Evaluation of the Cascades Job Corps College and Career Academy (CCCA) Pilot

Final Report

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About This Report

The **CCCA Pilot Evaluation** conducted qualitative and quantitative studies of the **Cascades Jobs Corps College and Career Academy** (CCCA) pilot operating from 2017 to 2019. Findings from the evaluation are reported in four parts:

- Final Report

- Detailed Report of the Implementation Analysis

- Technical Appendix

- An Implementation Brief (*Working Together: A First Look at Lessons from the Cascades College and Career Academy and Other Job Corps Partnerships with Community and Technical Colleges*)

This is the Final Report, prepared for the U.S. Department of Labor (DOL)'s Chief Evaluation Office and Employment and Training Administration by Abt Associates and MDRC under Contract Number DOL-OPS-16-U-00069. The views expressed are those of the authors and should not be attributed to DOL, nor does mention of trade names, commercial products, or organizations imply endorsement of same by the U.S. Government.

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Table of Abbreviations

CCCA	Cascades College and Career Academy
CIS	Center Information System
CTS	Career Transition System
CTT	career and technical training
DOL	U.S. Department of Labor
FTE	full-time-equivalent
GED	General Educational Development test
IT	information technology
NCTA	Northwest Career & Technical Academy
NDNH	National Directory of New Hires
NOJC	National Office of Job Corps
NSC	National Student Clearinghouse
OASIS	Outreach and Admissions Student Input System
OBS	on-board strength
PNW	Pacific Northwest (Idaho, Oregon, and Washington)
RQ	research questions
SVC	Skagit Valley College

Some Notes on Language in This Report

We refer to youth who applied to the CCCA pilot—whether or not they complete the application—as "applicants."

We refer to those youth who were accepted into the program and whom the evaluation randomly assigned to either the treatment or control group as "students" or "eligible applicants"—whether or not they actually participated in any way or received any services (e.g., some students randomized to treatment never came to the site).

Executive Summary

From February 2017 through June 2019, more than 500 students enrolled in the **Cascades Job Corps College and Career Academy (CCCA)**, a pilot program focused on enrolling Job Corps students in college to prepare for a career in healthcare or information technology. On May 11, 2016, DOL's Chief Evaluation Office, in partnership with the Employment and Training Administration, awarded a contract to Abt Associates and its partner, MDRC, to conduct the **CCCA Pilot Evaluation**.

This is the Executive Summary for the Final Report of that evaluation. It proceeds in three sections. Section ES.1 describes the pilot vision and the pilot contract. Section ES.2 summarizes the findings of the evaluation. Finally, Section ES.3 considers some discussion.

ES.1 About the CCCA Pilot

To develop an innovative program model that incorporates promising practices that could increase earnings for younger Job Corps students, the National Office of Job Corps (NOJC) developed a concept for an innovative pilot incorporating promising practices that

> *aims to provide career pathways programming as defined in [the Workforce Innovation and Opportunity Act of 2014] to include expanded and intensive academic instruction, career pathways technical training, and non-cognitive skills training in two industry sectors, Healthcare and Information Technology. It will test innovative approaches designed to assist at-risk youth to complete rigorous academic and technical training programs, qualify for employment opportunities in in-demand occupations that pay a living wage and provide opportunities for advancement, enroll in and successfully complete postsecondary education, and develop workforce and independent living skills needed for self-sufficiency.* [1]

To understand the potential of this model with younger students, in September 2015 DOL issued a request for proposals to competitively select an operator of the new program for Job Corps. In June 2016, DOL awarded the contract to develop, implement, and operate CCCA to Adams and Associates, Inc., an organization that runs 12 other Job Corps centers across the country.

Known as the Cascades College and Career Academy, the new pilot program was to operate at the former Job Corps center in Sedro-Woolley, Washington. To summarize, that pilot intended to provide several years of career pathways programs in two industries—healthcare and information technology—that connected academic, career training, and social skills training with industry-recognized credentials, a secure job, and/or advances into community college and employment.

ES.2 The Evaluation's Findings

The CCCA evaluation addressed four research questions.

