more than 29,000 programs linked to roughly a quarter of a million employers (Reed et al. 2012). Registered Apprenticeship

programs are delivered by sponsors—employers, employer associations, and labor management organizations. Employers cover the costs of training, wages paid to apprentices, costs of managing the program, and costs associated with time spent by senior employees to mentor and train apprentices.

Several states, including Wisconsin and Georgia, operate youth-focused apprenticeship programs (Holzer and Lerman 2014). Through Wisconsin's one- or two-year program, high school juniors and seniors spend 450 to 900 hours in work-based learning and occupational courses, and upon completing those hours they earn a certificate. Some students also receive academic credit from technical colleges (Lerman 2014). High school juniors and seniors in Georgia's school-administered program participate in at least 2,000 hours of work-based learning combined with over 100 hours of classroom instruction (Lerman 2014). Students earn postsecondary credentials in fields like information technology, transportation, and manufacturing. Youth receive mentors and are evaluated by employers. Currently, more than 7,000 youth participate (Lerman 2014).

Some apprentices first complete pre-apprenticeship training, which ensures they have the interest level and the skills needed to succeed in a Registered Apprenticeship program. Pre-apprenticeship programs are typically tied to Registered Apprenticeship programs and are completed in a short period of time. Like apprenticeship programs, pre-apprenticeship programs give participants hands-on training and coursework focused on literacy, numeracy, and work readiness (Conway et al. 2010). These programs also ensure that people meet the minimum qualifications to become apprentices in a Registered Apprenticeship program (Conway et al. 2010).

Research on apprenticeship programs has found them to be successful in improving labor market outcomes. A quasi-experimental study examining the program in 10 states found that several years after completing the program, Registered Apprenticeship program participants had substantially higher earnings than nonparticipants did (Reed et al. 2012). Six years after entering the program, participants earned nearly about $6,600 more annually than nonparticipants did; after nine years, participants were earning about $5,800 more annually (Reed et al. 2012). This result echoed an earlier study that found positive impacts in Washington State (Hollenbeck and Huang 2006).

E. Summary

The literature on career preparation highlights four concepts that are currently being promoted to better prepare job seekers, including youth, for productive careers. The concepts or topics have different degrees of research evidence. For example, career pathways programs have the potential to help workers develop sustaining careers, and upcoming research may give a more definitive answer about the effectiveness of these programs. Similarly, micro-credentials are growing in popularity, but there is little evidence yet about their usefulness to employers and job-seekers. On the other hand, work-based learning programs that are coupled with specialized education and connections with employers have been demonstrated to improve labor market outcomes. Research has also demonstrated that registered apprenticeships can improve labor market outcomes.

The approaches to career preparation outlined in this chapter – career pathways, micro-credentials, work-based learning, and apprenticeships – need not be mutually exclusive. In fact, Job Corps has already incorporated many of these ideas into its approach to delivering career services. Although Job Corps had already explored these training strategies, there may still be room for innovation and program improvement. Long-term tracking of Job Corps graduates could allow the program to see how participants move along a career pathway and whether the training received in the program laid the groundwork for future advancement. Job Corps already emphasizes credential attainment, but new micro-credentials may provide low-cost options for participants to receive additional credentials. Work-based learning and apprenticeship offerings could be enhanced to provide options for youth in more occupations.

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V. ORGANIZING YOUTH SERVICES

Several organizational features of Job Corps influence how youth come together to participate in educational, employment-based, and enrichment activities in Job Corps centers across the country. The formation of these groups and their dynamics is an important part of the participant experience, because groups can influence their members' actions, thoughts, and feelings (Lewin 1951). More specifically, group dynamics—defined as "the influential actions, processes, and changes that occur within and between groups" (Forsyth 2014)—can influence group members' learning and development. The makeup of these groups, such as their size or age range, can lead to different group dynamics and, as a result, different outcomes.

As discussed in Chapter 1, at-risk youth between the ages of 16 and 24 are eligible to participate in Job Corps centers, which range in size from about 100 to 1,500 youth. Once they are accepted into the program, youth are assigned to centers based on proximity to their homes, the correspondence of the centers' offerings to their interests, and the availability of openings at a center. Job Corps uses an open entry enrollment model, so youth come in and out of centers, entering when there are openings and leaving when they meet their goals or for other reasons. About 85 percent of youth also live together in the centers' on-site, coeducational dormitories.

In this chapter, we review the literature on programs that have group formation processes or dynamics that are most relevant or applicable to the Job Corps program (a list of programs can be found in Appendix B). These programs and topics were generated through conversations with expert working groups and Job Corps staff. We examine five types of program features that can affect group dynamics:

1. **Age of participants.** A program for youth may focus on serving a narrow age range, or, in the case of a wider age range, older and younger youth may be served together or separately.
2. **Gender of participants.** Programs may serve females and males together in a coeducational setting, or provide single-sex environments.
3. **Residential environment.** Youth may live together and receive services on-site at the dormitory, or some or all of the youth may receive programming without living on-site.
4. **Group size.** Youth may be organized into larger or smaller learning communities.
5. **Enrollment practices.** Programs may allow participants to enroll at any time, at frequent but specified windows, or at only a couple of fixed times during the year.

The intent of this chapter, as with other chapters, is not to endorse any of these practices over another, but to inform the Job Corps program about the potential benefits and drawbacks to the various approaches to group formation and interaction. To do this, we focus exclusively on the research most relevant to the Job Corps program. Thus, for example, when we look at the effect of age composition, we focus on research about programs or other settings that serve the 16–24 year old age range served by Job Corps. We do not present other related research, such as that focused on mixed-age classrooms in elementary schools. Because of this, the available research, especially rigorous studies of impacts, is limited. When appropriate, we discuss the theory behind the different group settings or organizational approaches and evidence from the available research.

A. Age of participants

Youth of different ages may experience educational programs differently. For example, the national Job Corps study found that Job Corps was more effective for older participants than younger ones (Schochet et al. 2008). One possible explanation for this is that youth are at different stages developmentally depending on their age. Research on brain development suggests that a teenager's brain is different from a young adult's (National Institutes of Mental Health 2016; Yurgelun-Todd 2007). As teenagers transition into young adulthood, the prefrontal cortex—one of the last parts of the brain to develop—matures, leading to the emergence of cognitive capacities including reasoning, planning, and behavior control (Yurgelun-Todd 2007). In Job Corps, differences in experience may also stem from the fact that some younger participants are not age-eligible for certain occupations; some older youth are consenting adults and have children; and some are legally allowed to drink alcohol. Little rigorous research has been conducted on the effects of serving younger and older youth together, so in this section we present mostly qualitative research on the advantages and disadvantages of mixing youth of different ages.

In terms of advantages, some researchers note that multi-age classrooms create an environment that makes learning more developmentally appropriate because students can progress at their own pace (Heins et al. 2000) and develop socially and academically (Brooks 2005; Miller 2017). For example, in a qualitative study of the "Learning Together" project in the United Kingdom, Brooks (2005) explored age-mixing and its impact on learning. The study examined many mixed-age classes, all of which matched one of the following patterns: classes in which young students (ages 16 to 19) were in the minority; classes in which older students (age 25 or older) were in the minority; and classes in which the age mix was evenly balanced. Brooks conducted focus group interviews of age-distinct groups of older and younger students and found that there were important differences between students that affected their learning. Interviews with younger students revealed that older students tended to model quality work for younger students and contributed to group discussions, creating a more positive and learning-oriented atmosphere. Interviews with older students suggest that younger students in the class brought a fresh perspective to conversations and allowed older students to be less anxious and see things from a broader point of view.

In another study, Miller (2017) described multi-age classrooms at the Francis W. Parker Charter Essential School, where students are divided into three divisions that each blend two grades: (1) 7th and 8th graders, (2) 9th and 10th graders, and (3) 11th and 12th graders. Classrooms within each division contain a mix of 15 to 20 students of various ages who work with one or two faculty members. Qualitative interviews with students suggest that mixed-age classrooms give younger students an opportunity to build relationships with older students, and give older students an opportunity to mentor younger students to keep them on track. The mixed-age classroom also helps students develop academically by allowing those who lag behind their peers to have more time to master the material; students can stay in their group an extra semester or year.

However, other researchers suggest that mixed age groups create barriers for learning because of the varying maturity levels of students and resulting classroom management issues (Arnett 2000; Krause et al. 2005; Perin et al. 2006). Arnett (2000) argues that emerging

adulthood (that is, ages 18 to 25) is a period of identity exploration that is more pronounced than and distinct from adolescence. Furthermore, he notes that older students are more likely to be thinking about their educational future, whereas younger students are simply taking another step in their educational path. In a case study of an adult education program, Perin et al. (2006) argue against mixed age groups, citing a lack of maturity and goal-directedness among younger students. The authors found that younger students tended to be more disruptive than older students and were more likely than their older counterparts to be involved in risky behaviors, such as being involved in gangs and abusing substances. Finally, the greater maturity of older youth was also cited as a reason why almost 30 percent of YouthBuild sites chose to serve exclusively youth over the age of 18, even though the program's target population is youth ages 16 to 24 (Wiegand et al. 2015).

B. Gender of participants

Most of the Job Corps centers are coeducational, with separate dorm space for females and for males, and participants attend trainings in coeducational settings. As with variation in the age of participants, male and female participants may experience educational programs differently. One reason may be that male and female students mature at different rates (Lim et al. 2015). Such differences have led to debates about the merits and drawbacks of coeducational versus single-sex schooling. Some rigorous research on the topic has been done, and a recent meta-analysis found no differences in student outcomes between the two settings (Pahlke et al. 2014).

The often-cited merits of single-sex education over coeducational education are that it can accommodate the different needs, interests, and modes of learning of male and female students, and it can provide a more focused academic orientation (Cable and Spradlin 2008; Sax 2005). For example, females tend to excel in noncompetitive, collaborative environments, whereas males tend to excel in competitions. Single-sex classrooms can be tailored to reflect these differences (Sax 2005). Male and female students may also be distracted by members of the opposite sex, making socializing more of a priority than learning. For this reason, single-sex classrooms could be beneficial because there will be fewer distractions and more of an orientation toward learning (Sax 2005).

In addition, researchers argue that being in a single-sex environment can affect students' self-concept and achievement. For example, in a randomized experiment, Kessels and Hannover (2008) found that females in single-sex classes reported a significantly stronger self-concept of their abilities in physics compared with females in coeducational classes. This led to positive identify formation and higher self-esteem, both of which are important predictors of achievement outcomes (Häussler and Hoffmann 2002). In a study of high schools in Seoul, South Korea, researchers estimated the effect of single-sex schools on middle school graduates who were randomly assigned to high schools within their school districts. The authors found positive effects of single-sex schools for females and males on both Korean and English college entrance exam scores (Park et al. 2013). Though there is a dearth of empirical evidence on the effects of single-sex schools on males, some researchers argue that all-male academies enhance academic outcomes for African American males. For example, Mitchell and Stewart (2013) cite the high graduation rate and college placement of students at Urban Prep Academy, an all-male, all-African-American charter school in Chicago, as support for the idea that single-sex schooling

can fulfill the needs of at-risk males who are members of a minority group and come from families with low incomes.

Other researchers suggest, however, that single-sex education may be detrimental to student learning (Cable and Spradlin 2008). For instance, it could be difficult for students in single-sex classrooms to assimilate into coeducational classrooms in the future, and the sexes will not be separated in "real life" or in the workplace. In addition, single-sex education can mean a lack of diversity, and it can perpetuate segregation and its associated stereotypes and messages of inferiority. Developmental intergroup theory suggests that once a trait, such as gender, gains psychological salience, the development and endorsement of gender stereotypes may be more likely. Psychological salience is gained through a combination of perceptual discriminability of groups, unequal group size, explicit labeling of group membership, and implicit use of groups – all of which are exacerbated in single-sex schooling (Bigler & Liben, 2006; 2007). Furthermore, some argue that the perceived success of single-sex education is likely due to other factors including highly motivated staff; higher prior achievement by the students, larger family incomes and higher levels of parental education; and small class sizes or schools (Cable and Spradlin 2008).

In an effort to synthesize studies that may come to different conclusions about single-sex education, a recent meta-analysis focused on studies that tested the effects of single-sex versus coeducational schooling on student performance and attitudes. When the authors considered only U.S. studies that were done through random assignment or that controlled for selection effects, they found negligible differences between student outcomes in single-sex versus coeducational settings (Pahlke et al. 2014). There were not enough rigorous studies that tested whether single-sex schooling is particularly effective for males who are members of minority groups to include in the meta-analysis.

C. Residential environment

Job Corps offers a full array of educational and residential services across its centers, and about 85 percent of participants live at the centers. For our purposes, residential education is defined as the "settings where economically and socially disadvantaged children live and learn together, outside their homes, within stable, supportive environments" (Coalition for Residential Excellence 2011). Although residential programs may provide safety, nurturing, structure, and stability in an education-focused setting (Coalition for Residential Excellence 2011), they may also remove youth from their community and home labor market. The residential education literature focuses mainly on special populations such as foster youth or youth in psychiatric care, and rigorous research that isolates the effect of residential programming is lacking.

The potential advantages of residential programs include fostering close connections between residents, providing stability, and socializing youth. Lee and Barth (2009) argue that residential education promotes close connections between the learning environment and the living environment, and offers enhanced educational services for youth in the foster care system. For older youth in foster care, residential education programs can give stability to those who often experience multiple placements (Trout et al. 2008). Furthermore, for these youth in foster care, attending residential education programs can provide the stability and educational resources that may be difficult to find elsewhere. In addition, Lee and Barth (2009) note that many

residential education programs integrate family living in their environments, where meals are served family style and recreation activities are planned and decided as a family group. This helps youth socialize to family living instead of experiencing institutional living.

Possible disadvantages of residential education programs include the potential for increased negative peer effects from youth with behavioral problems (Leve and Chamberlain 2005; Dishion et al. 1999) and separating youth from their families and community supports (Barth 2002). Leve and Chamberlain (2005) examined data from two randomized controlled trials that were designed to examine the effects of residential peer aggregation among at-risk youth who were referred for out-of-home care through the juvenile justice system. The authors found that youth who were living with their peers instead of being individually placed had more associations with delinquent peers at the 12-month follow up—an outcome that is strongly predictive of engaging in delinquent behavior. Dishion et al. (1999) came to similar conclusions, and argued that increased exposure to deviant peers (which might happen in a residential setting) increases the potential for peer effects to operate.

A Residential Youth Program: National Guard Youth ChalleNGe

The National Guard Youth ChalleNGe program is a residential education and training program designed for youth between the ages of 16 and 18 who have dropped out of or been expelled from high school. During the 22-week residential period, students live in barracks in a quasi-military environment, wear uniforms, and experience military-style discipline. Participants are offered GED preparation classes and other services intended to promote positive development.

