

A Proposed Research and Evaluation Framework for the Job Corps Program

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Executive Summary

The Job Corps program, established in 1964, helps young Americans from low-income backgrounds, ages 16 to 24, complete their high school education and provides them career and technical training to prepare them for meaningful employment.¹ Rigorous research on the national program, using data on Job Corps students who enrolled from 1994 to 1996, suggested it might have a positive impact on students' earnings three and four years after enrollment, but that its impact remains positive only for students who enrolled when they were 20 to 24 years old.² This report suggests how Job Corps can use research and evaluation both to continue understanding the strengths and weaknesses of its program and to refine the model in an evidence-based manner to yield substantial and sustained earnings impacts for more youth.

While much is known about the pre–Workforce Investment Opportunity Act (WIOA) Job Corps program of the late 1990s, far less is known about Job Corps as it currently operates — how it delivers services, the experiences of different types of students, and the impacts of the program on students in the modern economy.³ A foundational study that documents how the post-WIOA program operates and its impacts on earnings for its students could guide Job Corps' program improvement activity over the next 5 to 10 years. It is equally important to examine whether there are disparities in impacts, by age, race, or gender, and to try to understand why they arise.

The current report proposes that Job Corps alternate between two types of comprehensive studies of its operations and its effectiveness:

- A quasi-experimental impact study analyzing existing data, paired with an implementation study based on program data and data from a center director survey; and
- A more rigorous impact study, paired with an in-depth implementation study, to address a broader set of questions, generate more in-depth answers to those questions, and yield more rigorous impact estimates.

These comprehensive studies would identify program strengths upon which Job Corps could build and/or areas it could improve.

¹To qualify as low income an applicant must meet one or more of the following criteria: is on public assistance, has income below the poverty level, is experiencing homelessness, is eligible for free or reduced-price lunch, or is a foster child. Applicants must also meet one or more of the following criteria: is basic skills deficient; did not graduate from high school; is homeless, is a runaway, in foster care, or has aged out of foster care; is a parent; requires additional education; or is a victim of severe forms of trafficking in persons (Office of Job Corps 2023, Exhibit 1-1).

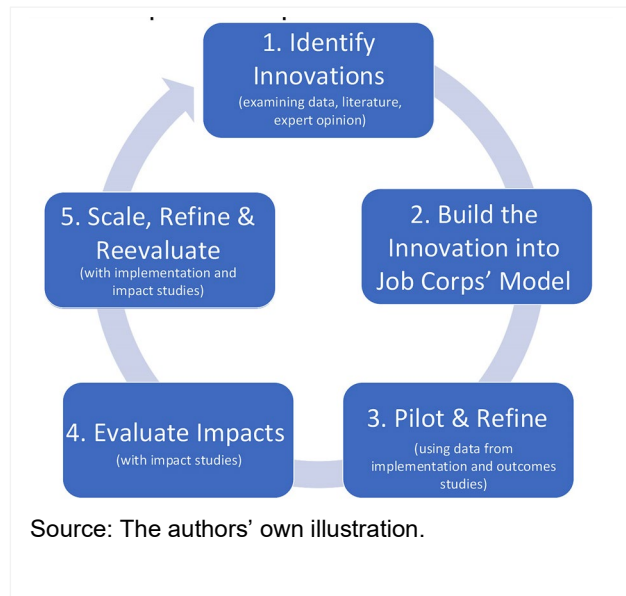
²Schochet, Burghardt, and McConnell (2008) analyzed survey and administrative earnings data for the 15,138 students who enrolled in Job Corps between November 1994 and February 1996 and participated in the random assignment evaluation of the Job Corps. Adjusting earnings to 1995 dollars, in Year 4, participants earned \$1,350 more than control group youth, according to the survey data; the impact was \$302 when measured with administrative data. From Year 5 to Year 9, the average impact across the full sample disappeared; however, for the older students, the impact remained positive at approximately \$750 a year.

³Of the 25 studies published since 2000, 19 studies have investigated Job Corps as it ran in the late 1990s.

This report argues that strategically sequenced research and evaluation activities have an important role in identifying and scaling innovations in a way that strengthens the program. Strong scalable program refinements are unlikely to be based on any one study. Instead, they will emerge from an extended iterative effort involving research to identify promising innovations, careful program development, piloting, more research, model refinement, scaling, more refining, and more testing of the model.⁴ The proposed research-based improvement framework (Figure ES.1) tries to capture this iterative process of continuous improvement.⁵ In particular, the key steps and activities are:

1. **Identify** a candidate innovation by analyzing program data, reviewing literature, and/or obtaining expert opinions;
2. Deliberately **build** that innovation concept into Job Corps as a well-defined change to the current program model;
3. **Pilot and refine** the well-defined innovation until consistent implementation is achieved, informed by data from one or more implementation and outcomes studies;
4. Once consistent implementation is achieved, **evaluate impacts** using an impact study; and
5. *If* the initial study indicates the program has a positive impact, **scale** the model in other sites, **refine** it in the new settings using implementation study feedback until consistent implementation is again achieved, then **reevaluate** the impacts to determine whether the scaled-up version is still achieving its goals.

Figure ES.1. The Proposed Job Corps Research and Evaluation Framework



To illustrate how the framework could be used as a continuous improvement tool, the report then presents how various research activities could be sequenced to improve Job Corps in a few example areas. Some of the illustrative studies build on innovations Job Corps has already started to explore; other examples focus on activities that could help Job Corps develop new potential innovations.

Building on work Job Corps has already done on its partnerships with colleges, the report suggests strategic next steps to advance two of Job Corps' college partnership innovations that have had an initial

⁴ Al-Ubaydli, List, and Suskind (2019) reported a theoretical analysis of the factors influencing successful scaling of innovations.

⁵The framework in this report is unique, but many similar research frameworks have been created over the years for many purposes: to develop and clinically deploy new therapeutic interventions (Thornicroft, Lempp, and Tansella 2011; Lobo, Petrich, and Burns 2014); to implement, evaluate, and continuously improve prevention programs (RAND 2017); and to improve outcomes within a social program (Grants Policy Office 2023).

pilot. The first is a **College and Career Academy** version of Job Corps. Job Corps has already piloted this innovation (Step 3 of Figure ES.1) at the Cascades center in Washington State. The pilot focused on careers in information technology (IT) and healthcare. The implementation and impact study DOL funded (Step 4) suggested that a residential version of Job Corps focused on enabling students to take their training classes at a community college has the potential to substantially improve outcomes for Job Corps–eligible youth who have completed their high school education.⁶ It also suggested that this college-focused innovation attracted students who would not otherwise have enrolled in Job Corps. Thus, if these impacts are replicable when implemented by other centers, then this innovation could broaden Job Corps’ appeal to young people who are interested in attending college, which in turn could increase the number of students in the program. To build on this promising finding, the framework suggests that Job Corps might want to replicate the College and Career Academy model in more centers to determine how well the model works in a broader set of situations, refining the model (if need be) and testing whether the impacts continue to be positive in a larger set of centers (Step 5). If the study showed that the impacts of the original Cascades center was generalizable to other centers, adding this type of residential college-focused variant to the assortment of Job Corps centers available in each region could improve impacts for at least some of the Job Corps students and expand Job Corps’ appeal to more of its target population.

The framework is also used to suggest next steps for a second college-partnership innovation, **Job Corps Scholars**. This innovation funds colleges to deliver a mostly nonresidential version of the model in which Job Corps training services (and limited education services, if needed) are delivered by and at local colleges, rather than at Job Corps centers. Job Corps piloted Job Corps Scholars and funded an implementation and outcomes study on the pilot (Step 3 in Figure ES.1).⁷ The findings of the study suggest that the U.S. Department of Labor might want to conduct an impact study of the Job Corps Scholars model (Step 4) in either the original pilot colleges or in other colleges. A rigorous impact and cost study of this nonresidential college-focused version of Job Corps could determine if the higher earnings observed in the mentioned outcomes study were due to the program (rather than the characteristics of the students who enrolled), how its cost compare to the cost of the other Job Corps programs, and how it impacts the reach of the program across different groups of students (women, students with children, etc.). Depending on the results, expanding this model could improve the cost effectiveness of the program for at least some groups of students.

The report also discusses examples of research activities that could help Job Corps develop innovations to improve equitable access to its services and decrease disparities in program persistence. Such innovations could improve the capacity utilizations of the centers and improve outcomes for underserved communities. Analysis conducted by the authors for the U.S. Department of Labor found differential lengths of stay for students by age and by race/ethnicity.⁸ A first step to addressing disparities is to better understand where disparities lie by analyzing Job Corps’ administrative data to examine program experiences of various groups of participants, defined by age, race, gender, entry education level, and perhaps even center, to identify centers that more equitably serve and retain students. A series of additional qualitative and quantitative research activities to gather insights from students and staff could be undertaken to better understand the reasons particular groups of students

⁶Klerman et al. (2021).

⁷Grossman et al. (2024).

⁸Outreach and Admissions Student Input System data and Job Corps’ Center Information System data were analyzed for students who enrolled in Job Corps between October 2016 and June 2020.

leave Job Corps. These activities could explore the causes for differential timing of program exits, particularly the early program exits (within the first three months), as well as reasons some students stay longer, to learn what could be done to improve persistence across all students (an example of a Figure ES.1 Step 1 activity).⁹ The findings then could be used to build out a program modification (Step 2). This modification could then be piloted at a few centers and refined (Step 3); evaluated (Step 4); and finally, if impactful, scaled, refined, and reevaluated (Step 5).

In summary, this report posits that innovative research could be an integral part of Job Corps' improvement strategy. For Job Corps to strategically modernize and strengthen, it needs to understand systematically how the program is operating in its current environment and its effects, by conducting an implementation and impact study of the program. Study options could examine the types of services provided to a broad array of students (by program feature and student characteristics); implementation challenges and facilitators; how centers partner with other organizations; and impacts on students, overall and by subgroups. The findings from that impact study could be used to suggest areas for improvement and possible practices that could be scaled.

The report notes that strong program refinements are unlikely to be based on any one study. Instead, significant improvement will emerge from an extended iterative effort involving research to identify innovations, careful program development, piloting, more research, model refinement, scaling, more refining, and more testing of the model. The evidence-building framework presented in the report tries to capture the iterative process of continuous improvement.

⁹Analysis conducted under the Job Corps Evidence Building Portfolio project is described in the third chapter of the report.

I. Introduction

The Job Corps program helps young Americans from low-income backgrounds, ages 16 to 24, complete their high school education and provides them career and technical training to prepare them for meaningful employment.¹ Rigorous research on the pre-Workforce Innovation and Opportunity Act (WIOA) program of the late 1990s suggests it might have a positive impact on students' earnings three and four years after enrollment, but that its impact remains positive only for students who enrolled when they were 20 to 24 years old.² This report suggests how Job Corps can use research and evaluation both to continue understanding the strengths and weaknesses of the whole program and to refine the model in an evidence-based manner to yield substantial and sustained earnings impacts for more youth.

WIOA requires that Job Corps evaluate the program, as it is operating, at least once every five years, including how it affects the employment outcomes of the participants it serves, overall and by various subgroups.³ The last such study of Job Corps participants, the National Job Corps Study (NJCS), evaluated the program as it ran in the mid-1990s with sample members applying to Job Corps between late 1994 and early 1996.⁴ More recent studies follow these same students to investigate the longer-term impacts, but these studies are addressing the impact of the pre-WIOA Job Corps program, not the program as it operates under WIOA.⁵ These same students were part of the last in-depth implementation evaluation of the Job Corps system.⁶

Thus, Job Corps knows relatively little about how it operates and its effectiveness under WIOA, which aims to increase partnerships and coordination among federal workforce development and related programs.⁷ Chapter 2 presents several different ways in which Job Corps could fill this gap. Such an

¹To qualify as low income an applicant must meet one or more of the following criteria: is on public assistance, has income below the poverty level, is experiencing homelessness, is eligible for free or reduced-price lunch, or is a foster child. Applicants must also meet one or more of the following criteria: is basic skills deficient; did not graduate from high school; is homeless, is a runaway, in foster care, or has aged out of foster care; is a parent; requires additional education; or is a victim of severe forms of trafficking in persons (Office of Job Corps 2023, Exhibit 1-1).