1. *How was the CCCA model implemented?*

2. *How do students flow through and experience the CCCA model?*

3. *How did receipt of training and services for eligible applicants offered CCCA differ from what their experiences would have been in the absence of CCCA?*

4. *How did outcomes differ for eligible applicants offered CCCA differ from what their experiences would have been in the absence of CCCA?*

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[1] *Source:* Cascades Job Corps College and Career Academy request for proposals (#DOL-ETA-16-R-00010).

To address these research questions the evaluation conducted the following activities: qualitative field research, a Baseline Information Form, and an 18-months follow-up survey. In addition, the evaluation drew on existing administrative data from the National Office of Job Corps, the National Student Clearinghouse, and the National Directory of New Hires. With the exception of the survey, all data cover the entire Pilot sample (enrolled between March 2017 to June 2019). Analysis focuses on the survey sample (enrolled between November 2017 to December 2018) who both experienced a relatively mature program and for whom there is longer follow-up.

The evaluation had an experimental design. Which eligible applicants were offered CCCA (the "treatment group") and which were not offered enrollment in CCCA (the "control group") was determined randomly—that is, by the functional equivalent of a coin toss. Random assignment only determined who was offered CCCA. Most of those offered CCCA (the "treatment" group) arrived at the Cascades Job Corps Center; a few arrived at some other Job Corps Center, some never arrived at any center. Those not offered CCCA (the "control group") were encouraged to enroll in some other Job Corps center. Some did; most did not.

The CCCA pilot was to be a proof of concept for a college-focused version of Job Corps. Like the conventional Job Corps model, the vision was for a residential program that took care of students' basic needs—food, housing, healthcare, clothing—allowing them to focus on their education and training. Entry was to be limited to those most likely to enroll in college courses while in Job Corps—defined as having achieved at least an eighth-grade equivalent in math and reading skills prior to enrollment. As needed, students were to complete high school while in the pilot, either a diploma or a GED—primarily at the CCCA site ("on center"). Most other instruction was to occur at a partner community college.

- **National Office of Job Corps and operator Adams and Associates succeeded in implementing most of the program vision.**

Restarting a closed Job Corps center is hard. Restarting a closed center with a new and untried program model is much harder. Working together, the NOJC and Adams succeeded in that task. As with any attempt to implement a new program model, there were challenges. NOJC and Adams worked through the challenges, revising and refining the model to align with emerging experience. Over the pilot's three-year term, the program matured. By the end, most—but not all—of the components were in place.

Employment-related services and transition services were not developed until later in the pilot and remained underdeveloped even at the end of the pilot. The pilot delayed staffing and developing these components because it did not anticipate students leaving the center until later in the program. As a result, pilot students received less robust employment-related services and transition services than student at other centers and the issues were particularly acute for students who left during the earlier phases of the pilot . In particular, the pilot did not prioritize the development of long-term work-based learning opportunities, such as internships, and student interest in participating in these services was low. Unlike conventional Job Corps students, who participated in these services as a standard part of the program, pilot students only received these services on a case-by-case basis.

- **The pilot revealed substantial demand for a college-focused Job Corps model.**

The pilot vision assumes that a sizable number of students are eligible for Job Corps, interested in a college-focused program, and meet the test score requirements. During the pilot's period of operation, about a fifth of PNW applicants met those criteria. That the pilot could recruit students strongly suggests that there is an interested population.

- **Much of the demand for a college-focused Job Corps model is from students who would not otherwise be interested in Job Corps.**

A college-focused program would not simply attract applicants who would otherwise have enrolled in Job Corps centers not focused on college. Instead, a college-focused program "expands the market"; that is, a

college-focused program attracts students who would otherwise not be interested in Job Corps. About a quarter of those who arrived at CCCA would otherwise not have arrived at Job Corps at all. Furthermore, consistent with its college-focus, the pilot allowed students to stay longer than in conventional Job Crops, up to three years. Furthermore, students were expected to say longer in order to earning credentials (perhaps from college). Students at CCCA did stay longer in Job Corps. In net, the estimates suggest that offering a college-focused Job Corps program to everyone interested would increase total on-board strength (i.e., students in Job Corps centers) by about 19 percent.

- **Recruited Job Corps students can succeed in college—with crucial caveats.**

CCCA concluded formal agreements with Skagit Valley College and—over time—seems to have developed a constructive and mutually beneficial working relationship. After some time on center, students shifted—at least partially—to instruction at the community college. That transition, however, did not go as smoothly or as soon after their arrival at CCCA as had been implicit in the vision.