Millenky et al. (2010) conducted a randomized controlled trial to examine the effects of the National Guard Youth ChalleNGe Program in 10 sites located in 10 states. The full sample included 3,074 youth who were randomly assigned to participate in the program or to be in a control group that did not receive program services. The authors found that there was a statistically significant positive difference between the intervention group and the control group in students' self-reports of having received a high school diploma or GED 21 months after random assignment. At the time of follow-up, 61 percent of the intervention group members reported having a diploma or GED, compared with 36 percent of the control group members. In addition, Youth ChalleNGe participants were more likely than members of the control group to be involved in work, school, or training 21 months after random assignment (72 percent versus 66 percent, respectively).

D. Learning in groups of different sizes

Job Corps centers across the country vary in size, and thus the learning groups in which students interact may vary in their group dynamics and resulting outcomes as well. The national study of Job Corps did not find differences in impacts by center size (Burghardt and Schochet 2001), but center size alone does not dictate how youth are grouped for the various learning opportunities offered by Job Corps. Even within larger settings, students can be organized into smaller groups.

A Residential Program for Foster Care Youth: The San Pascual Academy

The San Pascual Academy serves youth in long-term foster care who are not likely to be reunified with their family. Youth ages 12 to 18 live and learn at the Academy as they prepare for college and/or a career path. The Academy resembles Job Corps in that it provides residential, educational, work readiness, and child welfare services. The Academy seeks to provide a safe, stable, caring environment where youth can work toward their high school diplomas, prepare for college and/or a vocation, and develop independent living skills (http://www.sanpasqualacademy.org/). The Academy provides family-style cottages with house parents for up to eight youth per cottage. An intergenerational program allows foster grandparents to live on campus, mentor youth, and provide support in school tutoring and other activities such as cooking, crafts, gardening, and art. The Academy also provides comprehensive health services along with other supportive services to advance youth's goals of higher education and employment.

Lawler et al. (2014) found the duration of stay at the Academy and the completion of the program are associated with positive outcomes for participating youth. More specifically, the authors found that safe housing, significant relationships with adults, attainment of a high school diploma or GED, employment, and access to health care were significantly predicted by duration of stay. Post-high school education was significantly predicted by program completion and duration of stay. Another study conducted by Jones and Landsverk (2006) examined the effects of the Academy on foster youth's outcomes. They researchers found that for the first three graduating classes, school completion and college attendance rates were higher than rates reported in most other studies of foster youth programs.

Research has demonstrated that small schools are more effective than larger schools at improving student achievement (Lee and Friedrich 2007; Unterman 2014). A study of New York City's small schools of choice (SSC) used naturally occurring lotteries embedded in the city's process for applying to high schools to estimate the effect of small schools (serving about 100 to 120 students per grade) on student achievement (Unterman 2014). The study included more than 21,000 students who were enrolled in 105 of the 123 small schools that were created after 2002. Findings from the study indicate that, compared with students who did not attend an SSC, SSC attendees had higher high school graduation rates, particularly for disadvantaged students of color, and had a higher percentage of high school graduates who enrolled in postsecondary institutions (Unterman 2014). Some encouraging results were also found in a randomized controlled trial of a one-semester learning community program at Kingsborough Community College. The freshman students that were assigned to groups of 25 to take courses together in their first semester had higher persistence and degree completion than students receiving standard services (Weiss et al. 2015). In a related study of six learning community programs, however, only modest short-term effects on credits completed were found, meaning the Kingsborough results may not necessarily be generalizable nor replicable (Weiss et al. 2015).

Even within larger schools, there may be benefits to creating "small learning communities," which Lee and Friedrich (2007) define as organizational restructuring to create a smaller, more personalized, autonomous learning environment within their larger structures in order to improve educational outcomes. In a national evaluation of small learning communities (SLCs) for the U.S. Department of Education, Page et al. (2002) reviewed the existing body of research and identified several promising SLCs that had positive effects on student outcomes. One of these promising SLCs is the Junior Reserve Officer Training Corps (JROTC) Career Academy program that was examined by Elliott, Hanser, and Gilroy (2000) using a quasi-experimental

study designed to evaluate the program's effectiveness in terms of improving student grades, attendance, and graduation. The sample included 18 cohorts of students enrolled in eight pairs of schools in five urban school districts across the United States. The authors concluded that students in JROTC had higher GPAs, lower rates of absenteeism, and higher graduation rates than students who enrolled in the general academic program (Elliott et al. 2000). Another promising SLC that Page et al. identified is Career Academies, which had positive effects on completion rates of career and technical courses, and led to lower dropout rates for at-risk students (Kemple and Snipes 2000; Kemple and Willner 2008).

Although evidence suggests that smaller learning environments are related to positive academic outcomes, there can be challenges associated with implementation. For one, there is no consensus on an ideal school size (Lee and Friedrich 2007; Page et al. 2002). Some authors agree that a size of 400 is best as an upward threshold for small schools (Cotton 2001), and others recognize a threshold of 1,500 students for a school to be considered a large school (Lee et al. 2002). Other implementation challenges include reluctance to change and conflicting schedules or space needs (Page et al. 2002). The implementation of a successful SLC may also require increases in budget, planning time, and/or staff.

A Small Group Learning Environment: The Career Academies Program

The Career Academies program, which has operated for more than 30 years, provides high school students between the ages of 15 and 18 with academic, career, and technical training. Career Academies organize students into small groups to create a more supportive and personalized learning environment through a school-within-a-school structure. Career academies vary in size depending on the program; typically, there are about 30 to 150 students at each grade level to promote personalization (College and Career Academy Support Network 2014). The Career Academies program integrates an academic curriculum and a career-focused technical curriculum, and partners with local employers to give students a range of opportunities in career development and work-based learning. Research on Career Academies has demonstrated evidence that the program increases the participants' number of interpersonal relationships and their level of participation in career preparation activities, reduces dropout rates, and gets them more engaged in their development (Kemple and Snipes 2000). Overall, the Career Academies program has demonstrated effectiveness in increasing career and technical course-taking, improving the likelihood of at-risk students staying in school and earning credits toward graduation, and increasing earnings, especially among young men (Kemple and Willner 2008).

E. Enrollment practices

Job Corps uses an open entry model to enroll youth, who can enter the program at any time, progress toward their goals at their own pace, and exit when they reach their goals. Other programs use fixed and managed enrollment. Below, we describe the benefits and drawbacks of each model.

Open entry. Also known as continuous enrollment or rolling enrollment, open entry/open exit is "a system that allows learners to enter and exit a class at nearly any point throughout its term" (Scogins et al. 2008). Because students come and go, the instruction is typically self-

paced, students work independently, and learning is motivated by individual interests and priorities.

The main perceived strengths of this enrollment type are the flexibility and access it gives students and the ability to continuously fill open slots in classes. Students can enter when they are ready to enroll, maximizing access for those who face multiple barriers to enrolling at a fixed time (Scogins et al. 2008). The model also offers flexibility to individuals who may be juggling work and family responsibilities. In this open system, students can be served immediately instead of waiting for the next enrollment period, and the program will not lose students in the interim while students wait for classes to start. This is the most effective enrollment structure to keep classes full and enrollment numbers high.

The major weakness of an open entry/open exit enrollment system is the instructional issues that teachers face. Because students can show up to classes and also exit the program at any given time, instructors can have difficulty managing their classrooms (Scogins et al. 2008). Instructors also struggle with managing students who are at different levels, making it difficult to provide any group instruction (Smith and Hofer 2003; Strucker 2007). Scogins et al. (2008) also note that there may be challenges in terms of scheduling, staffing, and tracking students. In terms of group dynamics, the open enrollment system may lack cohesiveness, because the same students are not consistently present throughout the session (Scogins et al. 2008). As a result, students will not have a consistent learning community where they can learn from each other and develop strong supportive bonds.

An Open Entry/Open Exit Program: Los Angeles Conversation Corps

Founded in 1986, the Los Angeles Conservation Corps (LACC) is an open-entry, open-exit program that provides at-risk youth and young adults with educational support, job training skills, career support, and hands-on work experience on conservation and service projects that benefit the community. Corps members participate in a 12-month program that can be extended. They can take classes to earn a high school diploma and earn scholarships for college; earn specialized work certificates; or participate in tool and safety training or paid work experience. LACC also gives its participants legal services along with support services in resume writing, interviewing for jobs, and financial literacy.

Fixed enrollment. Fixed or closed enrollment programs often have structured intake and enrollment for all students at the beginning of the program or class (Scogins et al. 2008). Fixed enrollment typically also includes group-based instruction, with students progressing together toward completing the program.

This model's major strengths include having planned lessons, building group curriculum, and creating student learning communities. The structure allows instructors to plan lessons that build on each other without the need to constantly review and catch up students who missed class (Beder et al. 2006; Robinson-Geller 2005). Instructors are not limited to individualized instruction and learning and can develop activities, such as project-based instruction, for the whole class. Students enter as a cohort, and thus develop common goals and commitment to the program (Drago-Severson et al. 2001). These resulting learning communities can form

supportive bonds that may increase students' persistence and ultimately their learning gains (Beder et al. 2006; Scogins et al. 2008).

Weiss et al. (2015) found support for the effectiveness of a cohort-based instruction model on academic outcomes in the Kingsborough Community College study. Over 1,500 students between the ages of 17 and 34 were randomly assigned to a learning community program group or to the comparison (services as usual) group. Students enrolled in the learning community program took three courses together as a cohort: an English course, another academic course, and a freshman orientation course. Students in the comparison group took any available courses they wanted to, and were not required to enroll in the English or freshman orientation course. The authors found that students in the learning community program were more persistent than the comparison group in intersession course enrollment, and earned significantly more credits. The study found limited evidence that the learning community program increased graduation rates seven years after random assignment.

The major drawbacks to fixed enrollment are limited access and limited flexibility (Scogins et al. 2008; Strucker 2007). Students who miss the registration or placement dates are placed on waiting lists until the next registration period opens. Programs that use fixed enrollment often can fill their available slots at the beginning of the class, but then experience attrition as students drop out for a variety of reasons. Consequently, slots are not filled and the program is not operating at capacity, both of which result in higher costs of operation per student and underused instructors (Scogins et al. 2008).

A Fixed Enrollment Program: YouthBuild

YouthBuild is a fixed enrollment program that serves a youth population like the one the Job Corps program serves. The non-residential program provides pathways to education, employment, entrepreneurship, and community leadership for youth ages 16 to 24 who come from low-income backgrounds. Largely funded by the U.S. Department of Labor (DOL), YouthBuild empowers young people to become leaders, educates students and provides skills for high-demand careers, and builds affordable housing, community centers, playgrounds, and schools. YouthBuild design standards make fixed enrollment central to its model. Students enroll during specific times of the year, and if they miss the enrollment period, they must wait until the next enrollment period to begin. Before starting the program, students go through a Mental Toughness Orientation intended to facilitate group bonding, and then they are admitted in cohorts of no fewer than seven. In addition to working and learning together over the course of the program, YouthBuild programs strive to create a family-like environment within the cohort in which students and staff are supported, respected, and trusted (Wiegand et al. 2015).

Interim findings from the DOL-funded impact evaluation of YouthBuild revealed positive impacts on participants' education and training outcomes (Miller et al. 2016). More specifically, the evaluation found that YouthBuild increased the rate at which participants earned high school diplomas or GEDs, enrolled in college, and participated in vocational training. The authors also noted that YouthBuild led to a small increase in wages and earnings 30 months after participants entered the study. The study further revealed that YouthBuild increased civic engagement, particularly volunteering, but had few effects on other measures of youth development or attitudes, or on involvement in the criminal justice system.

Managed enrollment. Managed enrollment, also known as managed instruction or managed scheduling, is "a system developed by local programs that is characterized by efforts to build upon the strengths and minimize the challenges" of fixed-entry and open-entry programs (Scogins et al. 2008). It can be considered a blend of self-paced instruction and group-based instruction, because it gives students the flexibility to leave when they need to, but also creates a cohort of students who progress together through a fixed enrollment period.

The advantage of managed enrollment is that it combines the concepts of open and fixed enrollment by allowing flexibility to respond to the realities and challenges students face, yet it also provides a stable educational environment in which to learn and make measurable gains. Periodically scheduled entry points into existing classes give students flexibility, and short, self-contained, and sequential modules (that is, three to six weeks long) offers students a stable educational environment. This type of enrollment can also be tailored to meet local goals and needs, allowing administrators to decide how much flexibility to allow, how long students are expected to persist, and how the class will be structured. Programs that have switched from open to managed enrollment report seeing increases in attendance, persistence, and learning gains (Scogins et al. 2008; Strucker 2007).

The disadvantage of a managed enrollment system is the structural and administrative challenge it brings, such as setting up classes, determining the length of a session, and deciding when enrollment periods begin and end. This requires upfront time and effort for staff to plan and make program changes. Like fixed enrollment, managed enrollment has the disadvantage of limited access and limited flexibility. Because there are structured enrollment dates, students who miss the deadline will have to wait until the next enrollment period to sign up, but will not wait as long as they would in a fixed enrollment system because the length of the sessions tend to be shorter.

Two Managed Enrollment Programs

An example of a program with managed enrollment is Youth Empowerment Services in Philadelphia (YESPhilly), a nonprofit program that provides educational support, counseling, college and career services, and media arts opportunities for youth ages 17 to 21. YESPhilly operates on a two-month enrollment cycle, which allow instructors to create lesson plans that build on each lesson and on students' day-to-day learning. This limits the need to repeatedly cover skills for new students continuously joining the class.

Another program that operates as a managed enrollment program is the City University of New York Prep School, which prepares 16–18 year olds who are out of school to obtain a GED and complete college-level work. This program also provides support for college transition and directly connects students to postsecondary institutions. Managed enrollment classes can be structured to fit into the postsecondary education and training system, thereby easing this transition and leading to better student outcomes. Although limited rigorous research exists on these GED-to-college bridge programs, a report published by MDRC suggests evidence of promising trends for the efficacy of such programs (Rutschow and Crary-Ross 2014).

F. Summary

This chapter covered topics including mixed-age classes, single-sex and coeducational settings, residential programming, small learning communities, and different types of enrollment

systems. In general, more rigorous research is needed to come to a consensus on the effect of these approaches, especially in contexts like Job Corps.