²Schochet, Burghardt, and McConnell (2008) analyzed survey and administrative earnings data for the 15,138 students who enrolled in Job Corps between November 1994 and February 1996 and participated in the random assignment evaluation of the Job Corps. Adjusting earnings to 1995 dollars, in Year 4, participants earned \$1,350 more than control group youth, according to the survey data; the impact was \$302 when measured with administrative data. From Year 5 to Year 9, the average impact across the full sample disappeared; however, for the older students, the impact remained positive at approximately \$750 a year.

³29 U.S. Code § 3211 and 3224.

⁴Schochet, Burghardt, and McConnell (2008).

⁵Schochet (2018).

⁶The National Job Corps Study (Schochet, Burghardt, and Glazerman 2001) randomly assigned more than 80,000 Job Corps applicants across almost all of the Job Corps centers between November 1994 and February 1996. Seven percent of these individuals were assigned to the control group. To minimize evaluation costs, the impact analyses were based on approximately 15,000 of those students—all 5,977 of the control group and 9,409 randomly selected treatment group members.

⁷Collins (2022).

evaluation would be useful to Job Corps in understanding its current strengths and weaknesses, which in turn could help it prioritize areas it might want to improve or program strengths it could scale.

Chapter 3 suggests that strategically sequenced research and evaluation activities have an important role in identifying and scaling innovations in a way that strengthens the program. The research and evaluation framework presented there suggests that strong positive program improvement emerges from an iterative effort involving research to identify promising innovations, careful program development, piloting, more research, model refinement, scaling, more refining, and more testing of the model.⁸ The phases of suggested research activities are ordered so that the lessons of the studies build upon one another.⁹ A sample of evidence-building activity options are provided to illustrate how the framework could be used to build evidence and strengthen the program.¹⁰ Some of the study options could be implemented immediately; others would be more appropriate in several years. The examples span methodological approaches.

Background Information on Job Corps

Established as part of the Economic Opportunity Act of 1964 (Public Law 88-452) and currently authorized by the WIOA of 2014 (Public Law 113-128), Job Corps offers free education and vocational training for eligible youth at more than 100 locations across the United States—covering every state, the District of Columbia, and Puerto Rico. Youth eligible for Job Corps are between the ages of 16 and 24 years old at enrollment; have low incomes (including youth who receive public assistance, are homeless, are in foster care, and/or qualify for free or reduced-price lunch); can legally work in the United States; and are in need of job skills training, education, counseling, or related assistance to start on a career pathway.¹¹ Recruited youth are assigned to a Job Corps center, which is operated usually by either for-profit contractors or the U.S. Forest Service, the U.S. Department of the Interior, or Native American tribes, based on proximity and available training. Job Corps students can participate in the program for up to three years.¹²

To learn about the impact of the program, between late 1994 and early 1996, the National Job Corps Study (Schochet, Burghardt, and McConnell 2006) randomly assigned more than 80,000 Job Corps applicants across nearly every center that was operating at the time.¹³ The NJCS found that four years after enrollment, the program group students reported earnings that were 12 percent higher than those

⁸Al-Ubaydli, List, and Suskind (2019) reported a theoretical analysis of the factors influencing successful scaling of innovations.

⁹The framework in this report is unique, but many similar research frameworks have been created over the years for many purposes: to develop and clinically deploy new therapeutic interventions (Thorncroft, Lempp, and Tansella 2011; Lobo, Petrich, and Burns 2014); to implement, evaluate, and continuously improve prevention programs (RAND 2017); and to improve outcomes within a social program (Grants Policy Office 2023).

¹⁰A much longer list of study options was provided to DOL in an internal document.

¹¹Public Law 113–128, Title I, Subtitle C, Section 144.

¹²Office of Job Corps (2024).

¹³Analysis focused on a subsample of about 15,000: all of the control group and a subsample of the treatment group. Given the cost of each survey complete, this strategy made sense for survey-based analyses. Other studies with similar challenges usually have analyzed administrative data for the full sample (for example, Klerman et al. 2022).

reported by the control group students.¹⁴ A follow-up study that investigated the impacts between five and nine years after enrollment using administrative records found no impacts after Year 4 except for the older students, those who were ages 20 to 24 when they entered. A 20-year follow-up on the NJCS sample similarly found that the pre-WIOA Job Corps had lasting impacts only on those who had entered when they were ages 20 to 24. The estimated benefits outweighed the costs for those older participants but not for the program as a whole.¹⁵

Since 2000, 25 published studies have evaluated Job Corps.¹⁶ Of these studies, 19 have been based on the NJCS data and thus are evaluating the program as it operated from November 1994 through February 1998. Combined, these 19 studies have built evidence about how the pre-WIOA Job Corps program affected Job Corps students who began their careers in the labor markets of the mid-1990s and experienced a recession in November 2001 as young adults and the Great Recession in June 2009 as adults.¹⁷

These experimental studies show, for example, the following:

- Job Corps participants in the mid-1990s were more likely to obtain a high school diploma or GED compared with similar youth who did not participate in the program.¹⁸
- Though the program had positive effects four years after random assignment on employment and earnings for many participants, there were no such positive short-term impacts for Hispanic participants, participants ages 18 or 19, women without children in nonresidential programs, and participants with serious arrest records at application.¹⁹
- There were impacts on earnings beyond Year 4 only for the participants who were ages 20 to 24 when they enrolled, though the impacts were generally small.²⁰
- The program of the mid-1990s reduced arrests, conviction rates, and time spent in jail four years after application.²¹

¹⁴Schochet, Burghardt, and Glazerman (2001).

¹⁵Schochet (2018).

¹⁶Bampasidou et al. (2014); Barnow et al. (2021); Blanco, Flores, and Flores-Lagunes (2013); Chen and Flores (2015); Chen, Flores, and Flores-Lagunes (2018); Epstein et al. (2018); Eren and Ozbeklik (2014); Flores et al. (2012); Flores-Lagunes, Gonzalez, and Neumann (2010); Grossman, Olejniczak, and Klerman (2021); Hock et al. (2023); Kirsch et al. (2014); Klerman et al. (2021); Lee (2009); Qin et al. (2019); Liu et al. (2020); Olejniczak et al. (2021); Ryan and Johnson (2001); Schochet (2018; 2021); Schochet and Burghardt (2008); Schochet and Fortson (2014); Schochet, Burghardt, and Glazerman (2001); Schochet, Burghardt, and McConnell (2006); Strittmatter (2019).

¹⁷<https://www.cbpp.org/research/economy/tracking-the-post-great-recession-economy>

¹⁸ Burghardt et al. (2001).

¹⁹Burghardt et al. (2001).

²⁰Schochet (2018).

²¹Burghardt et al. (2001).

Nonexperimental research analysis suggests that:

- Participants who completed a GED or vocational training in the mid-1990s earned more over the first four years after enrollment than those who did not.²²
- The supplementary supports and experiences, such as the counseling and life skills classes, provided to the participants in the mid-1990s (that is, aspects of the program beyond the traditional education and occupational classes) could have accounted for as much as half the earnings impacts for participants.²³
- Participants in the mid-1990s who received more months of academic and vocational training in the program had stronger earnings impacts.²⁴

All these findings pertain to Job Corps as it operated under the Job Training Partnership Act of 1982, not as it operates under WIOA, which stresses partnership and coordination among workforce development institutions and programs.²⁵ The studies' results are also all anchored in past labor market dynamics. Thus, little is systematically known about the current Job Corps program—how it enrolls students, how it delivers services, what are the experiences of those students, and what is the impact of Job Corps on those students. Because the economy and the types of young people Job Corps centers serve have changed since the 1990s,²⁶ this outdated evidence is unlikely to apply, and new evidence is needed.²⁷

To illustrate how the youth who enroll in Job Corps have changed over time, the authors of the current report compared the application characteristics of Job Corps students in 1995 with the 42,962 students

²²Ryan and Johnson (2001) performed a propensity score matching analysis using the full NJCS sample of 15,000 randomly assigned Job Corps applicants. They estimate that students who completed their vocational training earned \$40-\$60 more than noncompleters 11 to 16 quarters after enrolling, and GED completers earned \$60-\$70 more than GED noncompleters.

²³Qin et al. (2019) developed a decomposition technique to analyze how program services affected earnings outcomes. It is based on the 6,614 NJCS sample members who did not have a high school diploma, GED, or vocational certificate at baseline; responded to the 48-month survey; and had no missing data on the center they were applying to, on whether they earned a vocational or academic degree, and on the other covariates in the study.

²⁴Flores et al. (2012) based their statistical dose-response analysis on the 3,715 program students in the NJCS sample who completed at least one week of academic or vocational training; reported being White, Black, or Hispanic; and had information on the earnings and all the study covariates. The authors found that students who received more weeks of academic or vocational training in Job Corps experience larger earnings both 16 weeks after enrollment and one year after leaving the program.

²⁵Collins (2022).

²⁶Autor (2010) discusses how the economy is different. The authors of this report discuss how the students are different later in this chapter.

²⁷None of the five studies of Job Corps based on its more recent operations (post 2000) examines the impact of the program on participants. Liu et al. (2020) examine costs. Epstein et al. (2018) examine the use of computer-assisted learning platforms to teach basic skills. Kirsch et al. (2014) examine the practices associated with high-fidelity centers. Klerman et al. (2021) and Olejniczak et al. (2021) evaluate the Cascades College and Career Academy pilot. Grossman, Olejniczak, and Klerman (2021) did a small study of promising Job Corps-college partnership practices.

who enrolled in 2017.²⁸ In 2017, more of the Job Corps students were high school graduates or had earned a high school equivalency credential compared with the students in the mid-1990s (23 percent in 1995; 34 percent in 2017). Far fewer students were 16 to 17 years old (40 percent in 1995; 14 percent in 2017), and more of the students had disabilities (4 percent in 1995; 29 percent in 2017).²⁹

The labor market has also changed since the mid-1990s.³⁰ For example, the differential in earnings (inflation-adjusted) between a worker who did not have a high school credential and one with some college has grown. In 1995, the median earnings of a man who had some high school but no high school credential, was 84 percent of a man with some college but no degree.³¹ By 2017, that man without a high school credential earned only 68 percent of a man with some college. Statistical analysis conducted by the Pew Research Center in 2016 found that the economy is increasingly rewarding analytical skills relative to manual skills.³² Since 1990, the wages of jobs requiring analytical skills grew 19 percent whereas the wages of jobs requiring manual skills grew only 7 percent.

At the same time, the broader field of occupational training has advanced and built new evidence on how to serve young people who can also be eligible for Job Corps. Secondary analysis across four randomized controlled trials (RCTs) of sectoral training programs covering 6,465 study members suggests that outcomes for young people are better when training programs have a close relationship with employers or sectors and when they provide participants with soft skills training and wraparound support services, such as counseling or case management.³³ Two RCTs of high school programs found that students are more likely to complete high school and pursue additional education when they are in learning environments where staff interact with a smaller number of students.³⁴

Ever committed to serving youth well, Job Corps has changed since the 1990s, modernizing how it delivers education and training, incorporating technology, changing the occupations in which it provides training, and enriching its life skills courses.³⁵ Indeed, the Job Corps 2.0 initiative, described in its Fiscal Year 2024 Congressional Budget Justification, illustrates its commitment to improvement.³⁶

Given that so much has changed since the mid-1990s—in the target populations, the labor market they face, and the program—Job Corps’ existing evidence base is out of date. An evaluation based on a recent cohort of Job Corps participants is needed so that DOL knows how the *current* program is serving young people. For whom does it work well? Only with more current information can it ensure the

²⁸Program Year 2017 was chosen because it was two to three years before the COVID-19 pandemic, so students’ program experiences were not interrupted or modified by it. The analysis of 2017 data done by the authors used data from the Outreach and Admissions Student Input System and Center Information System.