The vision was not explicit on these issues, but the implicit assumption appears to have been that almost any student admitted to CCCA could proceed to and perform successfully in community college—after only a short orientation period on center and with only moderate levels of support while in college. Staff interviews suggest that—at least for some CCCA students—that assumption was too optimistic. Most community college students are old enough to have completed high school (age 18 or older); have the personal discipline to complete conventional high school (as evidenced by a high school diploma); and given their higher educational attainment, are likely to have higher literacy and numeracy skills than at least those CCCA students without a high school diploma. In contrast, CCCA students were as young as age 16 (and many were age 17 and younger at application), most had not completed high school, and the minimum math and reading assessment for admission was set below 8th grade—about equivalent to a typical late sixth grader's achievement level.[2]

This disjunction between community college students and at least some of the CCCA population should inform our expectations about the success of the CCCA program. Specifically, given this disjunction, that some students found community college challenging should not be surprising. College and center staff reported that many students lacked maturity and had academic challenges to succeeding in college. The center responded in two complementary ways. First, the center lengthened the on-center component of the program and instituted a set of checkpoints to be satisfied before students could proceed to college. Second, the center substantially increased support for college students, both at the college campus and back on center.

Further, the Impact Analysis suggests there are identifiable applicants who will tend to stay longer in the center and in college. Given the previous description of the typical community college student, the characteristics of applicants who tend to do better are not surprising: they are older, have a high school credential at application, and achieved higher test scores. Slightly more surprisingly, these are also the characteristics of eligible applicants with larger impacts—that is, who stay longer in the center and in college than they would if they had not been offered the pilot. A plausible interpretation of these findings is that the younger and less academically prepared eligible applicants were also less likely to derive any benefit from a college-focused program.

- **The offer of CCCA increased total time in education and training (the study's single, pre-specified, confirmatory outcome).**

The study's 18-month survey collected information on months in any form of education or training. Analyses of these data imply that the offer of CCCA substantially increased total months in education and training: from 6.6 months in the control group to 9.5 months in the treatment group. This increase of 2.8 months is a relative increase of nearly half (43%).

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[2] Actual average test scores of CCCA students approximated a grade level equivalent of grade 8.5.

In part offsetting, the control group had more employment. In net, the offer of CCCA does not shift months of connection—that is, either education and training or employment: about 13 of the 18 months in both groups.

The offer of CCCA also increased overall (not college-specific) receipt of credentials or certificates (a pre-specified secondary outcome): from 41 percent in the control group to 52 percent in the treatment group. This increase of 11 percentage points is a relative increase of more than a quarter (26%).

- **The offer of CCCA increased time in college, but—through 27 months—there was no detectable impact on attainment of college degrees or other credentials.**

The National Student Clearinghouse provides high-quality data on college enrollment and credentials. Through 27 months after random assignment, the evaluation found moderate impacts of the offer of CCCA on full-time-equivalent months of college—about a month and a half and more than two months in some subgroups. Compared to other non–Job Corps programs that provide community college for disadvantaged youth, this is a moderate to large impact. Alone, it is probably not large enough to generate detectable long-term earnings impacts.

Through 27 months after random assignment, the evaluation found no evidence of impact of the offer of CCCA on degrees or other college credentials. In the absence of COVID-19, 27 months of follow-up might have been enough to expect to see impacts on at least non-degree college credentials. Given COVID-19, when (if ever) to expect impacts of the offer of CCCA on degrees or other college credentials is unclear.

- **Short-term impacts of the offer of CCA on earnings are strongly negative, as expected in early follow-up.**

The National Directory of New Hires provides high-quality data on employment and earnings. Through 18 months after random assignment, the impact of the offer of CCCA is strongly *negative*. This is as expected. More time in Job Corps is less time working. We would not expect to see positive impacts of Job Corps on employment or earnings until after most eligible applicants have left CCCA and after any post–Job Corps time in community college is also completed. Even in the absence of COVID-19, that is probably at least three years after application.