More specifically, the research base on mixed-age classes in the age range Job Corps serves is sparse and varied, and the rigorous literature on single-sex versus coeducational settings does not provide strong evidence in favor of either approach. Some residential programs that are similar to Job Corps, such as National Guard Youth ChalleNGe, have achieved positive education and employment outcomes for their participants. However, the research has not been able to isolate and identify the effect of the residential programming versus other aspects of these programs. In terms of the size of learning communities, there is rigorous evidence that smaller schools (around 120 students per grade) are more effective at producing better student learning outcomes than larger schools are. Some small learning communities, such as JROTC and Career Academies, have also shown positive effects on the educational and labor market outcomes of their participants. As was the case with the residential programming literature, however, these studies do not isolate the impact of being a small learning community from other aspects of the program, such as career and technical training. Lastly, fixed enrollment programs in which students enter and learn in a cohort have been shown to improve short-term outcomes, but it is not clear if those effects persist in the longer term. Fixed enrollment programs may not face as many instructional or administrative challenges as open entry systems, but they also do not give students the flexibility and access that open entry systems do.

Some of the organizational features discussed in this chapter are congressionally mandated (such as what age group is served) and some may be fully implemented in Job Corps centers already (such as open entry enrollment). Others would be substantial shifts from the current model, but could give Job Corps an opportunity to pilot the various approaches or variations on them. Indeed, Job Corps is currently operating a pilot at the Cascades center that serves younger students (ages 16 to 21), uses cohort enrollment, and extends the residential programming to up to three years. DOL has contracted with Abt Associates to evaluate this pilot.

These approaches could be explored in incremental ways, such as offering some services or trainings in single-sex environments, serving youth of different ages at different centers, or creating smaller learning communities within its centers instead of creating smaller centers. Whether they are done incrementally or not, each of the organizational approaches in this chapter comes with its own implementation challenges. For example, current Job Corps center locations would make non-residential programming infeasible for most participants, so Job Corps would have to explore the possibility of opening new locations. Modifying structures based on age and sex would require Job Corps to make sure it was still serving its target population across all of its centers, and would also result in some youth being served at centers further from home. Similarly, changing the enrollment system could produce more attrition between recruitment and program entry, resulting in fewer participants being served. Challenges related to size include deciding on the right size for a learning community and potentially opening new, smaller centers.

Finally, some of the approaches discussed here may be more or less compatible with one another. For example, the research on small learning communities is based on settings with fixed enrollment systems, so the implementation may not work as well in an open entry system. On the other hand, some approaches may be compatible because they can be implemented together

relatively easily. For example, a fixed enrollment system could be used to create sex- or age-specific cohorts.

PART II: PROGRAM OPERATIONS

Part II of this report focuses on promising practices and alternative approaches related to the operations of the Job Corps program.

- **Chapter VI: Optimal Location of Job Corps Centers**

  As Job Corps examines its current stock of centers and considers the potential for new centers or closing older facilities, the program has many different factors it could consider. In this chapter, we consider the location of current Job Corps centers along three dimensions:

  1. Facilitating access to Job Corps across the country
  2. Proximity to community colleges
  3. Proximity to employers

- **Chapter VII: Approaches to Program Innovation**

  A program like Job Corps needs to continually innovate to best serve its participants. In this chapter, we examine the theory and research behind fostering program innovation from the business and public sectors and examples of practices that could foster innovation. These practices include:

  1. Using human-centered design principles
  2. Giving prizes to encourage innovation
  3. Encouraging contractors to act as innovation labs
  4. Instituting communities of practice to share ideas

- **Chapter VIII: Alternative Arrangements for Providing Job Corps Services**

  The decision to operate the Job Corps programs primarily through contractors has significant implications for program operations. In this chapter, we explore alternative ways that federal services can be procured or delivered and potential strategies to expand the types of organizations operating Job Corps centers. These strategies include:

  1. Subcontracts with specialized service providers
  2. Limited number of "charter" centers with fewer regulations
  3. Requests for information to gain input from stakeholders

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VI. OPTIMAL LOCATION OF JOB CORPS CENTERS

The locations of Job Corps centers have remained relatively constant over time. Historical factors, including the availability of facilities (many of the centers are former military or education institutions or hospitals), help to explain the current locations of the 101 contractor-operated centers. The remaining 26 centers (called Civilian Conservation Centers [CCC]) are operated by the U.S. Department of Agriculture's (USDA) Forest Service and are located in rural areas such as national forests, parks, grasslands, and other public lands.

This chapter considers the locations of current Job Corps centers along three dimensions: (1) facilitating access to Job Corps for young people across the country, (2) proximity to postsecondary institutions to facilitate training partnerships, and (3) proximity to employers to facilitate work-based learning. Focus on one of these dimensions may affect another. The geographic location of a Job Corps center affects the feasibility of its developing partnerships with community colleges and employers. Although a center in a remote location may be able to develop effective partnerships, these partnerships may be more difficult to facilitate than partnerships between centers and colleges in closer proximity.

As a practical matter, changing center locations would require closing current centers or opening new ones, and Job Corps has several factors to consider besides optimal location in weighing those options. Following WIOA guidance, DOL has published written criteria for closing a center, which include chronic low performance, a joint decision by the secretaries of labor and agriculture to close a CCC, or a determination by DOL that a high-quality education and training program cannot be provided at the center (81 FR 12529).

The analysis presented below is illustrative of the types of geographic factors that could be taken into consideration and help inform decisions about center location as well as how centers' geographic location affects the possibility of partnerships. It is important to acknowledge that these geographic factors may have different implications. For example, locating centers close to potential youth participants may not optimize a center's proximity to community colleges and the desired employers. Therefor, we are not making any recommendations about opening or closing specific Job Corps centers on the basis of this analysis, but instead presenting information on various factors that could be taken into consideration.

A. Facilitating access to Job Corps across the country

Job Corps operates centers in all states, the District of Columbia, and Puerto Rico, and the program prioritizes enrolling youth in centers in their home state (unless an appropriate center in another state is closer to a youth's home). Although Job Corps regulations no longer require that the program maintain a center in each state, Puerto Rico, and the District of Columbia (82 FR 44842), the preference remains to offer nationwide access.

Although most Job Corps participants reside at their center during the program, there may be advantages to minimizing the distance youth need to travel to the center from their home communities. Potential advantages of having youth attend closer to home include their ability to maintain connections to their community and access to their home labor market (Barth 2002). Also, costs of travel to and from home are covered by the program, so minimizing travel is cost-

effective. Others have emphasized the potential advantages of having youth participate in residential programs away from their home environment.

There are multiple ways to consider youth access to Job Corps centers. Here, we examine the capacity of Job Corps centers relative to the potential population of Job Corps participants in an area. Although this is an important measure of access, living in a state with a relatively large number of Job Corps slots does not guarantee a youth geographical proximity to a Job Corps center. In large states with only one Job Corps center, youth may live far from the center, even if a relatively large number of program slots are available in the state.

To examine center capacity relative to the number of potential participants, we first use information on Job Corps center location and capacity to calculate the number of Job Corps slots available in each state. We then use data collected by the U.S. Census Bureau and analyzed by Measure of America and Opportunity Nation (2017) to ascertain the number of youth in each state between the ages of 16 and 24 who are not enrolled in school and not working. These are disconnected youth that represent the target population for Job Corps.

Some states appear to have low capacity relative to the population of prospective Job Corps participants. For example, in South Carolina, there are 441 disconnected youth per Job Corps slot, compared to 26 disconnected youth per slot in Montana (Table VI.1). We also display the number of disconnected youth per Job Corps slot in a tile grid map, where each state is represented by a rectangle (Figure VI.1). The dark blue tiles indicate a state that has more than 200 disconnected youth per Job Corps slot. Of the six Job Corps regions, the Chicago and Atlanta regions have a high number of states with relatively low numbers of slots given their populations of disconnected youth. The states in the Chicago region are Illinois, Ohio, Kansas, Indiana, Michigan, and Minnesota. The states in the Atlanta region are South Carolina, Florida, Tennessee, and Alabama.

Current waitlists are not necessarily a good measure of unmet demand for Job Corps services. The OA contractors, who are responsible for conducting outreach and enrolling youth in the program, have negotiated quotas that are dependent on the number of program slots available at the centers they serve. An OA contractor in a state with a low capacity relative to the population of prospective participants may conduct less extensive outreach and public education because they are aiming to enroll fewer youth into the program.

Table VI.1. Number of disconnected youth and Job Corps slots by state

State	Number of disconnected youth[a]	Number of Job Corps slots[b]	Number of disconnected youth per slot	Number of Job Corps centers	Region
South Carolina	89,591	203	441	1	Atlanta
Colorado	74,275	190	391	1	Dallas
Florida	320,602	1,094	293	4	Atlanta
Tennessee	129,295	457	283	2	Atlanta
New Jersey	118,177	417	283	1	Boston
Illinois	200,833	780	257	3	Chicago
California	680,495	3,151	216	7	San Francisco
Ohio	174,847	820	213	3	Chicago
Kansas	46,075	217	212	1	Chicago

State	Number of disconnected youth[a]	Number of Job Corps slots[b]	Number of disconnected youth per slot	Number of Job Corps centers	Region
Indiana	107,557	510	211	2	Chicago
Arizona	129,372	620	209	2	San Francisco
Michigan	169,706	817	208	3	Chicago
Alabama	104,901	514	204	2	Atlanta
Minnesota	53,126	264	201	1	Chicago
North Carolina	165,828	846	196	4	Atlanta
Wisconsin	74,917	397	189	2	Chicago
Texas	497,746	2,632	189	4	Dallas
New York	326,614	1,797	182	7	Boston
Washington	111,100	636	175	3	San Francisco
Virginia	111,084	678	164	3	Philadelphia
Louisiana	101,149	624	162	3	Dallas
Connecticut	45,285	338	134	2	Boston
Georgia	203,812	1,519	134	3	Atlanta
Arkansas	55,903	421	133	2	Dallas
Maryland	92,275	728	127	2	Philadelphia
Pennsylvania	189,799	1,733	110	4	Philadelphia
Idaho	28,546	262	109	1	San Francisco
Mississippi	68,846	691	100	3	Atlanta
Nebraska	21,361	216	99	1	Chicago
Nevada	48,486	509	95	1	San Francisco
Rhode Island	17,021	185	92	1	Boston
Delaware	13,352	153	87	1	Philadelphia
Oklahoma	76,737	964	80	3	Dallas
New Mexico	40,347	505	80	2	Dallas
Alaska	17,737	226	78	1	San Francisco
Missouri	89,095	1,166	76	3	Chicago
Massachusetts	73,239	974	75	3	Boston
West Virginia	34,048	463	74	2	Philadelphia
Iowa	37,479	519	72	2	Chicago
Hawaii	24,052	339	71	2	San Francisco
South Dakota	11,534	169	68	1	Dallas
New Hampshire	14,269	216	66	1	Boston
North Dakota	10,242	197	52	1	Dallas
Oregon	58,724	1,263	46	6	San Francisco
Utah	51,825	1,226	42	2	Dallas
Kentucky	83,791	2,393	35	7	Philadelphia
District of Columbia	12,694	378	34	1	Philadelphia
Wyoming	6,637	196	34	1	Dallas
Vermont	7,320	220	33	1	Boston
Maine	15,022	574	26	2	Boston
Montana	16,128	630	26	3	Dallas

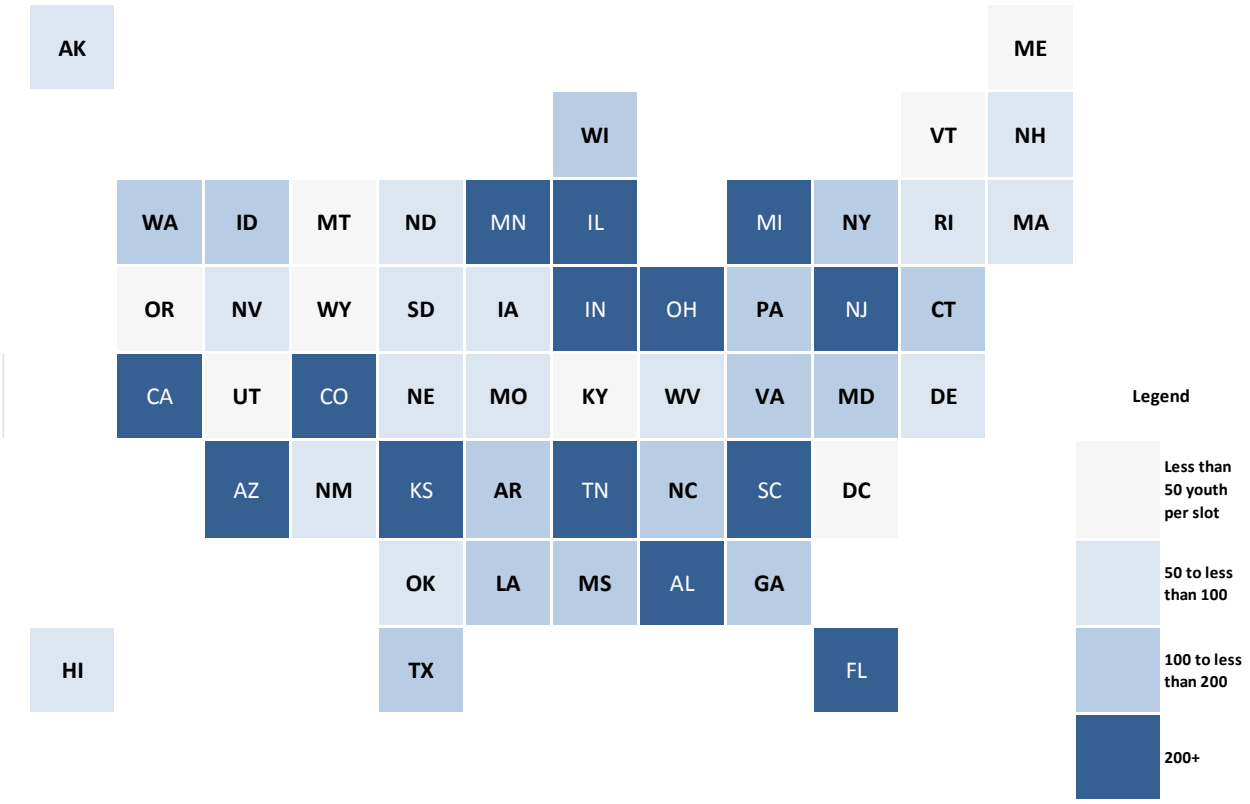
Source: 2016 Opportunity Index developed by Opportunity Nation and Measure of America.

Note: Puerto Rico is excluded from the table because Opportunity Index data are not available for Puerto Rico.

[a]Disconnected youth are the population, ages 16 to 24, who are not enrolled in school and who are not working (either unemployed or not in the labor force).

[b]The number of Job Corps slots is the number of planned slots for 2016.

Figure VI.1. Number of disconnected youth per Job Corps slot by state



Source: 2016 Opportunity Index developed by Opportunity Nation and Measure of America.

Note: Puerto Rico is excluded from the table because Opportunity Index data are not available for Puerto Rico.