²⁹Berk et al. (2018); Schochet, Burghardt, and McConnell (2008); and analysis of 2017 data done by the authors (N=42,962).

³⁰Pew Research Center (2016).

³¹https://nces.ed.gov/programs/digest/d18/tables/dt18_502.20.asp

³²Pew Research Center (2016).

³³Katz et al. (2020).

³⁴Kemple (2008), an RCT with 1,428 students; Unterman and Haider (2019), an RCT with 21,113 students.

³⁵<https://www.britannica.com/topic/Job-Corps>; Epstein et al. (2018).

³⁶<https://www.dol.gov/sites/dolgov/files/general/budget/2024/CBJ-2024-V1-04.pdf>

program is serving its eligible population appropriately.³⁷ Submitting that evaluation to Congress would also enable Job Corps to fulfill its statutory evaluation requirement.

This report suggests research and/or evaluations that Job Corps could pursue both on its continuous improvement journey and to fulfill its statutory evaluation mandate to address these questions or others. This opening chapter provides context for the remainder of the document. The next sections describe how the Job Corps program aims to improve student outcomes, the students who enroll, and how long they stay. The chapter ends with a roadmap for the rest of the report.

How Does Job Corps Aim to Improve Students' Outcomes?

The eligibility criteria intentionally target youth ages 16 to 24 who have experienced considerable challenges prior to entering the program, including personal and systemic barriers such as familial and neighborhood-level poverty; unstable housing; underresourced schools; and limited opportunities for local, livable-wages.³⁸ Of the approximately 43,000 students who enrolled in Job Corps in 2017, about one quarter of students were receiving public assistance at the time of their application, and 65 percent of them had left high school before earning a diploma and had not yet earned an equivalent credential.³⁹

Communities all over the country provide high school equivalency education and employment services to young people ages 16 to 24 who are no longer in school through the WIOA Youth program. Job Corps has the potential to be particularly effective at serving its eligible youth population.⁴⁰ It is common for Job Corps-eligible young people to make multiple attempts to earn a secondary or postsecondary credential using community-based workforce development services, but work or personal issues related to finances, family, parenting, or mental health challenges all too often force them to drop out.⁴¹

Recognizing these barriers, Job Corps provides a structure and support services that help its students complete the type of substantive training that could generate sustained increases in earnings, compared with the services that the average youth program can provide.⁴² Job Corps is free; it is often residential, thus eliminating the need to pay for food, housing, and transportation; and it provides a wide array of supportive services, such as healthcare, mental health counseling, life skills training, and assistance

³⁷There have been two studies commissioned by the Secretary of Labor more recently that have broadly examined the operations of Job Corps, but neither addressed the impacts of the program. One was the Job Corps Process Study conducted in the early 2010s in which its authors explored what center practices distinguished centers with strong performance management indicators from those with low performance indicators (Kirsch et al. 2014). Its authors note clearly in the beginning of the report that performance indicators for Job Corps centers are not related to their impacts, as shown by Schochet and Fortson (2014). The other study examined the cost per enrollee and graduate by center in Program Year 2017 (Liu et al. 2020) but did not address impact.

³⁸Office of Job Corps (2023).

³⁹Unless otherwise noted, the statistics in this section are contract-specific tabulations from Job Corps administrative data: application data from the Outreach and Admissions Student Input System; enrollment date and details of high school diploma/GED completion from the Center Information System. The tabulations are for students entering in calendar year 2017, the last cohort to have at least two full years before the onset of COVID.

⁴⁰Alterman and Treskon (2022, p. 5).

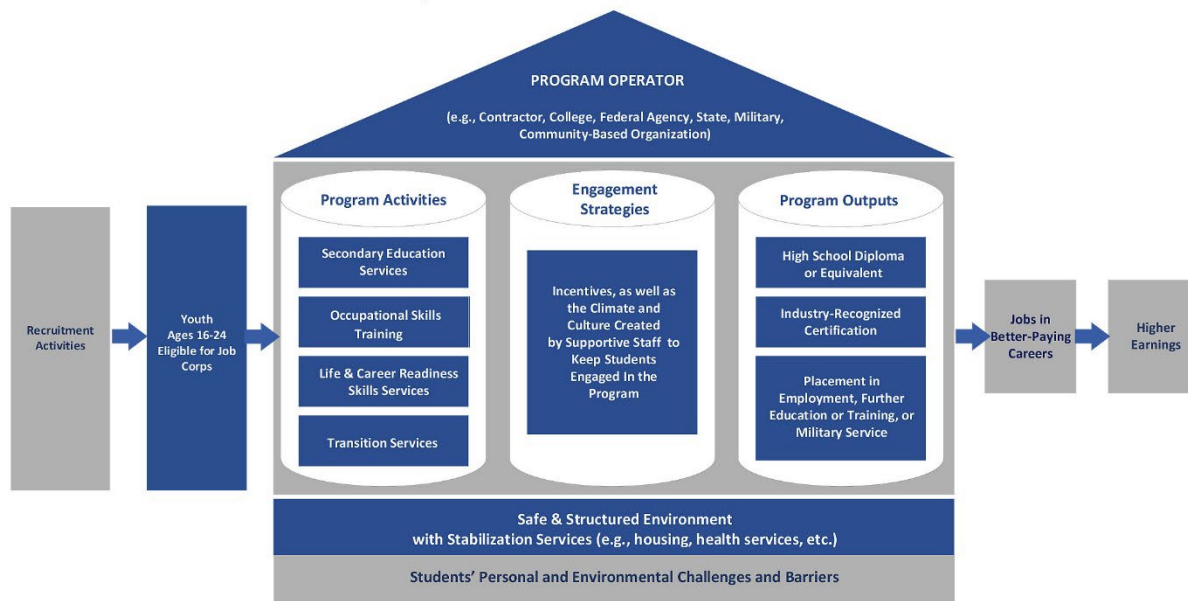
⁴¹Mendelson et al. (2018); Loprest, Spaulding, and Nightingale (2019); Ashtiani and Feliciano (2012).

⁴²Office of Job Corps (2023).

transitioning after the program to employment, the military, or additional education. Each Job Corps center also develops its own standard of conduct for students, supported by rules and positive incentives.⁴³ Ultimately, Job Corps aims to create a safe, structured environment where many of the barriers that interfere with students' participation are removed, so they can engage in their studies for long enough to obtain significantly more skills training than they would have otherwise. Experimental and nonexperimental research suggest that these supports can be important factors in employment and training programs, particularly for youth with experiences or characteristics that make them eligible for Job Corps.⁴⁴

Figure 1 is a logic model for Job Corps showing how these services aim to improve student outcomes.⁴⁵

Figure 1. Logic Model of Job Corps



Source: The authors' own illustration.

From left to right, recruitment and enrollment activities, conducted by Job Corps staff, aim to attract a wide range of eligible students to fill the Job Corps centers. Students arrive at a center and operators provide them with skills- and knowledge-building services, such as secondary education to those who need it, occupational training, and life skills, as well as transitional services aimed at helping graduates into a productive post-Job Corps position. This includes finding a job, entering the military, or pursuing additional education and/or training. To help these students, who face many personal and

⁴³Office of Job Corps (2023, Section 2.5).

⁴⁴Weiss et al. (2019) conducted an RCT of 896 students; Hahn et al. (2004), a study of 900 YouthBuild graduates; Grossman and Bulle (2006), a review of 15 years of statistical studies of youth programs; and Bloom, Thompson, and Ivry (2010), a review of 11 RCTs.

⁴⁵The many descriptions of the Job Corps program include that by Berk et al. (2018). The *Job Corps Policy and Requirements Handbook* (Office of Job Corps 2023; 2024) provides much more detail about the services and policies. The program as it operated in the mid-1990s is described in all the NJCS reports, including by Schochet, Burghardt, and McConnell (2006). The basic features of the Job Corps model have not changed since the mid-1990s.

environmental challenges (such as poor behavior management skills, mental health issues, and physical disabilities) complete a substantial amount of training, the centers also provide a range of other support services, such as physical and mental health services or counseling—usually, but not always, in a residential setting.

The key program outputs are the attainment of various credentials, such as industry-recognized or employer-valued certifications, and/or a high school diploma or equivalent degree. Having completed more education and training than they would have gotten without Job Corps, and with the help of the transitional services, completers are assisted in their pursuit of further education or training (through work-based learning or internship opportunities), employment, or military service. Those post-program outcomes would allow students to secure jobs in better-paying careers, which in turn, over time, would lead to higher earnings than they would have had without Job Corps.⁴⁶

However, because students are stepping away from the labor market to enroll in Job Corps and they might pursue additional training after exiting Job Corps, their earnings for two to three years after enrollment could well be below those of young people who do not attend Job Corps. To be worthwhile for students, theoretically, enrolling in Job Corps should result in better outcomes over the long run than not enrolling.

Consistent with this logic model, this report proceeds on the assumption that Job Corps' focal outcome is increasing earnings over the students' lifetimes. Impacts on earlier outcomes (such as degree attainment) are intended primarily to lead to an impact on earnings; impacts on later outcomes will follow primarily from increased earnings.

Given the importance of lifetime earnings, the Job Corps program faces a challenge. The last evaluation of Job Corps to examine its earnings impacts found that though the program had a positive effect on earnings in Years 3 and 4 post-enrollment, earnings gains continued only for the older participants (ages 20-24), not younger participants.⁴⁷ Between 2013 and 2015 (approximately 20 years after enrollment), older participants were 4.2 percentage points more likely to be employed and had a 7.3 percent earnings advantage of \$1,265 per year over their control group peers. For participants ages 16-19, there was no impact on employment or earnings in Years 10 to 20.⁴⁸ Thus, the program of the mid-1990s appears to have succeeded with only some students. However, with the enactment of the Workforce Investment Act and later the WIOA, Job Corps has changed, such as emphasizing partnerships and performance metrics more.⁴⁹ Job Corps does not know whether the earlier findings still hold true for Job Corps students now.

⁴⁶The link between more education and higher earnings is very well documented in the economics literature (Card 1999), but Brown and Routon (2016) show how military service is also linked to higher earnings for people who are at or below the median earnings level, as Job Corps-eligible students typically are.

⁴⁷Schochet, Burghardt, and McConnell (2008). It is relevant to note that the older participants (ages 20-24) did continue to earn more than their control group peers through 2015, whereas the younger participants did not.

⁴⁸Schochet (2021) analyzed tax records through 2015 for the NJCS sample. The employment impact is statistically significant, but the earnings impact is underpowered due to the size of the older groups and the variance of earnings, thus not significant. However, the students who entered Job Corps in the late 1990s in their 20s earned more than their control group peers in all but one year between 2001 and 2015, but the impacts between Years 10 and 20 were not statistically significant.

⁴⁹Collins (2022).

To better understand what in the current program needs strengthening, a new impact study on a more recent group of Job Corps students is needed. Before presenting options on how to conduct such an impact study (and meet the WIOA requirements), the next section provides more context about how students who enrolled in 2017 engaged with Job Corps.