ES.3 Discussion

This evaluation of the CCCA pilot found that the basic vision in DOL's solicitation showed promise in implementing a college-focused Job Corps model. There exists a moderately-sized eligible population that could and would enroll in a college-focused Job Corps program. CCCA demonstrated that a residential program with academic and non-academic supports can substantially increase time in college. More time in college would plausibly lead to higher earnings (Becker 1990; Stevens, Kurlaender, and Grosz 2019; Roder and Elliot 2021; Flores et al. 2012).

This evaluation should be viewed as a proof of concept. Implementation was imperfect and then COVID-19 arrived, interrupting students' momentum in the program, pausing certain academic and non-academic supports, and requiring students to leave campus. . Longer follow-up (beyond the time when students might be expected to obtain academic and occupational credentials and then become employed in their field) and likely larger samples are needed to detect impacts on earnings. Finally, a multi-center study would enable the exploration of how impacts vary with demographic groups and specific occupations.

1. Introduction

From February 2017 through June 2019, more than 500 students enrolled in the **Cascades Job Corps College and Career Academy (CCCA)**, a pilot program focused on enrolling Job Corps students in college to prepare for a career in healthcare or information technology (IT). This is the *Final Report* of an evaluation of that pilot.

This opening chapter proceeds as follows. Section 1.1 places the pilot in context. Section 1.2 describes the pilot. Section 1.3 provides an overview of the evaluation. Finally, Section 1.4 describes the structure of the balance of this report.

1.1. *Context for the CCCA Pilot*

Established in 1964 as part of the Great Society initiatives and currently authorized by the Workforce Innovation and Opportunity Act of 2014 (WIOA), Job Corps offers free education and vocational training for disadvantaged, low-income youth ages 16 to 24. Job Corps focuses on youth who have left school but want additional preparation for their desired career. The program has approximately 120 locations throughout the continental United States and Puerto Rico and, at the time the pilot was launched, had an annual enrollment of about 50,000.[3]

The conventional Job Corps model provides integrated academic, career, technical, and support services to youth—almost all on site and provided by Job Corps staff. Such services include career planning, on-the-job training, job placement, residential housing, food service, driver's education, health and dental care, a bi-weekly basic living allowance, and a clothing allowance.

A seminal random assignment evaluation of Job Corps, conducted between 1994 and 2003 (Schochet Burghardt, and McConnell 2008), found that Job Corps had statistically significant and favorable impacts on earnings for older youth (ages 22 to 24 at application). Impacts were smaller for younger youth (ages 16 to 19 at application; Schochet, Burghardt, and McConnell 2006, 2008). These findings held at a 20-year follow-up (Schochet 2018, 2021).

DOL sought to understand whether a different approach to career training designed for younger youth could improve impacts for them. That search led DOL to develop and fund the CCCA pilot.[4]

1.2. *About the CCCA Pilot*

To develop an innovative program model that incorporates promising practices that could increase earnings for younger eligible applicants (ages 16 to 21), the National Office of Job Corps (NOJC) developed a concept for an innovative pilot incorporating promising practices that

> *aims to provide career pathways programming as defined in [the Workforce Innovation and Opportunity Act of 2014] to include expanded and intensive academic instruction, career pathways technical training, and non-cognitive skills training in two industry sectors, Healthcare and Information Technology. It will test innovative approaches designed to assist at-risk youth to complete rigorous academic and technical training programs, qualify for employment opportunities in in-demand occupations that pay a living wage and provide*

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[3] Source: U.S. Department of Labor. *FY 2018 Congressional Budget Justification, Employment and Training Administration, Job Corps,* p. JC-10 (https://www.dol.gov/sites/dolgov/files/general/budget/2018/CBJ-2018-V1-04.pdf). Current enrollment in Job Corps dropped after the pilot due to enrollment restrictions related to the COVID-19 pandemic (see the *FY 22 Budget Justification* (https://www.dol.gov/sites/dolgov/files/general/budget/2022/CBJ-2022-V1-04.pdf).