B. Proximity to postsecondary institutions

Proximity to postsecondary institutions can affect Job Corps centers' ability to develop meaningful partnerships with community colleges. Some Job Corps centers are already partnering with community colleges to provide (1) career training in occupations not available at the center or (2) advanced career training (ACT) for participants who have completed basic career training and are seeking an associate's degree. Job Corps requires that career training at other locations be within reasonable commuting distance of the center.

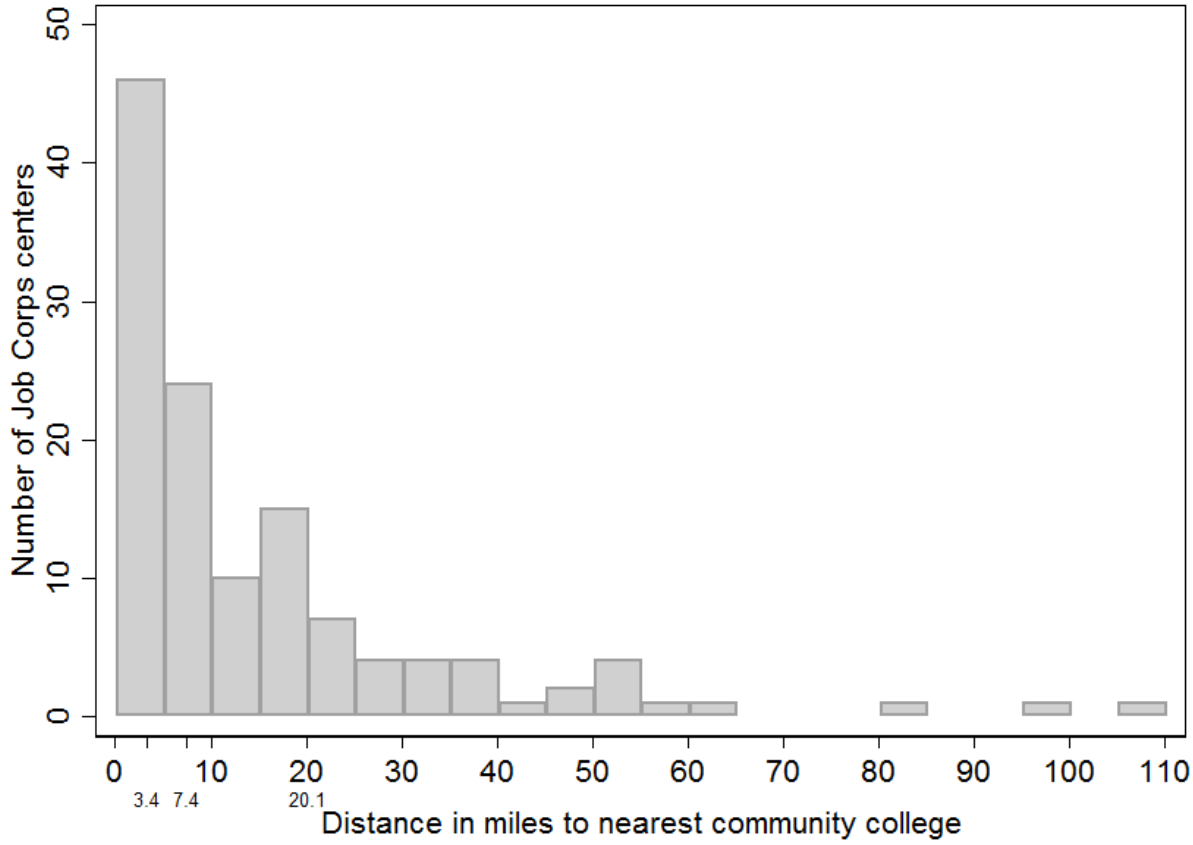
Partnerships with community colleges provide Job Corps opportunities to either offer existing up-to-date career training aligned with the needs of local businesses or broaden the kinds of trainings it offers. Currently, Job Corps offers training in more than 100 careers, but each center offers only a subset of trainings. The services a student receives in Job Corps depend on his or her personal career plan, the goals set forth in that plan, and the services available at the center. Expanding partnerships with community colleges could provide a cost-effective approach to diversifying career-training options.

To examine Job Corps' proximity to community colleges, we use Job Corps center locations and data from the Integrated Postsecondary Education Data System (IPEDS). IPEDS gathers information from every postsecondary institution that participates in the federal student financial aid programs (Title IV–eligible institutions) (U.S. Department of Education 2017). For the

analysis below, we calculate the distance to the nearest community college for each Job Corps center, defining community colleges as public two-year institutions.

Although the majority of Job Corps centers are within 10 miles of a community college, many of the centers are more isolated. Figure VI.2 shows the distribution of distances of Job Corps centers to the nearest community college. The median distance from a community college is 6 miles. More than one-third of Job Corps centers are located within 5 miles of a community college, and more than half are located within a 10-mile radius (Table VI.2). However, these numbers differ between CCCs and contractor-operated centers. The CCCs tend to be more rural and isolated from their surrounding communities than the centers operated by the for-profit contractors and may face more challenges partnering with colleges. For example, only 15 percent of CCCs are within 10 miles of a community college, whereas 65 percent of contractor-operated centers are.

Figure VI.2. Distances from Job Corps centers to nearest public two-year institution



Source: 2016 IPEDS Institutional Characteristics.

Note: The distances between Job Corps centers and institutions were calculated using the Vincenty formula. The figure excludes the Alaska Job Corps center, whose nearest public two-year institution is 705 miles away.

[a]The 25th, 50th, and 75th percentiles of distance are 3.4, 7.4, and 20.1, respectively.

Overall, there appears to be ample opportunity for Job Corps to expand its existing partnerships or pursue new partnerships because its centers tend to be located relatively close to community colleges. In fact, there are twelve Job Corps centers located within two miles of a community college: Montgomery (AL), Columbia Basin (WA), Roswell (NM), New Hampshire (NH), South Bronx (NY), Los Angeles (CA), New Orleans (LA), Wind River (WY), Pinellas (FL), Centennial (ID), Flint/Genesee (MI), and Gerald R. Ford (MI). (For a complete list of each Job Corps center and its distance from the nearest community college, see Appendix Table C.1.) Nonetheless, about 20 percent of Job Corps centers are located more than 25 miles away and would likely find it more difficult to build such partnerships. For those centers, there may still be an opportunity for partnership; for example, training services could be delivered virtually.

Table VI.2. Job Corps centers within a given radius of a community college

	All Job Corps centers (N = 127[a])		Job Corps CCCs (N = 26)		Contractor-operated Job Corps centers (N = 101)	
Radius (miles)	Number	Percentage	Number	Percentage	Number	Percentage
Within 5 miles	44	35	2	8	42	42
Within 10 miles	70	55	4	15	66	65
Within 15 miles	80	63	6	23	74	73
Within 20 miles	94	74	12	46	82	81
Within 25 miles	102	80	16	62	86	85
Within 100 miles	125	98	25	96	100	99

Source: 2016 IPEDS Institutional Characteristics.

Note: The distances between Job Corps centers and institutions were calculated using the Vincenty formula. The number of public two-year institutions is 995. The Carnegie classifications include Title IV–eligible, degree-granting colleges and universities in the United States represented in the National Center for Education Statistics IPEDS system that conferred degrees in 2013–2014. Two Job Corps centers are located more than 100 miles from a public two-year institution: Curlew (a CCC) and Alaska (a contractor-operated center).

[a]The official Job Corps count is 125 centers, but the table also includes two recently opened centers.

Proximity is not sufficient to ensure a successful partnership, and there are potential lessons to be learned from employers who have looked to community colleges to provide customized workforce development training for their employees. Although the benefits of such collaborations tend to be specific to the partnership, some common challenges have been documented (Kasper 2003). These include instability of funding, time constraints, and distrust of or resistance to change in curriculum alignment activities (deCastro and Karp 2009; Kisker and Carducci 2003). In addition to proximity, it is important to understand these potential challenges when considering partnerships.

C. Proximity to work experience opportunities

Work-based learning is a key component of the Job Corps approach to career training. Work experience may include internships with employers, volunteering for community service projects, and working on campus projects to improve Job Corps facilities. As described in Chapter IV, work-based learning programs that are coupled with specialized education and connections with employers have been demonstrated to improve labor market outcomes.

Job Corps promotes work-based learning at employer sites but acknowledges that employer site placements may not be feasible for all youth. Gaining work experience with a local employer may have distinct advantages over community service and center-based projects. Internships give youth exposure to a real work environment, provide work experience to include on a job application, and may offer youth connections to a post-program job.

A key challenge that may affect the ability of centers to offer work-based learning at employer sites is the center's proximity to employment opportunities in the appropriate career fields. This section explores the extent to which Job Corps centers are located in counties with potential for partnering with employers. To measure the proximity of Job Corps centers to employment opportunities, we used data from the Quarterly Census of Employment and Wages (QCEW). The QCEW tracks the number of jobs in each industry for every county, on a quarterly basis. Using 2016 averages, we calculated the number and share of jobs by industry in each county where a Job Corps center is located. The industries with training tracks most prevalently offered at Job Corps centers are construction, health care, finance and business, and hospitality. These categories do not map directly to the QCEW codes, so we show data on the most relevant categories available in the data: construction, education and health services, financial activities, professional and business services, and leisure and hospitality.

The more jobs there are in these targeted industries in the counties with Job Corps centers, the more likely it is the centers could find employers to partner with to offer training to participants. Table VI.3 shows the percentage of Job Corps centers located in a county with a minimum threshold for number of jobs, by industry. The percentages vary by industry, but overall they show that for any given industry, more than 70 percent of all centers are located in counties with at least 500 jobs in that industry. Ninety-seven percent of centers are in counties with at least 500 jobs in at least one of the industries, and 92 percent are in areas with at least 1,000 jobs in one of the industries. Again, these numbers differ for CCCs and contractor-operated centers. For example, 72 percent of contractor-operated centers are located in counties with at least 1,000 jobs in construction, whereas 31 percent of CCCs are in counties with at least 1,000 jobs in construction. For a complete list of Job Corps centers and the corresponding number of jobs by industry, see Appendix Table C.2.

Table VI.3. Percentage of Job Corps centers located in a county with a given number of jobs, by industry

Number of jobs	Construction	Education and health care services	Financial activities	Professional and business services	Leisure and hospitality	At least one of the 5 listed industries
All Job Corps centers (N = 127[a])						
≥ 500	76	97	72	82	90	97
≥ 1000	64	91	62	72	79	91
≥ 2000	57	82	53	61	69	83
≥ 5000	44	65	45	53	57	65
Job Corps CCCs (N = 26)						
≥ 500	54	85	35	58	73	85
≥ 1000	31	69	27	50	58	69
≥ 2000	23	54	19	27	46	58
≥ 5000	15	31	4	15	23	31
Contractor-operated Job Corps centers (N = 101)						
≥ 500	82	100	81	88	94	100
≥ 1000	72	96	71	77	84	97
≥ 2000	65	89	61	69	75	90
≥ 5000	51	74	55	62	66	74

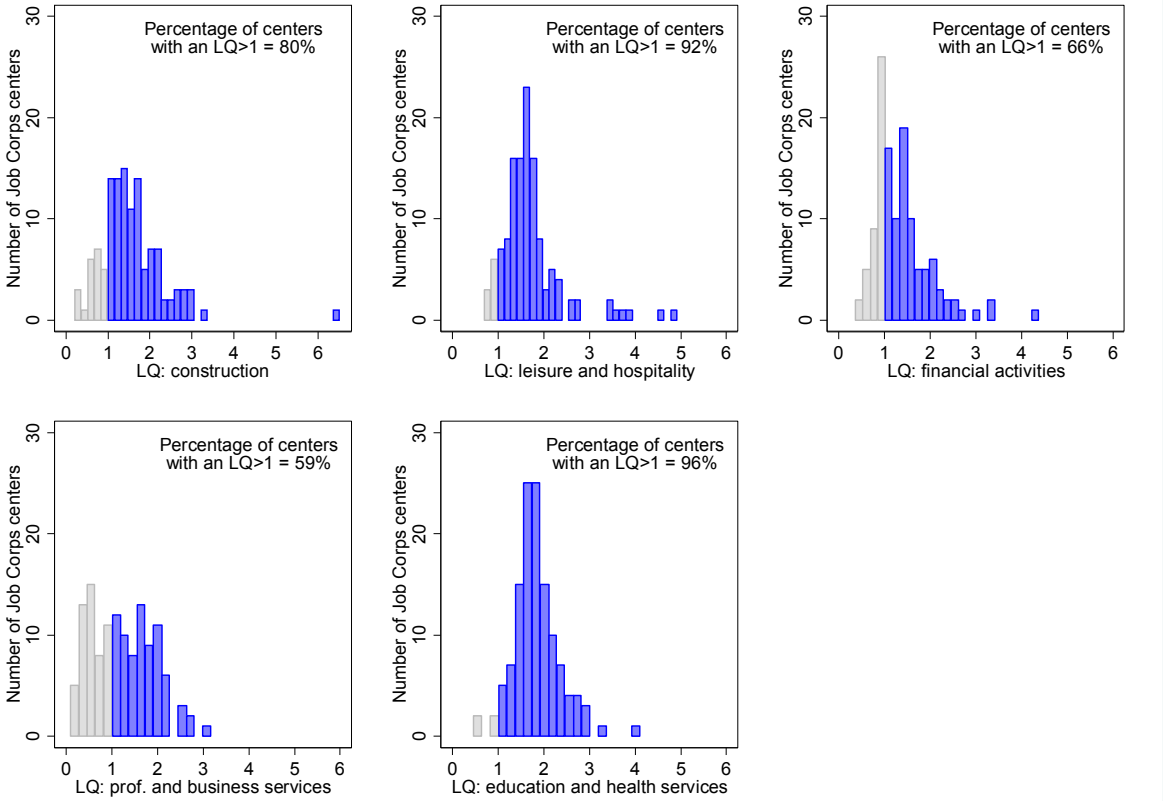
Source: 2016 QCEW.

Note: The numbers of jobs shown are the annual average of quarterly employment levels for the year 2016. The QCEW uses the North American Industry Classification System (NAICS). The NAICS codes that correspond to the industry categories in the table are 1012, 1025, 1023, 1024, and 1026, respectively.

[a]The official Job Corps count is 125 centers, but the table also includes two recently opened centers.

It is also more likely that Job Corps centers would have opportunities to partner with employers in their community if their community has a high concentration of jobs in the industries targeted by Job Corps. To get a sense of the magnitude of the concentration of jobs, we construct location quotients (LQs) that compare the concentration of an industry in a county to the concentration of that industry nationwide. The numerator of the LQ is specific to a county and is equal to that county's number of jobs in a given industry divided by the total number of jobs. The denominator of the LQ is the same for all counties and is equal to the number of jobs in a given industry in the nation divided by the total number of jobs in the nation. Thus, if an LQ is less than 1, it means that a county's concentration of jobs in a given industry is less than that of the nation. Conversely, if it is greater than 1, there is a higher concentration of jobs in that industry than in the nation as a whole. In Figure VI.3, we show the distribution of the LQs across Job Corps centers for each industry, shading the bars blue if the LQ is greater than 1.