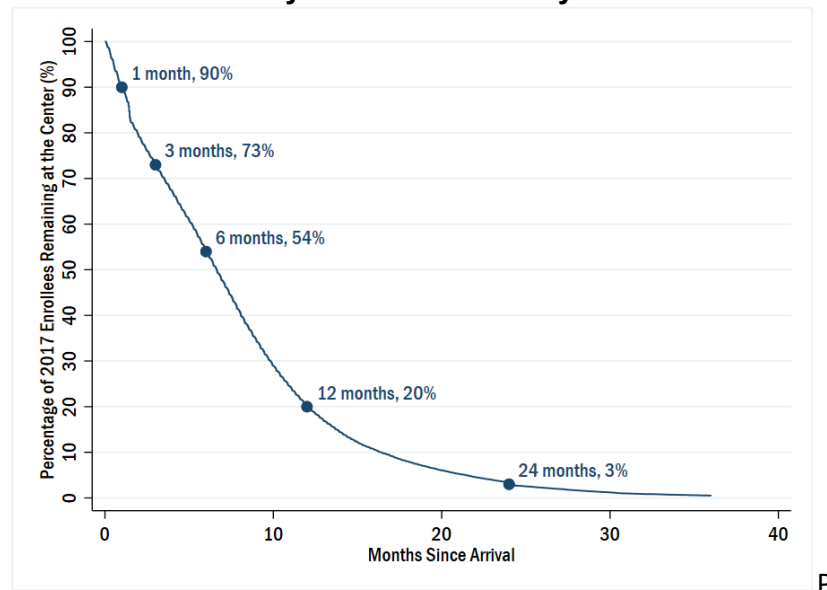
Student Experiences in Job Corps 2017

This section presents how long students who enrolled in 2017 stayed in Job Corps, the percentage of students who earned a secondary education credential, and what percentage enrolled in and finished at least one occupational training class.

Length of Time in Job Corps

Job Corps students can participate in the program for up to three years.⁵⁰ However, as shown in Figure 2, actual time in is typically short: For the 2017 cohort, 10 percent of students left within a month, and another 17 percent left within three months.⁵¹ By the sixth month, only half of the students (54 percent) were still enrolled. The shares of students staying more than one or two years are small (20 percent and 3 percent, respectively).

Figure 2. Percentage of 2017 Job Corps Enrollees Still in Job Corps, by Months After Entry



Source: Outreach and Admissions Student Input System and Center Information System data.

Note: Contract-specific tabulations from Job Corps administrative data on 42,963 students who enrolled in Job Corps in 2017.

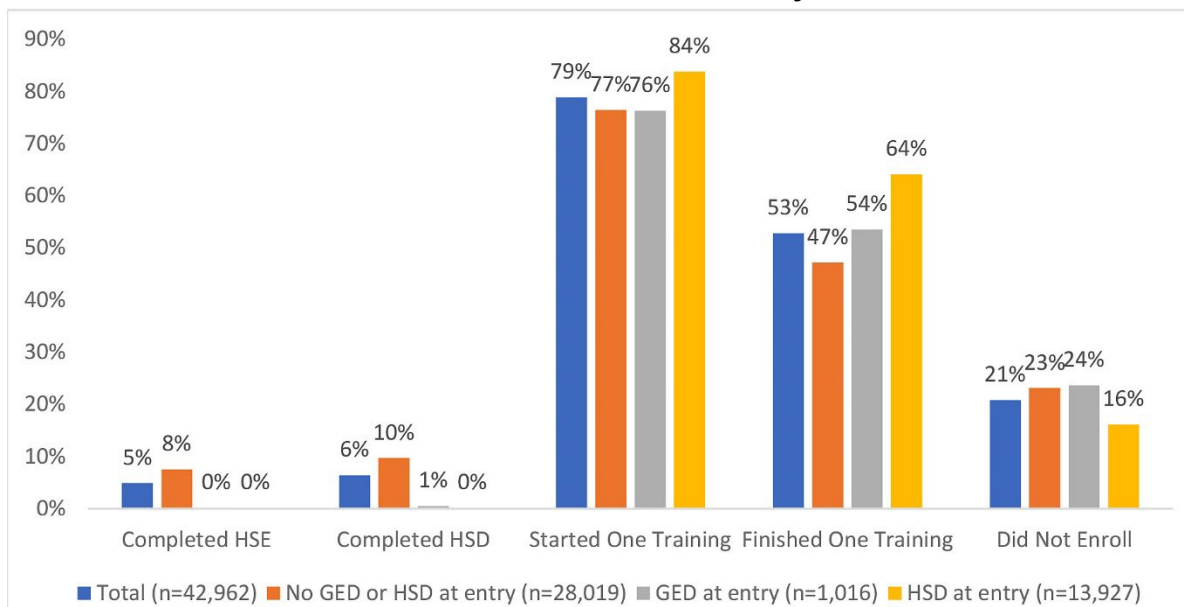
⁵⁰Office of Job Corps (2024).

⁵¹These results were computed by the authors using data from the Center Information System. $N=42,963$ students who enrolled in Job Corps in 2017.

Participation in Job Corps Activities

Figure 3 shows student participation levels in education and training, by educational status at entry, for the 2017 cohort. As shown, though 65 percent of the Job Corps students did not have a high school diploma or equivalent when they enrolled, only 10 percent received a high school diploma while in Job Corps; only 8 percent completed a GED (or other alternative credential). In contrast, 79 percent of all students attended occupational training. However, though 79 percent of the students started training, only 53 percent completed at least one training course. Research is needed to determine how best to improve completion rates.

Figure 3. Participation Levels in Education and Training of 2017 Job Corps Enrollees, by Education Status at Entry



Source: Outreach and Admissions Student Input System and Center Information System data.

Key: GED—General Education Degree or other alternative high school credential. HSD—high school diploma. “Completed HSE”—earned GED or other high school equivalent at Job Corps. “Completed HSD”—earned high school diploma at Job Corps. “Started One Training”—started at least one occupational training course at Job Corps. “Finished One Training”—finished at least one occupational training course at Job Corps. “Did Not Enroll”—did not enroll in any education program or occupational training at Job Corps.

Note: Tabulations on 42,962 students who enrolled in Job Corps in 2017 with non-missing education and training data. Students for whom the “Career Preparation Period” is the only activity recorded are classified as not enrolling in any occupational training. Students with GED at entry accounted for 2.4 percent of the sample, students with no GED or HSD at entry accounted for 65.2 percent, students with HSD at entry accounted for 32.4 percent.

The balance of the report is structured as follows: Chapter 2 suggests studies that could help Job Corps evaluate its current program and meet its statutory requirement to evaluate its structure and impact, in both the short and long term. Chapter 3 describes a framework for conducting research and evaluation activities to improve the program and lays out examples of studies that could be used to improve two aspects of the program: improving student experience, and how partnering with colleges and employers affects the program and its participants. Chapter 4 concludes with recommendations on priorities for which studies to undertake sooner and later.

II. Evaluation Options to Meet Job Corps' Statutory Requirement

As discussed in the prior chapter, more recent evidence is needed to understand what impact Job Corps has on its participants, whom it serves, and the labor market these youth navigate. Impact evaluation designs vary widely in their cost, the degree to which they change the intake and enrollment process, and the level of new data collection required. Thus, an approach that could lessen the evaluation burden on the program would be to rotate between more and less expensive and rigorous impact studies across the five-year intervals.

Below is a potential sequence of impact evaluations using different designs over sequences of five-year periods.

- First, use administrative data to conduct a quasi-experimental comparison group impact analysis to estimate the effects of the Job Corps program on administratively collected employment and earnings outcomes. Because only administrative data would be used, this study would be relatively low cost.
- Then, Job Corps could consider conducting another large-scale, experimental study like Schochet's 2018 National Job Corps Study, to include baseline and follow-up surveys as well as administrative data collection. The new experimental impact estimates could be used to examine the impacts on a wider range of outcomes (namely outcomes not captured by administrative databases, such as job quality, self-employment, health, and/or criminal justice involvement), to gauge Job Corps' benefits relative to its costs. This study could also be used to revise contractual performance measures to induce contractors to work toward improving impacts.
- Subsequently, Job Corps could repeat the low-cost, quasi-experimental study using a later cohort of participants, ideally collecting application-measured Test of Adult Basic Education scores for all applicants.⁶¹

This last suggestion implies that Job Corps gets permission from the Office of Management and Budget and starts collecting the Test of Adult Basic Education (TABE) data at application over the next decade. Doing so would provide Job Corps with additional rich baseline data that could be used to construct a stronger comparison group for a quasi-experimental evaluation design. This academic achievement information might also be useful in guiding applicants as to specific technical training and therefore in the selection of center.⁶²

The quasi-experimental approaches suggested above that use administrative data to estimate impacts would compare the outcomes of youth who participated in Job Corps (the "participant group") versus a

⁶¹Office of Job Corps (2024, Appendix 301).

⁶²Because different centers offer different fields of occupational training, not knowing an applicant's TABE score can lead to sending them to the "wrong" center; that is, to a center that does not offer training for the occupation that might be most appropriate for this applicant.

group of youth who have similar characteristics (“comparison group”).⁶³ Comparisons of average education and employment outcomes for the Job Corps participant group versus average outcomes for this comparison group (after adjusting statistically for observable differences between the group members, such as age and education) could provide estimates of the impacts of participating in Job Corps. The degree to which these comparisons provide reliable impact estimates depends on how closely the outcomes of this comparison group (adjusting statistically for any observable differences) reflect what outcomes the participant group *would have been* had they not enrolled in Job Corps.

Besides requiring Job Corps to investigate its effect on participants, WIOA also requires the evaluation of *“the effectiveness of the structure and mechanisms for delivery of services through such programs and activities, including the coordination and integration of services through such programs and activities; [and] the impact of such programs and activities on the community, businesses, and participants involved.”*⁶⁴ Thus, to fulfill the Act’s full mandate, any of the impact studies would need to be augmented with descriptive analyses of the program’s implementation, its participants, and its effects on the local communities and businesses. Collecting descriptive information on these issues could be done in a variety of ways:

- Information on the structure and implementation issues of Job Corps centers could be collected through a survey of center directors. Directors, with the help of their staffs, could report on the details of their current program, such as partnerships with local school districts, community colleges, and employers; enrollment practices; academic and occupational supports; staff training; and key challenges.
- Participant experiences in the program could also be documented easily by examining the data held by the Job Corps Data Center, such as enrollment in secondary education or occupational training completed and credentials earned.
- In-person or remote interviews with center staff, participants, and key partners could also be used to deepen understanding of how and why centers operate the way they do.

To summarize, to meet its statutory mandate, Job Corps could alternate between less expensive evaluations—nonexperimental impact studies paired with analysis of existing data (both program data and center director survey data)—and more rigorous experimental evaluation designs (every 10 to 15 years) that could address a broader set of questions, generate more in-depth answers to those questions, and yield more rigorous impact estimates. These five-year assessments would help Job Corps identify places or components of the program either that need strengthening or that are working well. The next chapter discusses how research and evaluation activities can help Job Corps identify innovations, strengthen aspects of the program, and ultimately improve Job Corps impacts for all students.

⁶³This comparison group strategy was suggested by Angrist (1998). Based on analysis of Job Corps Data Center data for youth who applied to Job Corps from 6/27/2018 to 6/28/2022, approximately half of the applicants never showed up at the center. The percentage of nonenrollees was approximately a third between 2006 and 2018.

⁶⁴29 U.S. Code § 3224 - Evaluations and research.