[4] The discussion here and in the next sub-section is based on the Cascades Job Corps College and Career Academy request for proposals (#DOL-ETA-16-R-00010) and related amendments and attachments accessible at https://www.fbo.gov, as well as the successful proposal in response to that solicitation (Adams and Associates 2015, 2016).

opportunities for advancement, enroll in and successfully complete postsecondary education, and develop workforce and independent living skills needed for self-sufficiency. [5]

To understand the potential of this model with younger students, in September 2015 DOL issued a request for proposals to competitively select an operator of the new program for Job Corps. Known as the Cascades College and Career Academy, the new pilot program was to operate as a proof of concept at the Job Corps center in Sedro-Woolley, Washington. The pilot recruited from the entire Pacific Northwest (hereafter, PNW): Washington, Oregon, and Idaho. Students could stay longer than in conventional Job Club, up to three years, and were expected to stay several years—long enough to earn a college credential.

To summarize, that pilot intended to provide career pathways programs in two industries—healthcare and information technology—that connected academic, career training, and social skills training with industry-recognized credentials, a secure job, and/or advances into community college and employment.

1.2.1 CCCA Pilot Implementation Chronology

In June 2016, DOL awarded the contract to develop, implement, and operate CCCA to Adams and Associates, Inc., an organization that, at the time, ran 12 other Job Corps centers across the country. According to its contract, Adams was to

provide training to ensure students attain relevant skills with job market value; industry-recognized academic, technical, secondary, and postsecondary credentials; employment within in-demand occupations leading to self-sufficiency and opportunities for advancement; and/or enrollment in postsecondary education, including registered apprenticeships, leading to long-term attachment to the labor force.

The pilot had a delayed start. Adams had anticipated opening CCCA to students as early as November 2016. However, issues with the physical plant, construction delays, and logistical challenges delayed the arrival of the first students at CCCA until May 16, 2017. Students continued arriving on site and being enrolled in the pilot through June 30, 2019—when DOL ended enrollment in the pilot. Thereafter, the Cascades Job Corps center enrolled the full age range of Job Corps students (i.e., ages 16 to 24). Furthermore, those enrolling after June 30, 2019, received not the pilot but, instead, a more conventional Job Corps program model (see Exhibit 2-1 and more detail in Chapter 2). Pilot students who were still enrolled after June 2019 were to continue receiving pilot services. However, non-pilot students were also at the center, diluting the college atmosphere.

1.3. *About the CCCA Pilot Evaluation*

On May 11, 2016, DOL's Chief Evaluation Office awarded a contract to Abt Associates and its partner, MDRC, to conduct the **CCCA Pilot Evaluation**. Exhibit 1-1 graphically displays the timing of the activities discussed in this section (random assignment, three cohorts, and data collection) as well as for the pilot more broadly.

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[5] The quote is from the Cascades Job Corps College and Career Academy request for proposals (#DOL-ETA-16-R-00010).

Exhibit 1-1   Timeline for CCCA Pilot and Evaluation
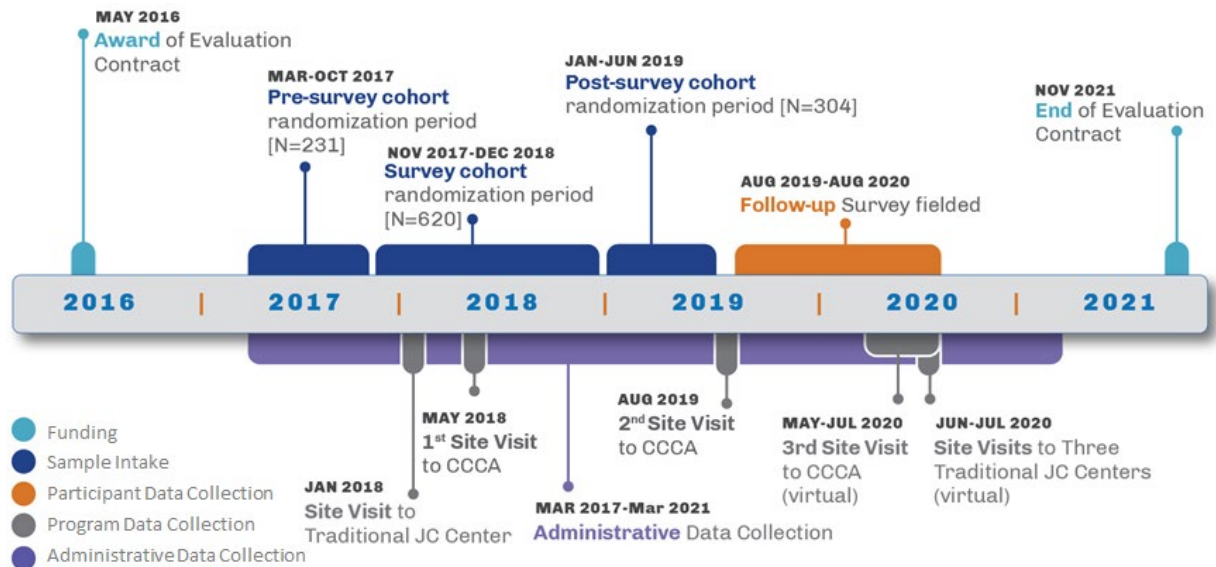
SOURCE: Authors' own illustration.
NOTES: "Survey cohort" are randomly assigned individuals included in the frame for the evaluation's follow-up survey. Those randomly assigned before this period are referred to as the "Pre-Survey Cohort"; those randomly assigned after this period are referred to as the "Post-Survey Cohort."