Figure VI.3. Distribution of location quotients (LQ), by industry



Source: 2016 QCEW.

Note: The LQ is the ratio of local concentration to national concentration of jobs in a given industry. The QCEW uses the North American Industry Classification System (NAICS). The NAICS codes that correspond to the industry categories in the table are 1012, 1025, 1023, 1024, and 1026, respectively.

Across the five industries most relevant for Job Corps training programs, Job Corps centers tend to be located in areas with concentrations of jobs that are higher than that of the nation (an LQ of greater than one). This is especially true in leisure and hospitality and education and health services, in which the percentage of centers with an LQ greater than 1 is 92 and 96 percent, respectively. Job Corps centers are not as well located for providing work opportunities in financial activities and professional and business services as for the other industries, but the majority of centers have an LQ greater than 1. Table VI.3 and Figure VI.3 show consistent evidence that, overall, most Job Corps centers are well positioned to build partnerships with local employers, which could lead to increases in the effectiveness and efficiency of Job Corps services.

Proximity to employment opportunities alone is not sufficient for ensuring high quality work experience opportunities for Job Corps participants. Developing relationships with employers can be challenging, and not all employers will be willing to offer work opportunities and provide sufficient oversight to ensure a meaningful work experience. A recent evaluation of The Urban Alliance, an intermediary that facilitates paid internships for under-resourced youth, highlighted some of the challenges of recruiting employers who are willing to "welcome low-skilled high school students and give them genuine work opportunities," even though some of the youth are "rough around the edges." (Theodos et al. 2014).

D. Summary

As Job Corps examines its current stock of centers and considers the potential for opening new centers or closing older ones, its leaders have many different factors to consider, including the availability of facilities. In this chapter, we highlighted the issue of proximity—to the target youth population, to community colleges, and to employers—and suggested methods that could be used to assess the optimal locations of centers. To examine these issues, we used relatively blunt measures, but the analysis highlights important factors for the program to consider.

We found substantial variation across states in the number of disconnected youth per Job Corps program slot—ranging from 26 youth per slot in Montana to 441 youth per slot in South Carolina. As Job Corps considers facilities and participant capacity at centers, looking to increase capacity in states with high ratios could present opportunities for increasing the program's efficiency in serving youth in these areas.

As Job Corps considers opportunities to enhance partnerships with community colleges and develop employer-based work opportunities for youth, the proximity of the centers to colleges and employers will affect what is feasible. We found that more than half of the centers are within 10 miles of a community college, and most of the contractor-operated Job Corps centers are in counties with significant employment in the industries the program targets.

VII. APPROACHES TO PROGRAM INNOVATION

A program like Job Corps needs to innovate continually to best serve its participants. The need for innovation is driven by the changing needs of its youth participants, employers, and the overall environment. The skills most valued by employers evolve, as do the in-demand occupations and industries. Changes in the labor market are becoming more rapid, and technological changes will allow for significant increases in automation, which may change some occupations and eliminate others (Manyika 2017). In addition to changes in the labor market, there are other, broader social changes, including the opioid drug crisis, that affect the youth that Job Corps serves. All of the changes are ongoing and can evolve rapidly, so it is important for programs like Job Corps to foster an environment where innovation is possible and encouraged.

Job Corps presents a complicated environment in which to promote innovation. Job Corps' multilayered structure—the national DOL office setting policy, DOL regional offices overseeing contractors, and contractors providing services—allows for innovation at different levels. Job Corps uses its Policy and Regulations Handbook to provide detailed guidance to contractors about their roles and responsibilities in implementing the program. The detailed guidance supports consistency in the implementation of the Job Corps program model, but it also creates a highly regulated environment. The Job Corps program's reliance on private contractors for service delivery also creates a competitive environment with a strong performance management system. This structure—multilayered, competitive, and highly regulated—presents inherent challenges for fostering innovation.

This section presents the theory and research behind fostering program innovation in the business and public sectors and examples of practices that could foster innovation in programs such as Job Corps. Although this chapter focuses on promoting innovation, we should also acknowledge that not all innovations are successful. It is important to evaluate innovations to understand the impact of these changes on the outcomes of youth and the efficiency of program operations. An accompanying report, "The External Review of Job Corps: Directions for Future Research" (Lee et al. 2018), outlines high-level design options for evaluating potential innovations.

A. Theory and research

Research demonstrates that developing a culture of innovation, creating an environment that welcomes ideas, and understanding the regulatory environment can cultivate more innovative organizations. Each of these topics is discussed in more detail below:

1. Developing a culture of innovation

An organization's culture strongly influences its ability to promote innovation, playing as it does a key role in employees' attitudes and the organization's effectiveness (Grant 2016; Steele and Murray 2004; Ahmed 1998). To develop a culture of innovation, the literature recommends that organizations adopt two key attributes:

a. **Develop an organizational culture that permits failure.** Attong (2015) argues that an organization should create an environment that characterizes failure as the chance to do

something different or new rather than as a mistake. Allowing for failure in an organization can take many forms and should be balanced with the risks involved in the programs or services offered by that organization.

b. **Embrace disruption of standard procedures.** Innovation can require "disruption," in which the standard structures and procedures are changed or discarded to create innovation. Disrupters create growth in an organization by redefining performance expectations. The most successful innovations to date have typically been caused by a disrupter who came in and challenged the expected norms and standard operating procedures (Anthony et al. 2008).

2. Creating the space to generate ideas

The quality and quantity of innovative ideas may depend on the structure under which the brainstorming takes place.

a. **Better idea generation can occur if brainstorming starts with the individual and moves to the group**. Girotra et al. (2010) compared the performance of university students in generating ideas in two different group structures—a team approach and a hybrid (individual work followed by group work). Students in a hybrid structure were able to generate more and better ideas. They used the team setting to discuss, analyze, and refine ideas generated during individual brainstorming. In addition, students in the hybrid model were better able to recognize a good idea than they were in a purely team setting.

b. **More unique ideas are generated in a setting that encourages parallel idea generation.** Kornish and Ulrich found that individuals or small groups generating ideas on the same topic in parallel to each other creates more and higher quality ideas (Kornish and Ulrich 2011).

3. Understanding the regulatory environment

A regulatory environment can promote or hinder innovation, depending on the type and purpose of the regulation. Some studies have demonstrated that regulation has positive effects for increasing competitiveness and fostering innovation (Blind 2012; European Commission 2016). Other studies report that regulation hinders new product development, services, or innovative technologies (Moreno 2015; Prieger 2002).

The regulations most relevant in the Job Corps context are the product and service regulations. These regulations tend to impose strict requirements on businesses to ensure public safety or competitiveness. In the short run, product and service regulations tend to inhibit innovation by deterring activities and reducing competitiveness, because few businesses understand and can meet all of the requirements. However, in the long run, government intervention through regulation may direct business activity into new and emerging ideas or markets. In sectors with "strong ethical dimensions and high importance of externalities," such as the health sector, regulations may prohibit innovation because they do not permit businesses to take risks in development (Blind 2012). On the other hand, they may also increase the acceptance of new products or services because consumers trust that minimum safety standards exist.

B. Practices for promoting innovation

Examples of innovative practices in other programs or sectors can suggest strategies that Job Corps could adopt to create a culture more conducive to innovation. These examples provide a range of experiences and environments in which innovation has developed.

1. Using human-centered design principles

Human-centered or customer-centered design is a process for developing and testing innovations that is focused on the needs of the people you are designing for. In a Job Corps context, this could be the youth or, potentially, the Job Corps staff. IDEO, a design and innovation firm, describes human-centered design as "all about building a deep empathy with the people you're designing for; generating tons of ideas; building a bunch of prototypes; sharing what you've made with the people you're designing for; and eventually putting your innovative new solution out in the world" (IDEO 2015).

In recent years, DOL's Employment and Training Administration has administered a customer-centered design challenge as part of its WIOA implementation efforts. The challenge encouraged workforce professionals to form teams to address one of three challenges: (1) How might we improve the customer experience and outcomes for our shared One-Stop Customers? (2) How might we put employers in the center of our sector strategies and career pathway work? (3) How might we design services and programs for out-of-school youth that will engage them and produce great outcomes?

2. Giving prizes to encourage innovation

The use of prizes to encourage innovation has showed promise in multiple sectors. Long used in the private and philanthropic sectors, the practice of offering prizes that solve a problem or spur technological innovation has been adopted recently by the public sector. The Office of Science and Technology Policy (OSTP) reports that prizes enable the federal government to establish a goal without setting the approach, increase the number of individuals or organizations working on a problem, bring new perspectives, and maximize return on investment (OSTP 2012).

The Fragile Families Challenge recently encouraged participants from around the world to use survey data from the Fragile Families and Child Wellbeing Study to predict outcomes with the hope that these models could help provide policymakers with information on approaches to improving the lives of disadvantaged children. The Fragile Families Challenge received applications from 400 researchers representing 68 institutions in 7 countries.

Options for implementing this prize-based system in Job Corps could include using an innovation prize to develop products or trainings to implement some of the practices identified in Part I of the Evidence Scan or to enhance the use of existing program data. For example, Job Corps could provide researchers access to de-identified program administrative data and have a contest to develop predictive analytic models for identifying youth who are at-risk of dropping out of the program or recommending optimal matches between youth and career training fields.

The White House developed 21st Century Grand Challenges to harness science, technology, and innovation to solve national or global problems. The challenges were designed to do the following:

- Help create the industries and jobs of the future
- Expand the frontiers of human knowledge about ourselves and the world around us
- Help tackle important problems related to energy, health, education, the environment, national security, and global development
- Serve as a "North Star" for collaboration between the public and private sectors (OSTP 2012)

As part of the 21st Century Grand Challenges, the My Air, My Health Challenge offered $100,000 in grand prize money from the U.S. Environmental Protection Agency and the U.S. Department of Health and Human Service to create a personal, portable system to monitor air pollutants. The challenge received more than 500 submissions on how to solve this problem and awarded four teams $15,000 each to develop prototypes, one of which was selected as the grand prize winner. The challenge spurred new ideas, opened the field to new perspectives, and gave corporations, universities, and individuals the opportunity to fail without penalties. The prize concept rests on the notion that not all ideas will solve the problem; rather, the goal is to encourage as many ideas as possible.

3. Encouraging contractors to act as innovation labs

The corporate franchise environment shares many attributes of the Job Corps contractor network, so lessons for innovation from franchises may be particularly applicable to contractors in the Job Corps program. Franchisees are responsible for their unit within a larger, overall corporation, which may include their local competitors. Franchises also tend to have specific requirements or regulations for operating a store within the broader brand. Franchises are similar to Job Corps centers, in that Job Corps contractors provide services for youth according to guidelines from "headquarters" and belong to a larger Job Corps network.

As with franchises, Job Corps centers could be ideal platforms for fostering innovation in a safe and resource-rich environment. As a "laboratory to develop and test new ideas," franchisees are able to innovate around the existing structure and use resources available to them (Karmeni et al. 2015). The network available to centers that are open to sharing information can be used as an advantage within which to develop and manage new innovations. One center could test out a new strategy or practice that may be beneficial to others in the network. Sharing potential innovation with competitors is a challenge in the franchise environment. Cumberland and Githens (2012) suggested that creating a culture that encourages sharing ideas can reduce competitiveness and foster innovation amongst franchisees (and, likewise, centers).

4. Instituting communities of practice to share ideas

A community of practice (CoP) can take the idea of a network of centers one step further and share promising practices, ask questions, share resources, and foster innovation. CoPs can be online forums, email listservs, or facilitated groups that convene. The CoP model can thrive at the national, regional, or local level to bring organizations with a common theme together.

The Opportunity Youth Network (OYN) is a CoP focused on the needs of disconnected youth. Launched in March 2013, OYN includes 100 national organizations that focus on reducing the number of disconnected youth. Co-managed by the Forum for Youth Investment, the Aspen Institute's Forum for Community Solutions, and Gap Inc., OYN brings together funders, government officials, community-based organizations, and formerly disconnected youth to address problems facing disconnected youth of ages 16 to 24. The goals of OYN are to (1) hold the field collectively accountable to reducing the number of disconnected youth, (2) take stock of the progress, (3) help align related efforts, and (4) catalyze efforts where there are gaps. OYN created an eNewsletter to disseminate information on innovations in the field. In 2016, as part of a partnership with My Brother's Keeper Alliance, OYN is developing a tool kit of promising practices for supporting boys and men of color who are neither in school nor employed.

DOL has facilitated peer exchange for grant programs through development of a CoP, and a similar approach may be valuable for Job Corps. For example, the CoP model could operate at the national or regional level to facilitate innovation on setting policies and monitoring local Job Corps programs. Options for creating the CoP model could include the national or regional level taking the lead on identifying best practices and disseminating information. At the local level, an active, facilitated CoP model could offer local programs a platform for sharing innovative approaches to serving at-risk youth. One challenge of this model is in providing an incentive and assurance to competitors that information shared will not harm their business practices or their competition for Job Corps contracts.

C. Summary

As Job Corps looks to meet the needs of its youth participants and prepare them to succeed in a changing world, there is value in thinking about the process of innovation. The first part of this evidence scan identified promising evidence-based practices for serving youth that include innovations that Job Corps may want to consider. Job Corps is a challenging environment in which to implement innovation. The program has limited discretionary resources, service delivery is highly regulated, and service providers are competitive and performance driven. In such an environment it can be difficult to engage in the risk taking and inevitable failure that is part of the innovation process.

Research suggests that organizational culture matters and that leaders need to be purposeful about innovation and idea generation. Certain practices can help facilitate a culture of innovation, including adopting a human-centered design perspective, offering prizes for innovation, viewing contractors as innovation partners, and promoting CoPs both within the program and with other youth-serving organizations. Promoting innovation is important, but these innovations must be tested to understand the impact of these changes on the outcomes of youth and the efficiency of program operations.

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VIII. ALTERNATIVE ARRANGEMENTS FOR DELIVERING JOB CORPS SERVICES

Contractors have played a large role in operating the Job Corps program since the program's founding in the 1960s. DOL holds contracts with outside organizations for all aspects of service delivery, including (1) outreach and admissions; (2) center operations, which include career preparation and career development; and (3) career transition services. Most centers are run through contracts, however, 26 Civilian Conservation Centers (CCC) are operated through an Interagency Agreement with the U.S. Department of Agriculture. In addition to service-related contracts, the national office holds contracts with organizations that provide national assistance on data systems, outreach, performance management, and research and data analysis. Contracts are solicited for each type of activity separately, although some contractors hold contracts for more than one type of activity.