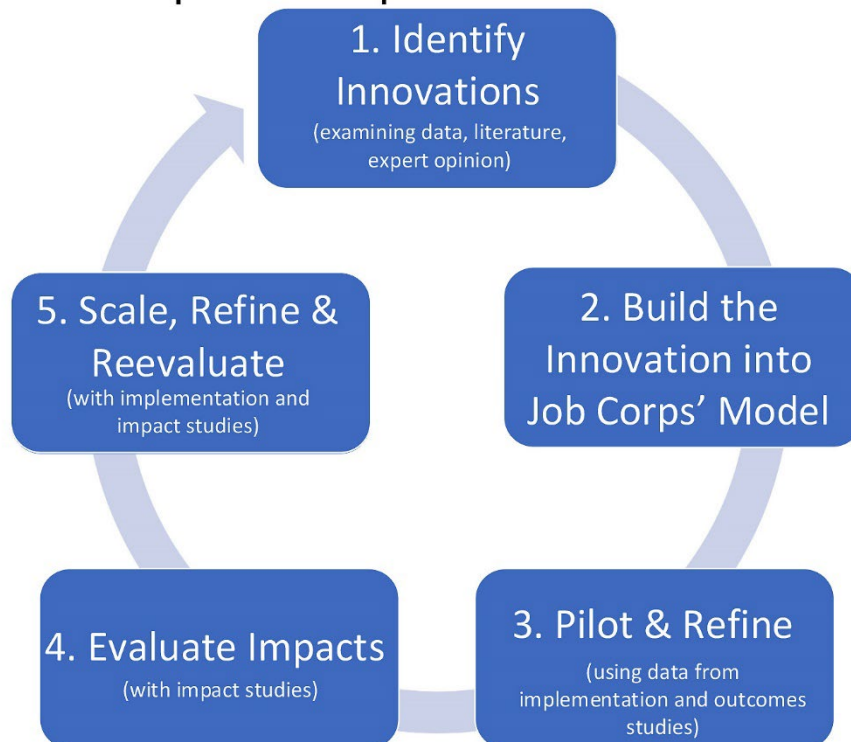
III. Embedding Research into Job Corps' Improvement Process

The previous chapter considers studies to evaluate the effectiveness of the Job Corps program as a whole at a point in time, as required by the WIOA. This chapter discusses how research and evaluation could be used, in a continuous improvement process, to provide information needed to strengthen various aspects of the program, such as improving equitable access to the program or partnering with colleges or employers. Using the structure of the logic model of Job Corps presented in Figure 1, improvements could yield (one or more) program variants that could either result in increases in earnings or improve some other dimension of the program, such as attracting more students. To start, this chapter lays out a research and evaluation framework that Job Corps can use to generate ideas for program innovations in an area, test new or evidence-based practices, and test whether they can be scaled. Then, this chapter illustrates how the framework could be used as a continuous improvement tool by providing examples of a series of studies in a couple of areas.

An Evidence-Building Framework to Improve Job Corps

Research and evaluation activities have a role in identifying and scaling innovations that could improve the implementation and outcomes of Job Corps, such as identifying promising practices or scaling only effective changes in a service. Improving the program and its outcomes through evaluation is not a one-step process. Instead, studies build upon one another.

Figure 4. The Proposed Job Corps Research and Evaluation Framework



Source: The authors' own illustration.

Figure 4 graphically presents the proposed five-step recurring, evidence-building framework. The five steps are:

1. **Identify** a candidate innovation by analyzing program data, reviewing literature, and/or obtaining expert opinions;
2. Deliberately **build** that innovation concept into Job Corps as a well-defined change to the current program model;
3. **Pilot and refine** the well-defined change to the current program model until consistent implementation is achieved, informed by data from one or more implementation and outcomes studies;
4. Once consistent implementation is achieved, **evaluate impacts** of the well-defined pilot program model using an impact study; and
5. *If* the initial study indicates the program has a positive impact, **scale** the model in other sites, **refine** it in the new sites using implementation study feedback until consistent implementation is again achieved, then **reevaluate** impact to ensure the scaled-up version is still achieving its goals.

Building evidence in this incremental manner attempts to address two different challenges with program development and evaluation practice; namely wasting money to evaluate programs with weak implementation and/or scaling programs that have not been proven to be effective. Sequencing evidence-building activities and studies in this manner helps ensure that Job Corps provides staff the time to work out implementation challenges encountered when operating the innovation on the ground and information about how to refine the model before the expense of an impact study is incurred. Similarly, this framework ensures that Job Corps will scale only *impactful* innovations.

The first problem arises from underappreciation of the challenge of program implementation and consistent implementation. A recent example of this problem was seen in Job Corps' evaluation of the Cascades College and Career Academy (CCCA) pilot. In 2015, the DOL, in collaboration with the U.S. Department of Education, designed an innovative version of Job Corps targeting students ages 16 to 21 years old. This residential Job Corps model aimed to send all of its students to the local community college in conjunction with, or in place of, center-based career and technical training.

The model included new practices, such as cohort enrollment, expanded learning opportunities including technology-enabled instruction and evening and weekend programming, and human-centered design principles.⁶⁵ It also allowed students to pass courses by demonstrating competency rather than always requiring them to sit through a course. Eager to learn whether this was a useful approach to engaging Job Corps' younger participants, DOL began the impact study contract for this pilot six months after the new center was to have launched. For external reasons and because the model was so new, it took the pilot center more time than expected to begin implementation, and several of the envisioned service components and elements were incompletely implemented.⁶⁶ Yet, the impact study had already

⁶⁵This paragraph is based on information provided in Klerman et al. (2021).

⁶⁶Olejniczak et al. (2021).

begun. The impact study delayed the intake period as long as feasible while still being able to collect a meaningful amount of follow-up data. Still, some important aspects of the model were not in place until near the end of the intake period, undoubtedly affecting the program's measured impacts.⁶⁷ For example, it took staff 15 months of operation to realize that many students did not have all the academic and nonacademic skills needed to succeed in college. A College Readiness module was added to the model, but not until the last 4 months of the evaluation's 14-month intake period.⁶⁸ To avoid experiences like this in the future, Step 3 of the framework in Figure 4 focuses on gauging implementation fidelity and quality issues before starting an impact study (Step 4), to ensure that impact studies do not occur until the program concept is well specified and has been refined in the real world through piloting.⁶⁹

The second problem arises from a presumption that innovative program ideas will have favorable impacts on the outcomes of interest when scaled up to other sites or populations. Unfortunately, not all well-thought-out innovations have positive effects.⁷⁰ Furthermore, even if a prior evaluation shows that an innovation is effective, when the program is scaled to other sites and reevaluated the scaled version might not necessarily be impactful in its new setting. Given that reality, conducting impact studies (Step 4) and evaluating the scaling effort (Step 5) are crucial steps before widespread scaling of an innovation throughout the Job Corps system.

Job Corps currently has a few innovations that are going or have gone through program development Step 2 (Build the Innovation into the Model) and Step 3 (Pilot).⁷¹ As a result, some of the studies presented in this chapter build on these innovations, whereas others focus on activities that could help Job Corps develop other potential innovations.

With this introductory motivation, the balance of the chapter shows concretely how the framework could be applied. It presents examples of studies suggested by the framework that Job Corps could pursue to strengthen two different parts of the Job Corps model:

- Improve student experiences—improve the equity of service access, and implement new engagement strategies; and
- Improve partnerships—with colleges as well as employers and sector leaders.

A sequence of studies could be conducted on other aspects of Job Corps using the framework, but the examples below offer a good idea of the types of research activities entailed in using this framework as a continuous improvement tool. Some of the example studies suggested below aim to generate ideas for

⁶⁷Klerman et al. (2021).

⁶⁸Olejniczak et al. (2021).

⁶⁹See for example, Fixsen et al. (2005) and Epstein and Klerman (2012).

⁷⁰Goodson et al. (2024) examined the impacts of 148 Investing in Innovation innovations funded by the U.S. Department of Education between 2010 and 2016. Their Exhibit 6 shows that few had positive impacts, and only half of interventions that had prior evidence of positive effects were effective when scaled. Their Table C.11b shows that only 63 percent of interventions with several prior studies showing they were effective (Scale-Up Projects) continued to have positive impacts when scaled.

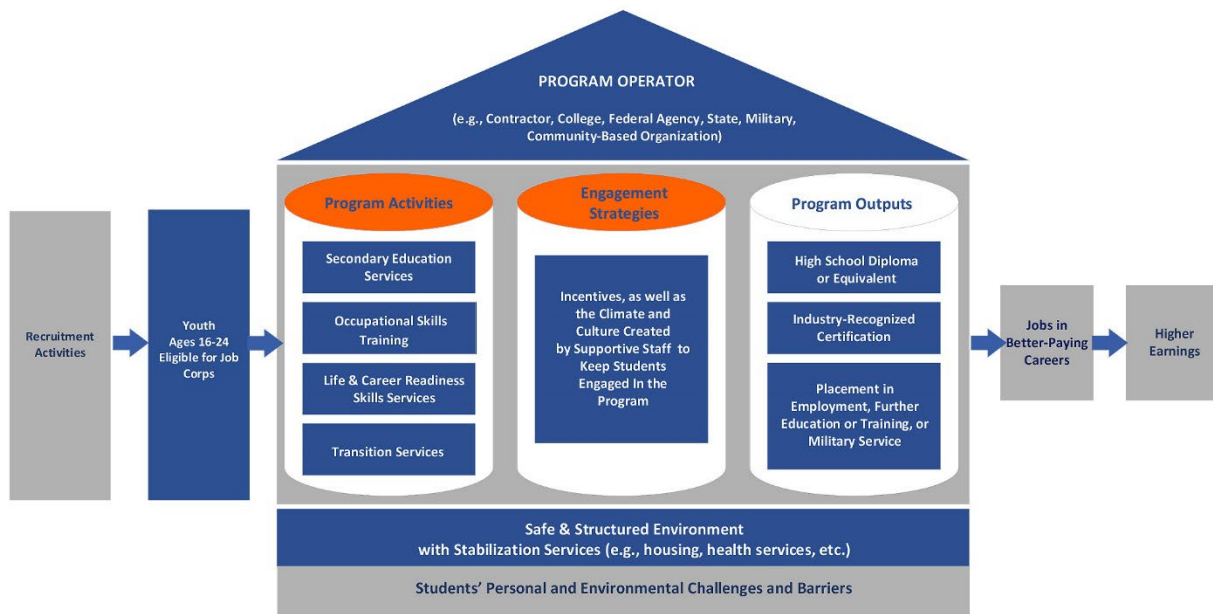
⁷¹Edgerton (2022, 7-8).

new practices; others test particular models that DOL has already piloted. Note that studies within an area are meant to build upon one another.

Examples of Studies to Support Improving Student Experience

Figure 5 shows that an important aspect of Job Corps is how it encourages and supports students to stay engaged in learning. This section presents three examples of sets of studies that could be done starting at different stages of the proposed framework in Figure 4. Two sets start at the idea-generation step (Step 1. Identify Innovations): one relying on staff and student surveys to generate an innovation and the other starting with the analysis of Job Corps administrative data. A third set of studies is based on an innovation uncovered in a literature review.

Figure 5. Logic Model of Job Corps Highlighting Engagement Strategy Projects



Source: The authors' own illustration.

Generating Ideas by Asking Staff and Students

A simple and straightforward way to generate ideas about how to improve student experience in Job Corps is to:

- Collect insights from a diverse set of youth and frontline Job Corps staff to identify innovations that might improve student experience in Job Corps. One approach could include conducting a short student experience survey at all the centers, then interviewing students and staff from centers that score high, medium, and low on student experience based on criteria established by the evaluation team (Step 1. Identify Innovations).

Some of these ideas could then be developed into a well-defined practice (Step 2). That practice could be piloted, and a formative implementation study of the pilots could be used to help refine the practice (Step 3).