The evaluation—and in particular, the conceptualization of the research—is motivated by the conceptual model depicted in Exhibit 1-2. Its top panel describes experiences of those Job Corps applicants who were offered a slot to attend CCCA. The bottom panel represents the experiences of otherwise similar applicants not offered a slot in CCCA, but encouraged to enroll in other Job Corps centers.[6]

Exhibit 1-2   Simplified Conceptual Model for the CCCA Evaluation
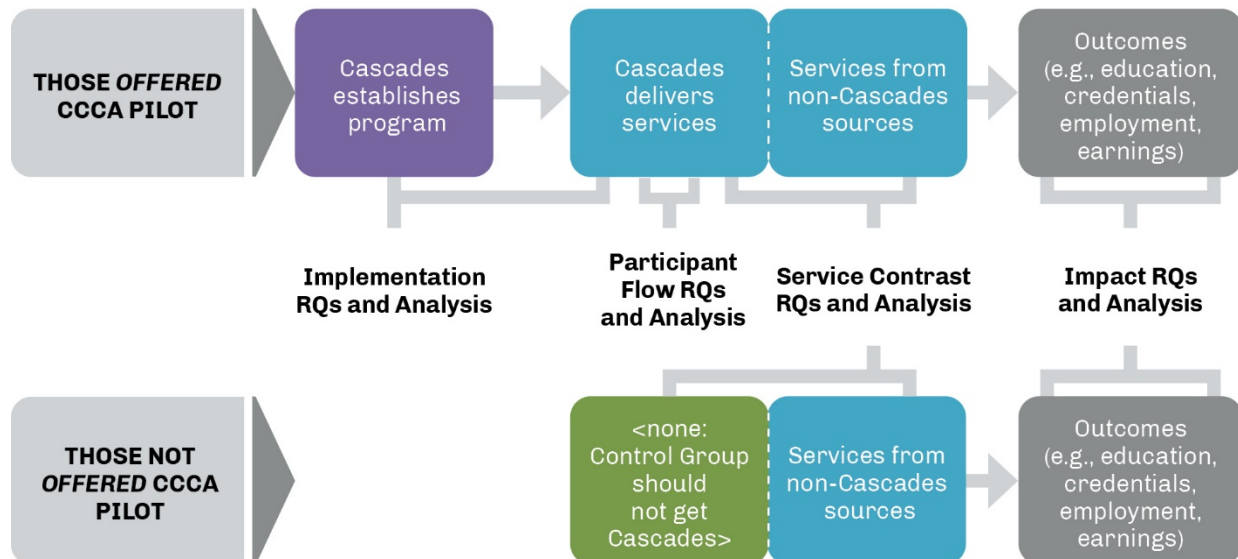
SOURCE: Authors' own illustration based on early qualitative field work.

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[6]   In practice, slightly more than half did; see Section 4.1.

NOTES: RQ=research question. For those eligible applicants offered the CCCA pilot, "Services from non-Cascades sources" refers to alternate services that they could opt to receive that are *not* part of the Cascades pilot program. That is, some members of that group could ultimately decide not to enroll in Cascades and instead might access services elsewhere; that box represents those potential choices.