The decision to operate the Job Corps programs primarily through contractors—as well as the type and structure of those contracts—has significant implications for program operations. The structure of the contracts affects the organizations that deliver services, the types of services delivered, and the incentives for service quality and cost-efficiency. The arrangements also determine how much oversight DOL can and should provide. DOL manages the procurements through its national office, and staff at the six regional Job Corps offices across the country oversee the contractors in their region and monitor compliance with the national office policies.

Procurement rules, described in the Federal Acquisition Regulation, govern all federal procurements, including Job Corps. The regulation allows the government to issue different types of contracts, including fixed price and cost reimbursement. Contract types vary in terms of allocation of risk between the contractor and the government (Manuel 2014). Reimbursing contractors for actual costs reduces the risk for contractors and increases the burden on the government to manage the contract finances. Issuing fixed-fee contracts increases the risks for contractors, because they are held to completing the contract budget within the contracted amount, and reduces the risk on the government. Job Corps service contracts are primarily cost-reimbursement contracts with fixed fees and incentive fees based on performance measures, designed to meet WIOA accountability requirements.

In this chapter we explore alternative ways that federal programs can be procured or delivered and potential strategies to expand the types of organizations delivering services. There is no rigorous research on the effectiveness of alternative funding arrangements. Designing a study to test the impacts of alternative funding arrangements would be very difficult, and if this study was implemented, it would be challenging to generalize the findings to other programs. Given the absence of rigorous research, this section explores the advantages and disadvantages of alternative arrangements and does not suggest one alternative over another.

A. Alternative funding arrangements

The WIOA legislation authorizes DOL to enter into an agreement with a federal, state, or local agency, an area's career or technical education school, a residential career and technical education school, or a private organization for the operation of each Job Corps center (WIOA 2014, §§147). It also authorizes DOL to enter into contracts with and make payment to individuals and organizations for the costs of conducting the recruiting, screening, and selection of eligible applicants for Job Corps (WIOA 2014, §§145). In practice, Job Corps centers are

operated by private companies, hired through a competitive contracting process, and by USDA, through interagency agreements.

This contracting arrangement is unique among DOL's employment and training programs; other programs are generally operated through grants to states or to community-based organizations (CBOs) (Nightingale and Pindus 1997; Fernandes-Alcantara 2017). The WIOA Youth program, for example, is funded as formula grants to state workforce development boards, which issue formula grants to local workforce development boards. The local boards can provide services directly or issue contracts or grants to private organizations. For other youth programs, including YouthBuild, DOL uses a competitive process to award grants to CBOs to operate the programs.

In this section, we explore alternative funding arrangements that could be considered, including grants to states, grants to CBOs, and direct government provision of services. Adopting these alternative arrangements may require changes to the program's authorizing legislation.

1. Formula grants to states

One alternative option for funding services is through formula block grants to states. A formula grant might allocate funds to states on the basis of factors such as the number of disadvantaged youth in a state and state-level economic conditions. WIOA's funding formula for the youth program, for example, considers the level of unemployment and the size of the disadvantaged youth population and also ensures that funding levels are not too variable from year to year.

Block grants, introduced to the federal budget in 1966, are seen as an approach to moving control to the states. The federal government actively pursued block granting in the 1970s under President Nixon and in the 1980s under President Reagan (Finegold et al. 2004b). As part of the 1996 welfare reform plan, the federally administered Aid to Families with Dependent Children became a block-grant program to states, called Temporary Assistance to Needy Families. More recently, President Bush's budget proposed turning multiple social service programs, including Head Start, into block grants (Finegold et al. 2004a). Many of these proposals, including the proposal for Head Start, were not successful. Head Start programs have been repeatedly identified as candidates for block granting (Pasachoff 2006).

Administering a program through formula grants to states would give states more control of the program and might allow a closer alignment between the program and other state-administered government programs such as workforce agencies. One disadvantage of using block grants to states to administer national programs is there ends up being less federal control of the program. As currently administered, there is a clear Job Corps program model, and youth across the country receive a fairly common set of services (with the notable exception of differences in career training tracks).

Analysis of prior block grant proposals suggests three common lessons that might be relevant for Job Corps: (1) the real value of the block grants tend to decline over time, (2) Congress tends to reduce flexibility over time, and (3) block grants work best when state administrative capacity already exists (Finegold et al. 2004b).

2. Grants to CBOs

Another alternative funding structure could be implemented through grants to CBOs. The idea of working with CBOs to implement Job Corps has been explored in the past. The Job Corps statute in the Job Training and Partnership Act of 1982 included authorization for DOL to undertake one or more pilots using CBOs to demonstrated effectiveness for Job Corps center operation (JTPA 1982, §§433).

Contracts and grants are governed by different regulations, terms, and conditions. The Federal Grant and Cooperative Act of 1977 applies standardized criteria to determining whether work should be awarded as a contract or a grant (Table VIII.1). The current Job Corps program appears to align more closely with contracting, in that DOL provides clear specifications for the project. Some grant-funded programs—Head Start, for example—also provide detailed guidance about expected programming.

Table VIII.1. Federal guidance on contracts versus grants

Contracts are used when the service directly benefits the agency	Grants are used when the agency is supporting or stimulating work done primarily for others
Key questions to consider	
Is the government agency the direct beneficiary or user of the activity?	Is the applicant performing the project for its own purpose?
Is the agency providing the specifications for the project?	Is the government agency merely supporting the project with financial assistance?
Is the agency undertaking the project based on its own identified needs?	Is the benefit to the agency incidental (that is, do funded activities complement the agency's mission)?

Source: Table from Pettijohn 2013.

Job Corps is significantly larger than DOL-funded youth grant programs, but other federal departments administer larger social service programs using grants (Table VIII.2). For example, HHS awarded approximately $9.2 billion in grants to fund Head Start programs to promote school readiness for children in low-income families. The grants are awarded to approximately 1,700 organizations and fund more than 900,000 enrollment slots for children. HHS's Office of Refugee Resettlement uses a mix of contracts and grants to provide residential services for unaccompanied children.

Table VIII.2. Approaches to funding selected federal youth programs

Program	Federal department	Approach to funding	Program size	Program model
Job Corps	DOL	Contracts with private organizations and interagency agreement with USDA	FY 2016: $1.6 billion; 50,000 youth per year	Specific program model
WIOA Youth	DOL	Formula grants to states	FY 2016: $873 million; 117,000 youth served	Required program elements; local flexibility
YouthBuild	DOL	Program grants to CBOs	FY 2016: $85 million; enrollment target of 4,000 youth	Specific program model
Head Start	HHS	Grants to public agencies, private nonprofit and for-profit organizations, tribal governments, and school systems	FY 2016: $9.2 billion; 915,000 enrollment slots	National guidelines ensure programs provide a wide array of comprehensive services; variation in length, intensity, and setting
Office of Refugee Resettlement—Unaccompanied Children's Services	HHS	Mix of contracts and grants	FY 2015: $948 million; 59,000 children served	National care standards; residential facilities are state licensed

Source: Fernandes-Alcantara 2017; Head Start Program Facts, available at https://eclkc.ohs.acf.hhs.gov/sites/default/files/pdf/hs-program-fact-sheet-2016.pdf. Office of Refugee Resettlement—Unaccompanied Children's Services Fact Sheet, available at https://www.acf.hhs.gov/sites/default/files/orr/orr_uc_updated_fact_sheet_1416.pdf.

Administering program grants instead of contracts might increase providers' flexibility to design service delivery, within a set of guidelines. This freedom could encourage additional service providers to apply for grants and may generate valuable program innovation. Even without additional flexibility, grants might increase the involvement of the nonprofit sector, which has more experience competing for DOL program grants.

3. Direct provision of selected services by federal staff

The Job Corps program's use of contractors to deliver services is a form of privatization of public services. Some of the theory behind privatization is difficult to sustain in practice. Researchers in the public management field have identified at least four key challenges with privatizing social service delivery: (1) efficient privatization assumes a competitive market of service providers, but providers may be limited in certain geographic markets or service types; (2) government may lack the administrative capacity to oversee contracts; (3) policy goals may be vague and hard to monitor progress against; and (4) contracting relationships may alter the practices of the contracting organization and lead to a dependence on government funding (Van Slyke 2007).

Another alternative funding approach to consider is for the federal government to provide services directly. One area in which we are starting to see a move away from privatization is the operation of prison facilities, although this trend may not continue at the federal level. As of 2015, contract prisons held about 12 percent of the federal prison population. The Department of Justice's Office of the Inspector General examined the quality of contract prisons and found that contract prisons had more safety and security incidents per capita than comparable government-operated prisons (OIG 2015). The Department of Justice had instructed the Federal Bureau of Prisons to close all privately run facilities, but this order was rescinded in 2017 (Zapotsky 2017).

Federal program leaders could choose to employ federal staff to provide selected services directly. Job Corps, for example, could have federal staff assume more of the youth-facing roles or management of the youth-facing staff. Direct provision of services may give federal programs more control over the quality and training of the staff.

An increase in direct provision of services by federal staff seems unlikely in the current political environment (consider the changing guidance on federal prisons) and may also limit the ability of Job Corps to respond to future changes in the location and types of Job Corps services.

B. Strategies for diversifying providers

Currently, Job Corps has a relatively small number of contractors delivering the majority of center-based services. More than 70 percent of center contracts and agreements are held by six organizations: the USDA, under an interagency agreement with DOL, and five private, for-profit contractors (see Table I.1).

Job Corps has an explicit goal to diversify providers by contracting with qualified small businesses, minority-owned businesses, female-owned businesses, veteran-owned businesses, and HubZone businesses.[3] In our conversation with Job Corps staff, staff also expressed an interest in working with organizations that are developing and implementing evidence-based practices to serve disconnected youth. Below, we discuss three options for using the procurement process to diversify the types of contractors delivering Job Corps services.

1. Subcontracts with specialized providers

DOL negotiates single contracts to cover all aspects of center operations, including education and training, behavior management, residential operations, and food services. Operating a Job Corps center is a massive undertaking, and certain providers who specialize in innovative approaches to serving youth may not have the interest or capacity to lead a Job Corps center operations contract. One potential to increase the participation of more specialized youth service providers is to issue contracts for smaller, specialized services or encourage contractors to develop subcontracts with these providers.

When the early leadership of Job Corps was considering options for service delivery, John Rubbell, an industry executive and member of the poverty task force overseeing the implementation of Job Corps advocated for a concept he called the "systems approach." In his

[3] From https://www.doleta.gov/grants/Contract/jobcorp/

view, "nothing could be worse than to approach its separate parts on an ad hoc basis" (Combs 1985).

Rubbell's approach remains reasonable today. Having a single contract for center operations has two key advantages: (1) a single entity is responsible for the performance of the youth at the center and the center's fiscal management, even if subcontracting out particular services, and (2) DOL is responsible for procurement and oversight of one contract per center instead of multiple contracts per center. The primary disadvantage of a single contract is that may keep more-specialized providers out of Job Corps service provision, and it may result in a selection of contractors who have focuses other than high-quality service provision for youth participants.

Offering separate contracts by function may not be necessary if the goal is to attract smaller, specialized providers. Contractors could choose to subcontract aspects of youth services to a nonprofit with deep expertise in trauma-informed programming, for example. If Job Corps leaders are not seeing the types of partnerships that they want the program to foster, they could consider possible reasons. Do current contractors gain enough advantage in the procurement process to motivate partnerships? There are multiple reasons that centers with prime contracts may be hesitant to develop new partnerships, including the increased administrative complexity, a reduction in revenue for prime contractors, and the potential that the partnership is mentoring a future competitor for the center-operator contract. If DOL wants to prioritize specialized service providers, the RFPs for the overall center contract could be adjusted to make this type of partnering advantageous. Mandating subcontract goals may not be sufficient if DOL is trying to emphasize partners with specific expertise. Instead, Job Corps could define specific requirements that require specialized expertise.

2. Limited number of "charter" centers with fewer regulations

Current Job Corps regulations create significant barriers to entry for new organizations. The detailed guidance included in the Policy and Regulations Handbook are difficult for a new contractor to implement with fidelity. The need to follow a proscribed service model may also be a deterrent to some of the innovative youth-serving organizations that Job Corps would like to include.

One potential alternative is to establish a limited number of "charter" centers with fewer regulations. This model is seen in charter schools in the K-12 environment in which these schools are often released from many of the regulations that govern other schools, such as some of those around staffing, curriculum, and scheduling. In exchange for this flexibility, the charter schools are held accountable for the quality of outcomes and could be closed if they fail to meet expectations. In addition to diversifying providers, charter schools may introduce practices or approaches that could be appropriate for more widespread adoption.

Creating Job Corps charter centers would be different from the approach Job Corps is using currently with its pilot at the Cascades center. For the Cascades pilot, Job Corps had a specific model that it was looking to test and sought a contractor to implement that model. A charter approach would allow the provider to propose a program model that would achieve the desired outcomes.

As an alternative to a full charter, some federal programs offer operators waivers from particular program requirements. Head Start's new performance regulations introduced similar flexibility to promote local innovation. Head Start grantees can seek waivers for some of the structural requirements, such as class size, if they have an evidence-based model that they think would be more effective for serving their local community (45 CFR Chapter XIII). The ability to seek waivers offers significantly less flexibility than that of a charter center, but it provides some additional flexibility that might be appealing to potential providers.

The evidence on the effectiveness of charter schools in public education is mixed. A rigorous impact study of charter middle schools that hold lotteries found that these charter schools are neither more nor less successful than traditional public schools in improving student achievement, behavior, and school progress (Clark et al. 2015). However, the study also found that the impact of charter middle schools on student achievement varies significantly across schools, with positive impacts for low-income youth. Other studies of specific charter school models also have found significant positive impacts on achievement (Tuttle et al. 2015; Betts and Tang 2011). Evidence that charter schools have been effective at increasing achievement for low-income youth may be particularly relevant for Job Corps.

3. Requests for information to gain input from stakeholders

Although federal contract procurement regulations restrict conversations between the federal government and potential bidders during the procurement process, the regulations also encourage significant early exchanges of information between all interested parties, including industry (CFR 15.201). One approach for soliciting input from industry and other stakeholder groups is to issue a formal request for information (RFI). RFIs may be used when the government does not presently intend to award a contract but wants to obtain price, delivery, or other market information, or potential providers' capabilities for planning purposes.