Studies to Improve the Equitable Access to Services

Improving the equity of experience of all students implies ensuring that the Job Corps environment is such that it does not lead to disparities in program attrition. Preliminary tabulations conducted under this contract for DOL did find disparities in length of stay by age and by race/ethnicity. For example, for Job Corps students who enrolled between October 2016 and June 2020, the median length of stay for Black students was 5.9 months, 7.0 months for Hispanic students, and 6.4 months for White students.⁷² Of these students who enrolled when they were age 16 or 17, their median length of stay was 5.5 months; students who enrolled when they were age 18 or 19 had a median stay of 6.4 months; and those age 20 or older had a median stay of 6.7 months.⁷³

The first step to addressing disparities is to better understand them by:

- Analyzing the data Job Corps already collects on its students to determine precisely how attrition over time differs across various groups of participants, such as by age, race, gender, entry education level, and even by centers, to identify centers that equitably retain students.

A series of studies could be undertaken to better understand the reasons particular groups of students leave Job Corps, particularly those who leave the program within the first three months, and the reasons some students stay longer. Specific approaches might include:

- Creating a process map (a visual representation of the steps of the program) intended to identify steps that might be modified to improve outcomes.⁷⁴ This behavioral science technique uses the input of a wide range of staff and students to map out not the *intended* flow of the steps but the *actual* one experienced by students step by step.
- Conducting in-depth interviews with students from different groups who stay longer, students who leave early (though this group is likely to be challenging to involve), and center staff.
- Conducting more in-depth analyses of Job Corps administrative data to identify when and why students leave.⁷⁵

From the information generated by one or more of these research activities, Job Corps could develop ideas for how to make access over time to Job Corps services more equitable (Step 1 of Figure 4). These

⁷²The equality of survival functions across subgroups (e.g., B vs. H vs. W vs. O) for race/ethnicity, age, gender and high school education is rejected for all subgroups at the 1 percent level.

⁷³This analysis, transmitted to DOL in a December 11, 2020, memorandum, used Center Information System and Outreach and Admissions Student Input System data for the 111,621 students who were at Job Corps centers between October 2016 and June 2020.

⁷⁴Sutcliffe and Condliffe (n.d.).

⁷⁵The current Job Corps Evidence Building Portfolio project already has conducted some quantitative analyses that could be complemented by additional qualitative data collection, such as site visits to centers with longer average lengths of stay (based on these analyses).

innovations could then be built into the Job Corps model (Step 2), then piloted and refined (Step 3), then the impacts tested (Step 4), then scaled, refined, and retested (Step 5).

Embedding Trauma-Informed Practices into Job Corps Using a Pilot Study

Another approach to improving student experience, suggested in the 2018 external review of Job Corps,⁷⁶ is to train all Job Corps staff to better support students who have experienced trauma. Infusing trauma-informed practices into programs is an approach that has gained popularity among other youth-serving programs—especially residential programs and nonresidential programs that enroll populations likely to have a history of acute stress and trauma.⁷⁷ Approaches often include increasing awareness of staff and students of the prevalence and impact of trauma, training staff to recognize signs and symptoms of trauma, implementing community-building meetings, providing nonpunitive supportive spaces for students to calm down as needed, providing all students with instruction to strengthen their social and emotional competencies, and changing policies to avoid retraumatizing.⁷⁸

The evidence base is still in the early stage, but there is some suggestive evidence that programs with well-implemented trauma-informed practices might increase self-control, reduce verbal aggression, and displace negative coping strategies in a school setting.⁷⁹ One of the few experimental studies—of the PACE Center for Girls, an alternative education setting for girls at risk of justice involvement infused with trauma-informed practices—suggests that implementing trauma-informed practices well could improve students' engagement in the program and increase retention by decreasing suspensions.⁸⁰ Because trauma is often more common among youth of color than White youth, successfully embedding trauma-informed practices can improve equity by decreasing the racial disparities in suspensions and disciplinary actions, enabling a broader set of students to complete more training.⁸¹

If Job Corps wanted to try to infuse trauma-informed practices into the program, it could start at Step 2 in Figure 4 by working with trauma-informed practice experts and Job Corps staff to develop an innovation to pilot. For example, a center could revise its disciplinary policies with a trauma-informed lens, as well as introducing a trauma-sensitivity and trauma-informed practice training for its staff and possibly its students. To learn from the pilot, Job Corps would want to conduct a series of studies that would build off one another:

- A formative implementation and outcomes study (Step 3) to examine whether this type of training is feasible, how trauma-informed practices were embedded into daily interactions and rules, and how the pilot affected length of stay and service receipt for participants overall and by subgroups.

The pilot could be refined based on the results of this implementation study.

⁷⁶Berk et al. (2018) review the literature on creating trauma-informed environments.

⁷⁷Forrest et al. (2018); Maynard et al. (2019); Thomas, Crosby, and Vanderhaar (2019).

⁷⁸Grossman and Portilla (2022); Interagency Working Group on Youth Programs (2013).

⁷⁹Dorado et al. (2016) report a small-sample nonexperimental retrospective pre-post study. More recently, programs are using the term “healing-centered” practices rather than “trauma-informed.” Portilla (2022) reviews how embedding trauma-informed practices into a system can improve equity.

⁸⁰Millenky et al. (2019) report an RCT with more than 1,000 sample members.

⁸¹Portilla (2022).

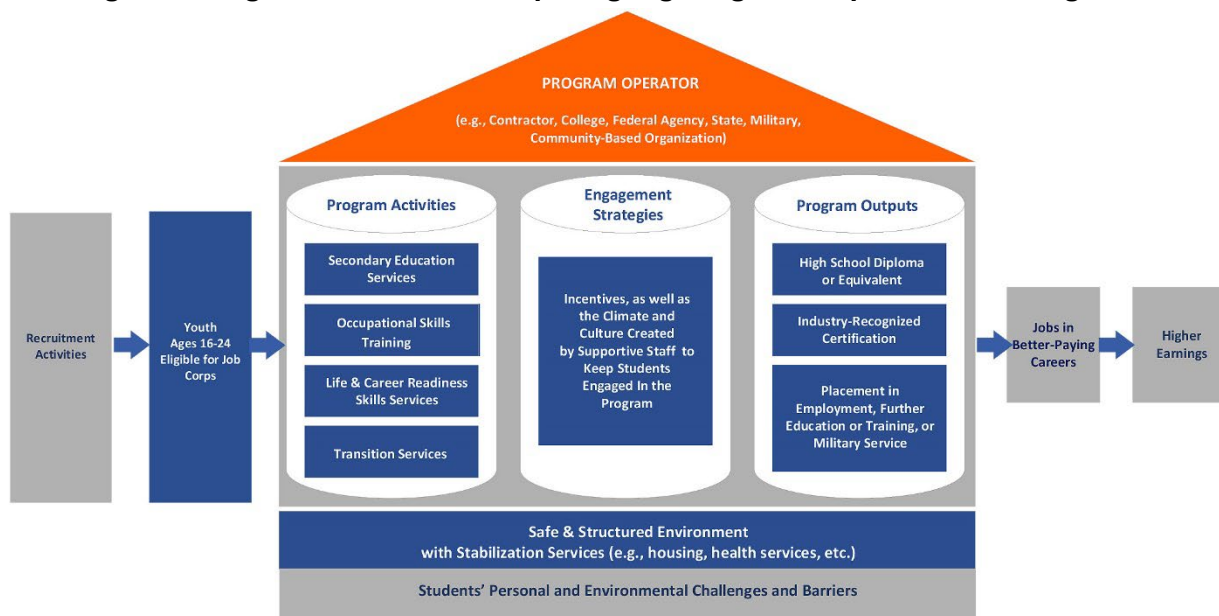
- If that study shows that the pilot training is promising, an impact study (Step 4) could be conducted. Because the intervention is delivered center wide, the impact study would need to be a center-level random assignment or comparison group study. Thus, it could be implemented in a randomly chosen set of interested centers. Alternatively, comparison centers would need to be selected. Once the model is being fully implemented in the pilot centers, an impact study could examine the model's impact on educational and employment outcomes overall and by subgroups of participants.

If the impact study of the pilot shows positive impacts, the model could be expanded to more centers and reevaluated (Step 5).

Examples of Studies to Support Improving College Partnerships

Another way to improve Job Corps' core services of education and training is to explore engaging different providers to deliver services (Figure 6). For example, some Job Corps centers have collaborative arrangements with nearby colleges to offer career and technical training that are not available at the Job Corps center or to provide students the opportunity to participate in additional advanced career and technical training programs beyond what is available at the center.⁸²

Figure 6. Logic Model of Job Corps Highlighting Who Operates the Program



Source: The authors' own illustration.

To date, Job Corps has developed two pilots exploring different ways to partner with colleges to deliver education and training effectively. In 2016, Job Corps developed the CCCA, a college-focused, college-partnership version of the program targeting youth ages 16 to 21; piloted it in the refurbished Cascades

⁸²Grossman, Olejniczak, and Klerman (2021); Office of Job Corps (2023, 3.1-7, 3.1-9).

center; and commissioned an implementation and impact study.⁸³ In 2019, DOL piloted Job Corps Scholars, a version of Job Corps operated by colleges themselves to provide education and career and technical training, intensive personal and career counseling, and employment placement services.⁸⁴ That pilot is being evaluated with an implementation and outcomes study.

For both innovations, the research and evaluation framework shown in Figure 4 points to several ways DOL could build off the earlier studies to further collect evidence on how Job Corps partners in different ways with colleges. Three options are discussed below.

One option, a **Multi-Center Study of a College-Focused Job Corps Model**, would build off the earlier implementation and random assignment impact study of the CCCA (which was a combination of Figure 4's Step 3 and Step 4). That study suggested that a version of Job Corps using the resources of the community college system has the potential to substantially improve outcomes for Job Corps–eligible youth who enroll with a high school credential and those with reading and math skills at a ninth-grade level or higher.⁸⁵ It also suggested that such a college-focused program model could attract eligible youth who would not otherwise be interested in Job Corps.

Building on the study, Job Corps could revise the model, focusing recruitment on Job Corps–eligible students who can transition relatively quickly to training at a community college.⁸⁶ The revised model would prepare them for the transition and support them (with personal counseling and academic tutoring) while they are college students. This refined version of the model could be piloted at several locations and reevaluated with another implementation and random assignment impact study (Step 5). A cost-benefit analysis could also be conducted as part of the impact study.

Another option, **A Study of Strong Partnerships with Community Colleges**, would build on the “first-look” partnership brief written under the CCCA evaluation (a Step 1 project) and would advance Job Corps' ability to partner well with colleges by examining the practices and challenges Job Corps centers across the nation have in partnering with community colleges.⁸⁷ The suggested study would be a more thorough Step 1 investigation to uncover a broader range of promising practices from throughout the Job Corps system. The proposed study would be based on the experiences of a much broader set of Job Corps center–community college partnerships than the four examined in the CCCA study. With more centers, the study could explore tradeoffs and promising practices of successful partnerships more deeply by interviewing staff and students in more partnering centers, as well as interviewing their college partners to explore the promising practices more fully. Then, the study team could examine the correlation of the administrative earnings and college attendance data (respectively, from the National Directory of New Hires and the National Student Clearinghouse) of all the Job Corps advanced training programs with certain practices.

A third study option, **An Impact Study of the Job Corps Scholars Program**, would involve funding another round of colleges to pilot the Job Corps Scholars program. The 2020–2023 Job Scholars pilot is being evaluated under the Job Corps Evidence Building Portfolio project with an implementation and

⁸³Klerman et al. (2021) report on an RCT with 612 sample members and an implementation study.

⁸⁴DOL/Employment and Training Administration (2019).

⁸⁵Klerman et al. (2021).