Which applicants were offered CCCA (the "treatment group") and which not offered CCCA (the "control group") was determined randomly—that is, by the functional equivalent of a coin toss.[7] Crucially, random assignment only determined who was offered CCCA. Most of those offered CCCA (the "treatment" group) arrived at the Cascades Job Corps Center; a few arrived at some other Job Corps Center, some never arrived at any center. Those not offered CCCA (the "control group") were encouraged to enroll in some other Job Corps center. Some did; most did not.

This **experimental research design**, where random assignment determines which applicants may access the program (the "treatment" group) and some may not (the "control" group), ensures there are no systematic pre–random assignment differences between the groups. Thus, any post–random assignment differences in sample member outcomes can reasonably be attributed to the CCCA pilot program or to chance. Statistical methods can then be used to bound the likely effect of chance. As a result, differences in average outcomes between the treatment group and the control group are a strong estimate of the impact of the offer of CCCA.

1.3.1 Four Research Questions and Corresponding Analyses

From this conceptual model came the research questions the evaluation set out to answer and the analyses it conducted to get those answers. In Exhibit 1-2, the box "Cascades establishes program" represents the CCCA pilot program that Adams established and delivered. Thus, the evaluation's first two research questions (RQs) are:

1. *How was the CCCA model implemented?*

   Eligible applicants offered enrollment in CCCA could receive the program's services (e.g., education, training, and supportive services, including those provided by CCCA's partners). The evaluation's **Implementation Analysis** describes how CCCA delivered these services, noting (when feasible and appropriate) differences between CCCA and other Job Corps centers, and discusses perceived challenges encountered in operating the CCCA pilot program.

2. *How do students flow through and experience the CCCA model?*

   The **Participant Flow Analysis** documents the flow of students arriving at the Cascades center through the CCCA program, with comparisons (where feasible) to other Job Corps centers, and students' experiences there.

   Experience with similar programs suggests that many eligible applicants to CCCA would have sought out and received training and other services—sometimes from other Job Corps centers, sometimes from outside Job Corps—if CCCA had not been available (Schochet, Burghardt, and McConnell. 2006).[8] In addition, even among eligible applicants who enrolled at CCCA, some might receive educational and career services not through CCCA after leaving. Finally, some

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[7]   In practice, random assignment was implemented in the Participant Data System (PDS), a web-based application that intake staff used to enter student baseline information. The evaluation team used the PROC PLAN procedure in SAS to build a randomized list of assignment slots, blocked by gender (men, women) and track (Healthcare and IT) to ensure that enrollment did not exceed the capacity of the program's beds or slots. As soon as student information was entered into the PDS, staff clicked a button to complete random assignment, and the PDS selected the next assignment slot (either treatment or control). Results of the random assignment process were available immediately. See Herr et al. (2021) for more on randomization procedures.

[8]   For example, an earlier Job Corps study found that 71.7% of the control group enrolled in some form of education or training in the four years after random assignment.

eligible applicants assigned to CCCA but who never arrive might obtain non-CCCA services elsewhere. Thus, the evaluation's third research question is:

3. ***How did receipt of training and services for eligible applicants offered CCCA differ from what their experiences would have been in the absence of CCCA?***

   The differences in the services (e.g., time in Job Corps, months in college) that the treatment group and control group experience are called the "service contrast." The **Service Contrast Analysis** estimates the receipt of training and services by eligible applicants offered CCCA (the treatment group) relative to what their outcomes would have been if they had not been offered CCCA (represented by the control group).

   Finally, the conceptual model hypothesizes that should the pilot program be effective, in the short term CCCA eligible applicants offered CCCA would earn more degrees and other credentials than they would have if not offered CCCA. In turn, those credentials would lead—perhaps past the follow-up period for this study—to higher earnings and better outcomes on broader measures of well-being. Thus, the fourth research question is:

4. ***How did outcomes differ for eligible applicants offered CCCA differ from what their experiences would have been in the absence of CCCA ?***

   The experimental **Impact Analysis** examines the short-term outcomes (education, credentials) as well as early results on longer-term outcomes (earnings, broader measures of well-being) for eligible applicants offered CCCA (treatment group) relative to what their outcomes would have been if they had not been offered CCCA (represented by the control group). As discussed in Chapter 4, the evaluation's primary focus is on months of education and training, as measured in the 18-month follow-up survey—the study's single confirmatory outcome.