The RFI process can be used in a number of ways and may help identify additional providers or the requirements for providers that are well positioned to deliver particularly innovative approaches. Information can also be collected about the staffing and training requirements necessary for successful implementation of an innovation. An RFI may also provide an opportunity for outside stakeholder groups, who may have no interest in winning a Job Corps contract, to respond to the RFI, thereby helping shape the procurement process. DOL's Office of Disability Policy recently issued an RFI seeking input on potential Stay at Work/Return to Work demonstration projects (82 FR 45618). The RFI included specific questions about the intervention elements, target population and sites, eligible applicants, and evaluation design issues. The RFI stated that DOL would use the contributed information to shape requests for proposals for demonstration project implementers, technical assistance providers, and evaluators.

For an RFI to help diversify the selected Job Corps providers, DOL would need to use the information gathered from responses to the RFI to shape the subsequent request for proposals and the selection criteria. The language in a request for proposal could encourage new providers to respond to the solicitation, or it could encourage current providers to form new partnerships to be more responsive to the request. For example, if the requirements included specialized expertise not held by current Job Corps contractors, alternative providers would see a signal that DOL was looking to contract with new organizations.

C. Summary

Unlike DOL's other youth employment programs, Job Corps is primarily operated through contracts with private providers. In this chapter, we considered alternative arrangements including block grants to states, grants to CBOs, and direct service provision by federal staff. These alternative arrangements may require changes in the program's legislative authorization.

We identify a few practices used by other programs that could be considered if Job Corps wants to broaden the pool of service providers. Encouraging existing contractors to subcontract with specialized provider may bring new organizations into the Job Corps without needing to issue and manage separate contracts for aspects of center operations. Other alternatives include operating a limited number of charters that give providers more freedom to innovate and implement a model to achieve designated outcomes or provide waivers from certain activities (as is done in Head Start). The RFI process is also an option to engage external stakeholders in program design and collect the information necessary to draft RFP language to promote specialized providers.

IX. CONCLUSION

Job Corps is the largest and most comprehensive residential education and job training program for at-risk youth in the United States. The program, administered by the Department of Labor's (DOL) Employment and Training Administration (ETA), aims to help disconnected youth become more responsible, employable, and productive citizens. Since its establishment by the Economic Opportunity Act of 1964, it has served more than 2.5 million youth. Researchers have rigorously evaluated Job Corps and found some evidence of positive long-term impacts on earnings for older youth (Schochet et al. 2001). However economic conditions have changed, and the research literature on youth programs has evolved. There might be practices that could be incorporated into Job Corps to further improve youth outcomes.

This report provided a broad, high-level summary of the current research across key topics that could be used to modernize and reform Job Corps today. Each report chapter used a theme to connect multiple topics and describe the literature that supports them. This included descriptions of the theory of change, summaries of existing publically and privately run programs that could relate to Job Corps, and any evidence about their effectiveness. In total, we presented over 25 topics across chapters (summarized in Table IX.1). Part I of the report focused on topics related to the youth experience in Job Corps, and Part II considered program organization models. The topics were selected based in part on discussions with national Job Corps staff and subject matter experts on Job Corps and similar programs. Several topics may already be implemented to some extent in Job Corp centers, but we have included them to provide a comprehensive review of the current literature relevant to Job Corps.

Table IX.1. Research questions for program improvement

Research questions for program improvement (Chapter)	Considerations for Job Corps enhancements
Part I: Youth services	
What strategies can Job Corps pursue to enhance the experiences and growth of participants? (Ch. II)	Strategies include fostering: • Positive youth development • High student expectations • Growth mindsets • Trauma-informed environments
What disciplinary approaches can Job Corps adopt to enhance the climate and safety of its centers? (Ch. III)	Positive Behavioral Interventions and Supports (PBIS) programs Restorative practices Building self-regulation skills
How can Job Corps enhance the employment skills and job readiness of Job Corps graduates? (Ch. IV)	Career pathways programs Micro-credentials Work-based learning and experience Apprenticeship and pre-apprenticeship programs
How could changes in Job Corps group dynamics enhance program outcomes for youth? (Ch. V)	Organizational factors influenced by: • Age of participants • Gender of participants • Residential environment • Learning in groups of different sizes • Enrollment practices

Research questions for program improvement (Chapter)	Considerations for Job Corps enhancements
Part II: Organizational structures or practices	
What geographic factors could Job Corps consider to optimize the locations of Job Corps centers? (Ch. VI)	Access to Job Corps across the country Proximity to postsecondary institutions Proximity to work experience opportunities
How could Job Corps foster program innovation? (Ch. VII)	Human-centered design principles Prizes to encourage innovation Contractors as innovation labs Communities of Practice
How could Job Corps services be procured or delivered to expand the types of organizations operating Job Corps centers? (Ch. VIII)	Subcontracts for smaller, specialized services Limited number of "charter" centers with fewer regulations Formal request for information from stakeholder groups

Five factors that could be considered across all of the approaches in this report are: (1) the outcomes that are expected to change, (2) the theory underlying the approach(es), (3) the duration and intensity of implementation, (4) the resources necessary to implement the approach with fidelity, and (5) the strength of the evidence base. Generally, the topics in Part I of this report tended to involve youth participation and aimed to change youth outcomes during and after Job Corps. They varied in terms of how the practices could also involve other groups such as staff and employers. Part II of the report contained approaches that could have direct effects on the contractors that provide services, which then influence youths served by Job Corps. These approaches could potentially involve center-wide transformations or legislative changes.

If potential improvements are pursued, a pilot phase in one or a few centers prior to full scale-up can be useful for two primary reasons. First, a pilot can assist with identifying and addressing implementation challenges and refinements could be identified that could tailor the approach(es) to Job Corps' unique context. Interventions with more complicated implementation, such as those requiring coordination across agencies or restructuring how youth are organized, are most likely to benefit from a pilot phase prior to evaluation. Second, a pilot phase could provide information about whether the timing is right for evaluation. The findings from an evaluation are more likely to be reliable and policy relevant if the intervention can be implemented with fidelity, and the evaluation is more likely to detect impacts if there is a sufficient contrast between the intervention provided to some students or centers and the services provided to comparison students or centers. The pilot phase could help identify refinements to ensure faithful implementation of the intervention and sufficient contrast between intervention and comparison services. The Future Research Report (Lee et al. 2018) discusses this and other evaluation design considerations for examples of interventions corresponding to topics described in this report.

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APPENDIX A:

SUBJECT MATTER EXPERTS SERVING ON THE EXPERT PANEL

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SUBJECT MATTER EXPERTS

Valerie R. Cherry, Humanitas, Inc.

S. Dallas Dance, Baltimore County Public Schools

Teresa Derrick-Mills, Urban Institute

Cassius Johnson, Year Up

Monique Miles, Aspen Institute

Mamadou Ndiaye, Jobs For the Future

Joaquín Tamayo, Department of Education

Anand Vimalassery, National Job Corps Association

Helen Whitcher, YouthBuild

David Wick, KIPP Foundation

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APPENDIX B:

YOUTH PROGRAMS REFERENCED IN PART I

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Program Name	Brief Description	Target Population	Sections That Reference Program
Becoming a Man (BAM)	Becoming a Man (BAM), run by Youth Guidance in Chicago, provides in-school and after-school programming to expose youth to pro-social adults, occupy them during the high-risk hours after school, and implement aspects of cognitive behavioral therapy (CBT). The curriculum uses standard CBT elements to engage youth, including self-analysis check-ins, relaxation techniques, and stories and metaphors to illustrate how and when automatic behaviors or biased beliefs appear. Youth also participate in training in non-traditional sports, such as archery, boxing, or handball, that require focus and self-control as a way to reflect on automatic behaviors. For more information, see https://www.youth-guidance.org/bam/	At-risk male youth in grades 7-12	Discipline and behavioral interventions
Career Academies	Small groups of high school students and teachers meet and work together for three or four years. Youth typically work on a combination of academic and career and technical training, and through partnerships with employers participate in work-based learning. Youth are encouraged to consider postgraduate education through connections with local community colleges, dual enrollment, and field trips. For more information, see http://www.ncacinc.com/nsop/academies	High school students	Positive Youth Development; work experience and work based learning; learning communities
City University of New York (CUNY) Prep School	A college preparatory program that provides out-of-school youth alternative pathways to college. For more information, see http://cunyprep.org	16 to 18 year olds	Managed enrollment
High Schools that Work (HSTW)	Holistic school reform and framework of practices for schools and teachers that has been implemented in over 1,000 vocational, CTE and traditional schools in 30 states. For more information, see http://www.sreb.org/high-schools-work	High school students	High expectations
Integrated Basic Education and Skills Training (I-BEST)	I-BEST integrates basic skills education into college-level occupational classes by including two teachers (one focused on basic skills and the other on occupational skills development). The model allows low-skilled students an accelerated path to college completion since they do not have to enroll in remedial courses. Students also receive supports including help accessing financial aid and proactive advising. For more information, see http://www.sbctc.edu/colleges-staff/programs-services/i-best/	Community and technical college students	Career pathways
KIPP	A network of charter schools divided into 29 regions that operate mostly independently. KIPP was founded on five pillars. The exact components of the KIPP intervention varies by school and region. For more information, see http://www.kipp.org/	K-12 students	High expectations
Los Angeles Conservation Corps (LACC)	Founded in 1986, LACC is an open-entry, open-exit program that provides at-risk youth and young adults with educational support, job training skills, career support, and hands-on work experience on conservation and service projects that benefit the community. Corps members participate in a 12-month program which may be extended. For more information, see http://lacorps.org/young-adult-corps/	18 to 24 year olds	Open enrollment

Program Name	Brief Description	Target Population	Sections That Reference Program
National Guard Youth ChalleNGe	Established in 1993, the National Guard Youth ChalleNGe (NGYC) program operates 40 programs in 28 states, Puerto Rico, and District of Columbia. The NGYC offers a 22-week military residential education and training program to youth who have dropped out of or been expelled from high school. NGYC is a voluntary program that helps at-risk youth attain a high school diploma or GED. For more information, see https://www.jointservicessupport.org/NGYCP/	High school students ages 16 to 18 who have dropped out or have been expelled from high school	Residential environment
Registered Apprenticeships (RA)	Registered Apprenticeship (RA) is a U.S. DOL career-training program that seeks to produce well-trained workers through structured on-the-job training, related technical instruction, incremental wage increases as skills are attained, and, upon completion, nationally recognized certification in the chosen career area. Programs range from one to six years and are offered in occupations like electrician, plumber, truck driver, child care worker, nursing aide, and correctional officer. RA programs are delivered by sponsors—employers, employer associations, and labor management organizations. Employers cover the costs of training, wages paid to apprentices, costs of managing the program, and costs associated with time spent by senior employees to mentor and train apprentices. For more information, see https://www.doleta.gov/OA/apprenticeship.cfm	Adults	Apprenticeship and pre-apprenticeship
San Pascual Academy	San Pascual Academy is a residential education program located in Escondido, CA that provides foster teens with a stable environment and educational and job training skills for independent living. For more information, see http://www.sanpasqualacademy.org/	Foster teens ages 12 to 18	Residential environment
Whole School Restorative Justice (WSRJ)	The Oakland Unified School District started the Whole School Restorative Justice (WSRJ) program in 2005 to focus on conflict resolution, community building, and successful reintegration of youth from the juvenile justice system. Students involved in conflicts report taking several actionable steps to resolve conflict as part of the restorative justice program: (1) making a list of what they can do to avoid future conflicts, (2) spending time with the person they were in conflict with, (3) apologizing, (4) informing friends of the new positive relationship, (5) attempting to understand the other student's motivation for their behavior, and (6) becoming friends, or just being neutral acquaintances. For more information, see https://www.ousd.org/Page/12326	Elementary, middle, and high school students	Discipline and behavioral interventions
Year Up	Year Up is an intensive, one-year program. Participants complete coursework, skills training and internships, and receive a wide array of wraparound services. The model relies heavily on partnerships with employers and local education providers. For more information, see http://www.yearup.org/	Low-income youth ages 18 to 24 with a high school degree or equivalent	Work experience and work-based learning

Program Name	Brief Description	Target Population	Sections That Reference Program
Youth Empowerment Services in Philadelphia (YESPhilly)	YESPhilly provides students with GED exam preparation and college enrollment support. Instruction takes place over a course of two months, focusing on a specific theme. For more information, see http://yesphilly.org	Youth ages 17 to 21	Managed enrollment
YouthBuild	YouthBuild has over 260 urban and rural programs in 46 states that provides pathways to education, job, entrepreneurship, and community leadership for 16- to 24-year olds who come from low-income backgrounds. For more information, see https://www.youthbuild.org	Youth ages 16 to 24 who come from low-income backgrounds	Growth mindsets; fixed enrollment; residential environment; work experience and work-based learning
YVLifeSet	Nine-month intervention that provides services to youth in weekly sessions with case managers. Services are individualized and can include general life skills development, mental or substance abuse treatment (including trauma-informed cognitive behavioral therapy), counseling, real-life activities like opening a bank account, access to education coordinators, and referrals to other services including educational opportunities or housing services. For more information, see http://www.youthvillages.org/what-we-do/yvlifeset.aspx	Youth ages 18 to 24 transitioning out of juvenile justice or foster care	Positive youth development; Trauma-informed environment

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APPENDIX C:

ANALYSIS OF JOB CORPS CENTER LOCATIONS

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Table C.1. Distance from each Job Corps center to the nearest public two-year institution

Job Corps center state	Job Corps center name	Distance to nearest community college (miles)
Alabama	Montgomery	0.3
Washington	Columbia Basin	0.3
New Mexico	Roswell	0.4
New Hampshire	New Hampshire	0.4
New York	South Bronx	0.5
California	Los Angeles	0.9
Louisiana	New Orleans	1.1
Wyoming	Wind River	1.2
Florida	Pinellas	1.2
Idaho	Centennial	1.4
Michigan	Flint/Genesee	1.7
Michigan	Gerald R. Ford	1.8
Alabama	Gadsden	2.3
Indiana	IndyPendence	2.3
Ohio	Cincinnati	2.8
Illinois	Paul Simon	2.9
Oregon	Springdale	2.9
Arizona	Phoenix	2.9
Connecticut	Hartford	2.9
California	Sacramento	3.0
Oregon	Tongue Point	3.0
New Jersey	Edison	3.0
New Mexico	Albuquerque	3.1
Texas	Laredo	3.1
Kentucky	Carl D. Perkins	3.1
Florida	Miami	3.2
Connecticut	New Haven	3.2
Texas	David Carrasco	3.2
Georgia	Atlanta	3.3
Pennsylvania	Philadelphia	3.3
West Virginia	Charleston	3.3
Ohio	Dayton	3.4
Arizona	Fred G. Acosta	3.4
Kansas	Flint Hills	3.6
New York	Brooklyn	3.6