⁸⁶Klerman et al. (2021); Olejniczak et al. (2021); Grossman, Olejniczak, and Klerman (2021).

⁸⁷Grossman, Olejniczak, and Klerman (2021).

outcomes study (Step 3) of the 26 programs that enrolled more than 2,000 Job Corps Scholar students. Pending the results of that pilot, the model could be refined and evaluated in another multisite evaluation (a Step 4 project). That evaluation could include an experimental impact study, an implementation study, and a cost-benefit study.

Examples of Studies to Support Improving Partnerships with Employers and Sector Leaders

Year Up is a program that provides students ages 18 to 24 from low-income communities who have a high school credential (a diploma or equivalent) with six months of technical training, a stipend and student services supports, such as housing, food, transportation, or childcare resources, followed by internships with major firms. An experimental evaluation of Year Up found large and sustained impacts on earnings.⁸⁸ Program staff believe that one reason it is effective is its strong partnership with employers, which features paid six-month internships, with some students hired when their internships end. Job Corps could learn more about how to better partner with employers and sector leaders by conducting a similar set of studies as was described above about partnering with colleges:

- Job Corps could conduct a qualitative study of promising practices in Job Corps' partnerships with employer partners. This Step 1 of Figure 4 investigation would explore the challenges of partnership and promising practices of successful ones through interviews with center staff, workforce boards, and employers. This study could also explore with the interviewees how Job Corps could improve students' transition to employment.
- Alternatively, Job Corps could pilot a Year Up–inspired Job Corps variant, emphasizing strong partnerships with employers. This pilot would begin at Step 2, building the key practices into the Job Corps model. Developing strong employer relationships can be time-consuming, so the pilot could be tested in centers that already have strong relationships, or DOL would need to give the pilots time to allow the relationships to mature.⁸⁹ Then, the model could be piloted and refined (Step 3), using feedback from an implementation and outcomes study. If the pilot appeared promising, an impact study should be conducted (Step 4).

Summary

This chapter proposes a five-step research and evaluation framework that Job Corps could employ to improve its continuous improvement process by including systematic evidence-building activities. As shown in Figure 4, Step 1 of the framework highlights that Job Corps can mine both the data it already collects and the knowledge of those currently involved in Job Corps (staff, students, employers, other partners) to generate ideas for improvement and innovation to supplement the sources it currently uses to develop innovations. Step 2 of the framework acknowledges that innovative ideas need to be

⁸⁸Fein and Dastrup (2022) report on an RCT with approximately 2,500 sample members.

⁸⁹Kanengiser and Schaberg (2022) is an RCT with 2,564 sample members of another sectoral program (WorkAdvance).

deliberately built into Job Corps' current model so that program implementers know what to do differently.

Step 3 of the framework proposes that before spreading the innovation throughout the system, Job Corps pilot the innovation with companion implementation and outcomes studies. The information they generate can then be used to refine the model before evaluating it, to ensure that it has the impact that it was intended to have (Step 4). Innovations that prove to be successful can be further refined and scaled to many more sites. But Step 5 suggests that the scaled program be evaluated again, using an implementation and impact study, to ensure that the innovation continues to be effective in a broader set of contexts.

IV. Conclusion

A Proposed Research and Evaluation Framework for the Job Corps Program was written to help Job Corps meet its statutory requirement to evaluate the program as it is operating every five years, as well as to help it advance and deepen the program's ability to build and use evidence to improve outcomes for its eligible youth. Chapter 2 suggested a series of studies that could be conducted every five years that would fulfill its Congressional mandate. Chapter 3 laid out a research framework that provides Job Corps guidance on how to use research and evaluation as tools for continuous improvement. Example studies were provided to show how the framework could be used. Which, if any, of the studies suggested in this report the U.S. Department of Labor will find most promising at a particular point in time will depend on an ongoing interplay of Job Corps' interest and the state of the evidence at that time.

This final chapter summarizes studies that could be worth more careful consideration, given the state of the evidence as of 2024 and some of Job Corps' current areas of interest.

A foundational evaluation that could guide Job Corps' program improvement activity over the next five years is an evaluation that determines whether the Job Corps program as it has operated in the early 21st century affects earnings of its students beyond what those impacts would have been; and if so, for how many years. Equally important is to examine whether there are disparities in impacts, by age or race or gender, and try to understand why they arise. Thus, a high-priority evaluation that could start immediately would be:

- A **nonexperimental impact study of the program**, along with an **implementation study**, to document services Job Corps provides.

Such an evaluation would both meet Job Corps' ongoing every-five-years statutory requirement and help identify practices that could be scaled to improve overall effectiveness.

To improve particular aspects of the program, the following studies could be funded over the next five years:

- A **study to improve the equity of access to services**. Given the low completion rates and differential lengths of stays of Job Corps students by race and ethnicity, it would be useful to analyze Job Corps' administrative data and gather insights from student and staff to learn what could be done to improve persistence, or completion of the program, across all students.⁹⁰
- The findings then could be used to modify the program. This modification could then be piloted, refined, evaluated, scaled, and reevaluated, as described in the proposed research and evaluation framework (Figure 4). Depending on the findings of the qualitative study suggested above, a pilot of trauma-informed practices might be suggested.

⁹⁰Analysis conducted under the Job Corps Evidence Building Portfolio project described in the preceding chapter.

Conducting these studies would enable Job Corps to develop evidence-based innovations that are informed by lived experience and focused on equity.

A second set of studies would help Job Corps scale innovations that it has already developed in an evidence-driven manner.

- **Studies of college-partnership Job Corps models.** Job Corps has conducted several studies in this area that could be built upon. The Cascades College and Career Academy evaluation suggested that a version of Job Corps focused on community college has the potential to substantially improve outcomes for some Job Corps–eligible youth.⁹¹ That evaluation also suggested that such a college-focused program model could attract students who would not otherwise be interested in Job Corps—filling more slots. To build on this promising finding, the College and Career Academy model could be refined by being replicated in more centers to test its impacts in a larger set of centers and lengthening follow-up to allow estimation of impact on post-college earnings. Additionally, an implementation study of strong partnership practices with colleges across the Job Corps network could strengthen the network’s understanding of how to partner with colleges. Finally, depending on the findings of the ongoing implementation study of the Job Corps Scholars program, DOL might want to conduct an impact study of the Job Corps Scholars model.

Job Corps is unique among youth programs in the structure and support it can provide its target population of youth ages 16 to 24 who have faced and continue to face substantial financial and structural barriers. It covers the cost of students’ education, training, and living expenses (by providing room and board), as well as providing them with many support services aimed at substantially reducing the challenges that often prevent young people, after they leave school, from acquiring the skills they need to thrive in their local economies. This report shows how Job Corps can use research and evaluation both to understand the strengths and weaknesses of the current program and to strategically refine its program model to yield substantial and sustained earnings impacts for more youth. It posits that strong program refinements will not be based on one study but will emerge from an extended iterative effort of continuous improvement.

⁹¹Klerman et al. (2021).

References

- Alterman, Emma, and Louisa Treskon. 2022. *Responding to Young People: An Analysis of Programs Serving Young People Not Connected to School or Work*. New York: MDRC.
- Al-Ubaydli, Omar, John A. List, and Dana Suskind. 2019. "The Science of Using Science: Towards an Understanding of the Threats to Scaling Experiments." Working Paper No. w25848. Cambridge, MA: National Bureau of Economic Research.
- Angrist, J. D. 1998. "Estimating the Labor Market Impact of Voluntary Military Service Using Social Security Data on Military Applicants." *Econometrica* 66 (2): 249–288.
- Ashtiani, Mariam, and Cynthia Feliciano. 2012. "Low-Income Young Adults Continue to Face Barriers to College Entry and Degree Completion." *UC/ACCORD Research Brief* 1: 1–7.
- Autor, David. 2010. "The Polarization of Job Opportunities in the US Labor Market: Implications for Employment and Earnings." *Center for American Progress and The Hamilton Project* 6: 11–19.
- Bampasidou, Maria, Carlos A. Flores, Alfonso Flores-Lagunes, and Daniel J. Parisian. 2014. "The Role of Degree Attainment in the Differential Impact of Job Corps on Adolescents and Young Adults." In *Factors Affecting Worker Well-Being, Vol. 40*, 113–156. Bingley, United Kingdom: Emerald Group Publishing Limited.
- Barnow, Burt S., Xu Qin, Jonah Deutsch, and Guanglei Hong. 2021. "Unpacking Complex Mediation Mechanisms and Their Heterogeneity Between Sites in a Job Corps Evaluation." *Journal of Policy Analysis and Management* 40 (1): 158–190.
- Berk, Jillian, Linda Rosenberg, Lindsay Cattell, Johanna Laco, Lindsay Fox, Myley Dang, and Elizabeth Brown. 2018. *The External Review of Job Corps: An Evidence Scan Report*. Princeton, NJ: Mathematica Policy Research.
- Blanco, German, Carlos A. Flores, and Alfonso Flores-Lagunes. 2013. "Bounds on the Quantile Treatment Effects of Job Corps on Wages." *Journal of Human Resources* 48 (3): 659–701.
- Bloom, D., S. K. Thompson, and R. Ivry. 2010. *Building a Learning Agenda Around Disconnected Youth*. New York: MDRC.
- Brown, Christian, and P. Wesley Rounton. 2016. "Military Service and the Civilian Labor Force: Time- and Income-Based Evidence." *Armed Forces & Society* 42 (3): 562–584.
- Burghardt, John, Peter Schochet, Sheena McConnell, Terry Johnson, R. Mark Gritz, Steven Glazerman, John Homrighausen, and Russell Jackson. *Does Job Corps Work? Summary of the National Job Corps Study*. 2001. Washington, DC: U.S. Department of Labor, Chief Evaluation Office.
- Card, David. 1999. "The Causal Effect of Education on Earnings." In *Handbook of Labor Economics, Vol. 3*, 1801–1863.
- Chen, Xuan, and Carlos A. Flores. 2015. "Bounds on Treatment Effects in the Presence of Sample Selection and Noncompliance: The Wage Effects of Job Corps." *Journal of Business & Economic Statistics* 33 (4): 523–540.
- Chen, Xuan, Carlos A. Flores, and Alfonso Flores-Lagunes. 2018. "Going Beyond LATE: Bounding Average Treatment Effects of Job Corps Training." *Journal of Human Resources* 53 (4): 1050–1099.
- Collins, Benjamin. 2022. *The Workforce Innovation and Opportunity Act and the One-Stop Delivery System*. R44252. Washington, DC: Congressional Research Service.
<https://crsreports.congress.gov>

- Dorado, Joyce S., Miriam Martinez, Laura E. McArthur, and Tailia Leibovitz. 2016. "Healthy Environments and Response to Trauma in Schools (HEARTS): A Whole-School, Multi-Level, Prevention and Intervention Program for Creating Trauma-Informed, Safe and Supportive Schools." *School Mental Health: A Multidisciplinary Research and Practice Journal* 8 (1): 163–176.
- Edgerton, Adam K. 2022, August 22. *Job Corps: A Primer*. R47208. Washington, DC: Congressional Research Service. <https://crsreports.congress.gov>
- Epstein, Diana, and Jacob A. Klerman. 2012. "When Is a Program Ready for Rigorous Impact Evaluation? The Role of a Falsifiable Logic Model." *Evaluation Review* 36 (5): 375–401.
- Epstein, Zachary, Porsha Cropper, Asaph Glosser, David Robinson, Lily Rosenthal, Riley Webster, and Valerie Benson. 2018. *The Use of Technology-Based Learning for Basic Skills in Job Corps*. Rockville, MD: Abt Associates.
- Eren, Ozkan, and Serkan Ozbeklik. 2014. "Who Benefits from Job Corps? A Distributional Analysis of an Active Labor Market Program." *Journal of Applied Econometrics* 29 (4): 586–611.
- Fein, D., and S. Dastrup. 2022. *Benefits that Last: Long-Term Impact and Cost-Benefit Findings for Year Up*. Rockville, MD: Abt Associates.
- Fixsen, Dean L., Sandra F. Naoom, Karen A. Blase, Robert M. Friedman, and Frances Wallace. 2005. *Implementation Research: A Synthesis of the Literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, National Implementation Research Network.
- Flores, Carlos A., Alfonso Flores-Lagunes, Arturo Gonzalez, and Todd C. Neumann. 2012. "Estimating the Effects of Length of Exposure to Instruction in a Training Program: The Case of Job Corps." *The Review of Economics and Statistics* 94 (1): 153–171. https://doi.org/10.1162/REST_a_00177
- Flores-Lagunes, Alfonso, Arturo Gonzalez, and Todd Neumann. 2010. "Learning but Not Earning? The Impact of Job Corps Training on Hispanic Youth." *Economic Inquiry* 48 (3): 651–667.
- Forrest, Stacey, Robert Gervais, Kayla A. Lord, Anne Sposato, Lia Martin, Kari Beserra, and Joseph Spinazzola. 2018. "Building Communities of Care: A Comprehensive Model for Trauma-Informed Youth Capacity Building and Behavior Management in Residential Services." *Residential Treatment for Children and Youth* 35 (4): 265–285.
- Goodson, Barbara D., Rachel McCormick, Eleanor Harvill, Maureen Sarna, and Kyla Brown. 2024. *Federal Efforts Towards Investing in Innovation in Education Through the i3 Fund: A Summary of Grantmaking and Evidence-Building*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance.
- Grants Policy Office. 2023, September 28. *Non-Regulatory Guidance: Using Evidence to Strengthen Education Investments*. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development. <https://www2.ed.gov/fund/grant/about/discretionary/2023-non-regulatory-guidance-evidence.pdf>
- Grossman, J. B., and M. J. Bulle. 2006. "Review of What Youth Programs Do to Increase the Connectedness of Youth with Adults." *Journal of Adolescent Health* 39: 788–799.
- Grossman, Jean, Keith Olejniczak, and Jacob A. Klerman. 2021. *Working Together: A First Look at Lessons from the Cascades College and Career Academy and Other Job Corps Partnerships with Community and Technical Colleges. An Implementation Brief from the Cascades Job Corps College and Career Academy Pilot Evaluation*. Washington, DC: U.S. Department of Labor, Chief Evaluation Office.

- Grossman, Jean B., and Ximena A. Portilla. 2022. *District-Level Strategies to Improve Students' Sense of Belonging in School: Solutions for Educational Equity Through Social and Emotional Well-Being*. New York: MDRC.
- Grossman, Jean B., Betsy Tessler, Keith Olejniczak, and Francesca Ciaramella. 2024. *Nonresidential College-Focused Job Corps: An Implementation and Outcome Study of Idaho Job Corps and Job Corps Scholars*. New York: MDRC.
- Hahn, A., T. D. Leavitt, E. M. Horvat, and J. E. Davis. 2004. *Life After YouthBuild: 900 YouthBuild Graduates Reflect on Their Lives, Dreams, and Experiences*. Somerville, MA: Brandeis University.
- Hock, Heinrich, Dara Lee Luca, Tim Kautz, and David Stapleton. 2023. "Improving the Outcomes of Youth with Medical Limitations: Evidence from the National Job Corps Study." *Journal of Economics & Management Strategy* 32 (3): 636–656.
- Interagency Working Group on Youth Programs. 2013. *Implementing a Trauma-Informed Approach for Youth Across Service Sectors*. Washington, DC: FindYouthInfo.gov. [https://youth.gov/docs/Trauma Informed Approach 508.pdf](https://youth.gov/docs/Trauma%20Informed%20Approach%20508.pdf)
- Kanengiser, Henry, and Kelsey Schaberg. 2022. *Employment and Earnings Effects of the WorkAdvance Demonstration After Seven Years*. New York: MDRC.
- Katz, Lawrence F., Jonathan Roth, Richard Hendra, and Kelsey Schaberg. 2020. "Why Do Sectoral Employment Programs Work? Lessons from WorkAdvance." *Journal of Labor Economics* 40 (S1): S249–S291.
- Kemple, James J. 2008. *Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood*. New York: MDRC.
- Kirsch, Michael P., Morgan S. Barnes, Jacob Benus, Terry Johnson, Mary K. Dugan, and Jim Cooper. 2014. *U.S. Department of Labor: Job Process Study Final Report*. Washington, DC: U.S. Department of Labor.
- Klerman, Jacob A., Jean Grossman, Correne Saunders, Keith Olejniczak, Jane Herr, Affiong Ibok, and Tanya de Sousa. 2021. *Evaluation of the Cascades Job Corps College and Career Academy (CCCA) Pilot: Final Report*. Rockville, MD: Abt Associates.
- Klerman, Nightingale, Clarkwest, and Epstein. 2022. *Options for Building Evidence on RESEA Programs*. Rockville, MD: Abt Associates.
- Lee, David S. 2009. "Training, Wages, and Sample Selection: Estimate Sharp Bounds on Treatment Effects." *Review of Economic Studies* 76 (3): 1071–1102.
- Liu, Albert Y., Clayton Perry, Robbie Skinner, and Scott Cody. 2020. *Estimating Job Corps Cost per Enrollee and Cost per Graduate*. Arlington, VA: Insight Policy Research.
- Lobo, Roanna, Mark Petrich, and Sharyn K. Burns. 2014. "Supporting Health Promotion Practitioners to Undertake Evaluation for Program Development." *BMC Public Health* 14 (1): 1–8.
- Loprest, Pamela, Shayne Spaulding, and Demetra Smith Nightingale. 2019. "Disconnected Young Adults: Increasing Engagement and Opportunity." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 5 (5): 221–243.
- Maynard, Brandy R., Anne Farina, Nathaniel A. Dell, and Michael S. Kelly. 2019. "Effects of Trauma-Informed Approaches in Schools: A Systematic Review." *Campbell Systematic Reviews* 15: 1–2.
- Mendelson, Tamar, Kristin Mmari, Robert W. Blum, Richard F. Catalano, and Claire D. Brindis. 2018. "Opportunity Youth: Insights and Opportunities for a Public Health Approach to Reengage Disconnected Teenagers and Young Adults." *Public Health Reports* 133 (1_suppl): 54S–64S.

- Millenky, Megan, Louisa Treskon, Lily Freedman, and Caroline Mage. 2019. *Focusing on Girls' Futures: Results from the Evaluation of PACE Center for Girls*. New York: MDRC.
- Office of Job Corps. 2024. *Policy and Requirements Handbook*. Washington, DC: U.S. Department of Labor.
- Olejniczak, Keith, Jean Grossman, Affiong Ibok, Jacob A. Klerman, and Correne Saunders. 2021. *Evaluation of the Cascades Job Corps College and Career Academy (CCCA) Pilot: Detailed Report of the Implementation Analysis*. Cambridge, MA: Abt Associates.
- Pew Research Center. 2016, October. *The State of American Jobs: How the Shifting Economic Landscape Is Reshaping Work and Society and Affecting the Way People Think About the Skills and Training They Need to Get Ahead*. Washington, DC: Pew Research Center.
- Portilla, Ximena A. 2022. *Healing School Systems: Solutions for Educational Equity Through Social and Emotional Well-Being*. New York: MDRC.
- Qin, Xu, Guanglei Hong, Jonah Deutsch, and Edward Bein. 2019. "Multisite Causal Mediation Analysis in the Presence of Complex Sample and Survey Designs and Non-Random Nonresponse." *Journal of the Royal Statistical Society* 182 (4): 1343–1370.
- RAND. 2017. *10 Proven Steps to Better Programs (and Outcomes Funders Expect)*. Santa Monica, CA: RAND Corporation.
https://www.rand.org/content/dam/rand/pubs/corporate_pubs/CP700/CP793-1/RAND_CP793-1.pdf
- Ryan, Daniel, and Terry Johnson. 2001. *National Job Corps Study: Assessing Program Effects on Earnings for Students Achieving Key Program Milestones*. Seattle, WA: Battelle Memorial Institute; Princeton, NJ: Mathematica Policy Research; and Houston, TX: Decision Information Resources.
- Schochet, Peter Z. 2018. *National Job Corps Study: 20-Year Follow-Up Study Using Tax Data*. Washington, DC: U.S. Department of Labor.
- Schochet, Peter Z. 2021. "Long-Run Labor Market Effects of the Job Corps Program: Evidence from a Nationally Representative Experiment." *Journal of Policy Analysis and Management* 40 (1): 128–157.
- Schochet, Peter Z., and John Burghardt. 2008. "Do Job Corps Performance Measures Track Program Impacts?" *Journal of Policy Analysis and Management: The Journal of the Association for Public Policy Analysis and Management* 27 (3): 556–576.
- Schochet, Peter Z., John Burghardt, and Steven Glazerman. 2001. *National Job Corps Study: The Impacts of Job Corps on Participants' Employment and Related Outcomes [and] Methodological Appendixes on the Impact Analysis*. Princeton, NJ: Mathematica Policy Research.
- Schochet, Peter Z., John Burghardt, and Sheena McConnell. 2006. *National Job Corps Study and Longer-term Follow-up Study: Impact and Benefit-cost Findings Using Survey and Summary Earnings Records Data*. Washington, DC: Employment and Training Administration, U.S. Department of Labor.
- Schochet, Peter Z., John Burghardt, and Sheena McConnell. 2008. "Does Job Corps Work? Impact Findings from the National Job Corps Study." *American Economic Review* 98 (5): 1864–1886.
- Schochet, Peter Z., and Jane Fortson. 2014. "When Do Regression-Adjusted Performance Measures Track Longer-Term Program Impacts? A Case Study for Job Corps." *Journal of Policy Analysis and Management* 33 (2): 495–525.

- Strittmatter, Anthony. 2019. "Heterogeneous Earnings Effects of the Job Corps by Gender: A Translated Quantile Approach." *Labour Economics* 61: 101760.
- Sutcliffe, Sophia, and Barbara Condliffe. n.d. "Part 1: An Introduction to the Role of Mapping in Social Service Innovation." Center for Applied Behavioral Science at MDRC. <https://cabs.mdrc.org/our-approach/cabs-approach/diagnose/part-1-introduction-role-mapping-social-service-innovation>
- Thomas, Mary S., Shantel Crosby, and Judi Vanderhaar. 2019. "Trauma-Informed Practices in Schools Across Two Decades: An Interdisciplinary Review of Research." *Review of Research in Education* 43 (2): 422–452.
- Thornicroft, Graham, Heidi Lempp, and Michele Tansella. 2011. "The Place of Implementation Science in the Translational Medicine Continuum." *Psychological Medicine* 41 (10): 2015–2021.
- Unterman, Rebecca, and Zeest Haider. 2019. *New York City's Small Schools of Choice*. New York: MDRC.
- U.S. Department of Labor, Employment and Training Administration, Office of Grants Management. 2019. *Funding Opportunity Announcement, FOA-ETA-20-03*. Washington DC: U.S. Department of Labor.
- U.S. Department of Labor, Office of Procurement Services. 2019. *Contract Solicitation 1605DC-19-R-00039*. Washington DC: U.S. Department of Labor.
- Weiss, M. J., A. Ratledge, C. Sommo, and H. Gupta. 2019. "Supporting Community College Students from Start to Degree Completion: Long-Term Evidence from a Randomized Trial of CUNY's ASAP." *American Economic Journal: Applied Economics* 11 (3): 253–297.