Job Corps center state	Job Corps center name	Distance to nearest community college (miles)
Maine	Penobscot	3.7
Minnesota	Hubert Humphrey	3.7
California	Long Beach	3.8
Texas	North Texas	4.2
Massachusetts	Westover	4.5
California	Inland Empire	4.6
Iowa	Ottumwa	4.7
Louisiana	Shreveport	4.8
Michigan	Detroit	5.0
Delaware	Wilmington	5.2
Oklahoma	Tulsa	5.2
California	San Jose	5.4
Oklahoma	Talking Leaves	5.5
Georgia	Turner	5.5
South Carolina	Bamberg	5.5
California	Treasure Island	5.6
Ohio	Cleveland	6.4
Missouri	St. Louis	6.4
Pennsylvania	Pittsburgh	6.4
Illinois	Joliet	6.6
Utah	Clearfield	6.7
Arkansas	Little Rock	6.8
Oregon	PIVOT	6.9
Massachusetts	Grafton	7.1
Utah	Weber Basin	7.2
Hawaii	Hawaii	7.2
Nevada	Sierra Nevada	7.3
Puerto Rico	Arecibo	7.3
Wisconsin	Milwaukee	7.5
California	San Diego	8.0
Maryland	Woodstock	8.6
Tennessee	Jacobs Creek	9.5
Maryland	Woodland	9.6
Tennessee	BL Hooks/Memphis	9.8
New York	Glenmont	10.0
District of Columbia	Potomac	11.3
Louisiana	Carville	11.5

Job Corps center state	Job Corps center name	Distance to nearest community college (miles)
Rhode Island	Exeter	11.5
West Virginia	Harpers Ferry	11.8
North Carolina	Kittrell	12.0
Pennsylvania	Keystone	13.1
North Carolina	Oconaluftee	13.2
Virginia	Old Dominion	13.8
New York	Iroquois	14.2
Kentucky	Earle C Clements	14.4
Puerto Rico	Barranquitas	16.1
Virginia	Flatwoods	16.7
North Carolina	Schenck	16.7
Missouri	Mingo	16.7
Oregon	Angell	16.7
Massachusetts	Shriver	17.0
New York	Cassadaga	17.4
Maine	Loring	17.4
Kentucky	Pine Knot	18.9
Kentucky	Muhlenberg	19.0
Virginia	Blue Ridge	19.4
Florida	Gainesville	19.5
Mississippi	Mississippi	19.5
Oregon	Wolf Creek	19.8
New York	Delaware Valley	20.1
South Dakota	Boxelder	20.7
Kentucky	Whitney M. Young	20.8
North Carolina	Lyndon Johnson	21.4
Illinois	Golconda	22.4
Kentucky	Great Onyx	22.6
Mississippi	Finch-Henry	23.2
Oklahoma	Guthrie	24.7
Pennsylvania	Red Rock	25.4
Missouri	ExcelsiorSprings	26.7
Oregon	Timber Lake	28.0
Mississippi	Gulfport	28.1
Texas	Gary	32.0
Indiana	Atterbury	32.7
Vermont	Northlands	34.2

Job Corps center state	Job Corps center name	Distance to nearest community college (miles)
Montana	Anaconda	34.7
Colorado	Collbran	37.1
New York	Oneonta	38.7
Florida	Jacksonville	39.1
Wisconsin	Blackwell	39.8
Puerto Rico	Ramey	44.2
Kentucky	Frenchburg	48.2
Arkansas	Cass	50.3
Iowa	Denison	53.1
Montana	Kicking Horse	53.3
Washington	Fort Simcoe	54.1
Georgia	Brunswick	55.2
North Dakota	Quentin Burdick	57.1
Nebraska	Pine Ridge	65.0
Montana	Trapper Creek	80.3
Hawaii	Maui	98.0
Washington	Curlew	108.5
Alaska	Alaska	705.3

Source: IPEDS data.

Note: The distances between Job Corps centers and institutions were calculated using the Vincenty formula.

Table C.2. Number of jobs in the county of each Job Corps center, by industry

Job Corps center state	Job Corps center name	Total	Construction	Education and health services	Financial activities	Professional and business services	Leisure and hospitality
California	Long Beach	4,344,132	132,586	1,068,830	218,475	598,433	516,292
California	Los Angeles	4,344,132	132,586	1,068,830	218,475	598,433	516,292
Illinois	Paul Simon	2,561,922	72,569	571,774	192,921	471,242	293,297
Arizona	Phoenix	1,871,953	103,222	373,413	168,030	324,620	217,491
California	San Diego	1,405,808	76,229	316,348	71,903	234,015	202,318
Florida	Miami	1,107,359	43,356	231,948	74,654	155,052	140,051
California	San Jose	1,046,049	47,835	202,565	34,852	222,283	99,197
Massachusetts	Shriver	888,073	39,832	217,495	36,531	209,011	76,780
Georgia	Atlanta	823,703	18,552	137,258	71,830	191,073	95,285
District of Columbia	Potomac	756,646	15,364	128,338	29,702	168,443	80,915
Ohio	Cleveland	719,480	20,761	196,722	51,778	113,499	74,414
Michigan	Detroit	711,606	19,853	168,950	32,794	117,690	75,748
California	Inland Empire	706,208	32,745	171,390	24,671	78,195	75,057
California	Treasure Island	703,188	19,747	136,579	55,424	187,701	96,652
Pennsylvania	Pittsburgh	688,600	29,076	187,298	54,578	127,569	72,909
New York	Brooklyn	687,358	29,987	291,987	33,858	54,128	54,329
Pennsylvania	Philadelphia	663,398	11,307	234,580	40,305	89,734	70,627
California	Sacramento	638,422	32,973	148,064	32,942	95,296	61,267
Missouri	St. Louis	598,815	28,377	135,865	43,454	112,470	62,766
Indiana	IndyPendence	591,186	25,305	134,418	36,653	99,046	58,477
Ohio	Cincinnati	509,034	23,142	117,535	35,559	97,153	56,848
Connecticut	Hartford	505,543	17,775	124,696	56,704	69,878	42,676
Oregon	Springdale	492,062	20,729	117,393	29,734	82,231	58,056
Oregon	PIVOT	492,062	20,729	117,393	29,734	82,231	58,056
Tennessee	BL Hooks/Memphis	491,027	16,388	106,839	23,037	81,725	47,725
Florida	Jacksonville	486,433	29,396	77,955	52,989	77,695	55,534
Wisconsin	Milwaukee	484,344	10,944	135,187	29,631	78,032	49,638
Hawaii	Hawaii	471,586	27,854	103,202	21,180	69,119	73,195
Florida	Pinellas	417,990	21,248	78,601	29,711	70,287	55,062
New Jersey	Edison	413,524	14,093	88,569	18,983	92,110	27,152
Michigan	Gerald R. Ford	388,828	15,298	82,087	18,521	73,867	34,107
Texas	North Texas	380,419	16,851	78,259	38,343	69,136	45,408
Maryland	Woodstock	373,523	23,180	97,046	30,936	60,578	34,857
Connecticut	New Haven	362,092	14,482	126,846	16,194	40,825	33,001
Arizona	Fred G. Acosta	358,682	14,852	85,685	16,064	50,180	43,895
Oklahoma	Tulsa	349,471	17,336	72,755	20,259	54,216	38,286
Massachusetts	Grafton	340,503	15,904	109,885	16,377	35,264	32,028
Minnesota	Hubert Humphrey	327,317	10,459	93,483	20,338	50,376	28,631

Job Corps center state	Job Corps center name	Total	Construction	Education and health services	Financial activities	Professional and business services	Leisure and hospitality
New Mexico	Albuquerque	324,566	18,954	87,232	15,798	52,134	42,315
New York	South Bronx	299,438	11,189	152,890	13,830	13,691	20,912
Texas	David Carrasco	296,977	14,583	86,388	12,248	32,558	35,897
Delaware	Wilmington	286,566	13,375	72,782	40,920	46,979	27,893
Maryland	Woodland	267,653	16,514	49,202	10,585	44,968	35,882
Ohio	Dayton	252,750	9,250	73,948	13,446	33,195	27,004
Arkansas	Little Rock	247,493	9,509	65,521	16,526	33,941	24,094
New York	Glenmont	232,495	7,824	55,565	15,694	30,323	16,935
Illinois	Joliet	230,559	14,385	48,207	6,885	26,572	25,908
Nevada	Sierra Nevada	209,985	13,932	32,814	9,853	29,921	36,813
Massachusetts	Westover	207,091	8,007	75,995	10,380	16,812	19,188
New Hampshire	New Hampshire	199,731	7,504	46,741	12,790	27,316	18,730
Louisiana	New Orleans	193,474	4,590	46,040	8,816	30,686	45,225
Oregon	Timber Lake	157,789	11,486	31,723	7,531	19,634	15,938
Pennsylvania	Keystone	143,619	4,718	35,317	6,065	16,379	13,121
Michigan	Flint/Genesee	133,469	4,623	37,413	5,410	13,968	15,077
Alabama	Montgomery	131,172	4,143	25,254	6,116	18,375	13,506
Florida	Gainesville	126,846	4,761	27,104	6,177	12,684	14,839
Utah	Clearfield	120,916	10,016	23,619	3,853	14,680	13,022
Utah	Weber Basin	120,916	10,016	23,619	3,853	14,680	13,022
Louisiana	Shreveport	114,285	5,223	30,110	4,965	12,855	12,967
Washington	Fort Simcoe	111,530	3,417	25,843	2,493	3,897	7,460
Missouri	ExcelsiorSprings	102,606	3,920	20,554	3,778	17,677	13,290
West Virginia	Charleston	101,129	3,927	26,883	5,713	12,451	9,597
Texas	Laredo	98,546	1,972	30,020	3,702	8,783	10,976
Hawaii	Maui	75,617	4,109	11,352	2,940	7,252	24,428
Maine	Penobscot	69,443	3,162	23,910	2,367	6,803	7,211
Tennessee	Jacobs Creek	68,221	5,318	15,501	2,090	6,003	7,409
Idaho	Centennial	61,123	5,032	13,476	1,765	4,604	5,189
Colorado	Collbran	59,593	4,053	14,287	3,004	5,327	7,562
Rhode Island	Exeter	52,141	2,016	10,672	1,654	4,161	8,329
Indiana	Atterbury	51,119	2,578	10,908	1,677	4,776	7,342
New York	Cassadaga	49,061	1,604	12,781	1,191	2,821	5,651
Georgia	Turner	47,030	1,882	9,926	1,489	6,301	5,201
Washington	Columbia Basin	38,806	1,287	7,239	754	1,691	2,463
Georgia	Brunswick	37,606	1,282	6,967	1,124	3,177	8,722
Oregon	Wolf Creek	37,355	1,365	8,246	1,189	3,734	4,208
Alabama	Gadsden	36,213	1,058	10,333	1,285	3,720	4,108
North Dakota	Quentin Burdick	32,276	2,224	7,077	1,818	2,160	4,140

Job Corps center state	Job Corps center name	Total	Construction	Education and health services	Financial activities	Professional and business services	Leisure and hospitality
Kansas	Flint Hills	28,749	1,398	5,587	1,524	2,057	4,410
Maine	Loring	27,206	840	8,686	1,031	1,249	2,193
New York	Delaware Valley	26,239	813	9,399	949	1,528	2,772
New York	Oneonta	23,470	435	8,670	1,221	962	3,432
Alaska	Alaska	22,959	2,088	4,401	671	1,237	2,878
New Mexico	Roswell	21,671	1,051	5,901	748	1,349	3,103
Puerto Rico	Arecibo	20,584	317	4,392	730	752	998
Oregon	Tongue Point	18,134	892	3,498	534	977	4,507
Oregon	Angell	17,972	738	2,767	550	1,232	4,372
Puerto Rico	Ramey	17,904	163	3,721	580	1,674	1,703
Kentucky	Whitney M. Young	16,285	511	1,334	469	1,656	1,494
Iowa	Ottumwa	16,135	586	4,309	535	935	1,502
Oklahoma	Talking Leaves	15,708	232	3,595	583	437	1,521
West Virginia	Harpers Ferry	15,613	548	3,038	444	1,119	4,106
Louisiana	Carville	15,583	2,794	922	471	1,159	738
Wyoming	Wind River	15,541	835	4,711	556	622	1,578
North Carolina	Kittrell	15,039	410	3,474	407	998	1,632
Vermont	Northlands	14,910	773	5,440	429	736	1,343
Virginia	Blue Ridge	12,793	462	2,615	204	1,717	773
New York	Iroquois	12,658	322	3,052	655	537	875
South Dakota	Boxelder	11,775	667	1,518	436	778	3,599
Montana	Trapper Creek	11,550	892	2,879	434	1,427	1,358
Virginia	Flatwoods	11,471	289	1,674	301	1,155	883
North Carolina	Lyndon Johnson	10,985	801	2,234	453	1,324	2,002
Kentucky	Carl D. Perkins	10,657	646	2,408	372	919	845
Mississippi	Finch-Henry	10,612	414	2,273	406	968	1,032
North Carolina	Oconaluftee	10,332	0	1,137	128	92	1,240
Missouri	Mingo	10,184	394	2,404	456	256	742
Kentucky	Muhlenberg	8,929	655	1,202	228	399	803
Montana	Kicking Horse	8,832	347	2,347	255	383	934
North Carolina	Schenck	8,827	505	2,459	290	632	1,356
Virginia	Old Dominion	8,409	462	1,342	159	271	699
Texas	Gary	8,217	388	2,485	261	436	971
Oklahoma	Guthrie	7,300	575	1,746	322	597	1,007
Mississippi	Mississippi	7,186	144	2,028	171	212	551
Iowa	Denison	6,878	300	1,599	225	240	480
Kentucky	Earle C Clements	5,020	101	1,027	149	183	329
Arkansas	Cass	4,471	116	1,073	80	323	331
South Carolina	Bamberg	3,952	60	1,226	177	123	198

Job Corps center state	Job Corps center name	Total	Construction	Education and health services	Financial activities	Professional and business services	Leisure and hospitality
Montana	Anaconda	3,331	145	866	79	134	566
Nebraska	Pine Ridge	3,309	104	721	103	132	419
Wisconsin	Blackwell	3,127	70	552	78	56	576
Puerto Rico	Barranquitas	3,008	49	519	210	63	177
Mississippi	Gulfport	2,603	15	846	116	44	266
Kentucky	Pine Knot	2,581	22	279	129	45	246
Washington	Curlew	1,759	0	514	44	80	104
Pennsylvania	Red Rock	1,640	100	518	0	62	142
Kentucky	Great Onyx	1,506	100	206	75	53	215
Kentucky	Frenchburg	885	0	161	20	31	0
Illinois	Golconda	568	6	0	14	16	61

Source: 2016 QCEW.

Note: The numbers of jobs shown are the annual average of quarterly employment levels for the year 2016. The QCEW uses the North American Industry Classification System (NAICS). The NAICS codes that correspond to the industry categories in the table are 1012, 1025, 1023, 1024, and 1026, respectively.

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