1.3.2   Data Sources

The evaluation uses four types of data: qualitative fieldwork, Job Corps and CCCA-specific administrative, evaluation-specific surveys, and non–Job Corps administrative data on all CCCA eligible applicants. See Appendix B for additional technical detail on data sources.

Qualitative Field Work
For its Implementation Analysis, the evaluation primarily draws on qualitative data collection, including phone calls and site visits, completed between January 2018 and May-July 2020 at CCCA and at four similar Job Corps centers.

- *Pilot implementation visits.* The evaluation team conducted three visits to the Cascades center. Research activities for the two visits conducted in May 2018 and August 2019 included interviews with key center staff and partners, observations of classes and other service delivery components, and focus groups with pilot students. A third COVID-era visit, conducted remotely in May-July 2020, included interviews with key center staff and partners, as well as focus groups with pilot students.

- *Conventional Job Corps center visits.* To understand how the pilot might have differed from services and operations at other Job Corps centers that implemented some similar program components (e.g., community college partnerships), the evaluation team visited four conventional Job Corps centers. Three of the centers were selected from a small number of centers recommended by Job Corps regional staff as having strong college partnerships. None were selected because they were attended by study participants in the control group. The in-person visit to the Treasure Island Center in January 2018 included a tour of the center and an interview with the center director. The visits to the Clearfield, Guthrie, and Pittsburgh centers in June and July 2020, after the onset of COVID-19, were conducted remotely and included interviews with key center staff and partners, as well as focus groups with students at those centers.

All-Center Job Corps and CCCA-Specific Administrative Data

The evaluation uses data from several data systems maintained by the NOJC's Job Corps Data Center and several data systems specific to CCCA:

- **National Job Corps Management Information System** maintained by the NOJC for all Job Corps applicants includes information from the application, time in Job Corps, and activities while in Job Corps. Specifically, OASIS

  To understand how eligible applicants offered CCCA and their experiences differ from those at other Job Corps centers, the evaluation used these data to compare eligible applicants to: (1) Other CCCA-eligible eligible applicants; (2) Other Job Corps students from the Pacific Northwest (Idaho, Oregon, and Washington); and (3) All other Job Corps students.

- **CCCA Management Information System** maintained by the Cascades center to tabulate details of activities of students at CCCA that are not recorded in the national Job Corps data.

Evaluation-Specific Surveys

The evaluation conducted two surveys:

- **Baseline Information Form.** Prior to being randomly assigned, all eligible applicants completed the Baseline Information Form, which recorded demographic and other information as of application (e.g., gender, age, education, employment history, educational attainment, and views about themselves and their goals). The evaluation team recorded responses to the Baseline Information Forms and conducted random assignment, in a Participant Data System. The study used these data to describe the members of the study sample, to generate the (survey) non-response weights, to improve the precision of the impact estimates, and to define subgroups.

- **18-month follow-up survey on the "Survey Cohort."** The evaluation fielded a follow-up survey for eligible applicants randomly assigned between November 1, 2017, and December 31, 2018 (the "Survey Cohort"). Eligible applicants arriving before this period (the "Pre-Survey Cohort") were not surveyed because of concern that the CCCA program was not yet sufficiently mature. Eligible applicants arriving after this period (the "Post-Survey Cohort") were not surveyed because there would be less than 18 months of follow-up.

  The 18-month survey asked the Survey Cohort—both treatment group and control group members—about topics including education, employment, and training. In total, 380 eligible applicants responded to the survey (a response rate of 62%; 68% in the treatment group and 57% in the control group).[9] Non-response weights are used to adjust for differential survey non-response (see Appendix D).

Non–Job Corps Administrative Data

For its Service Contrast Analysis and Impact Analysis, the evaluation also measured outcomes for members of the study sample in two national (non–Job Corps) administrative data sources as of about 27 months after random assignment.

- **National Student Clearinghouse (NSC)** provided information on enrollment and degrees for participating U.S. degree-granting educational institutions.

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[9] See Appendix C of the *Technical Appendix* (Herr et al, 2021), for more on the survey and its fielding. Most of the fielding occurred after the arrival of the COVID pandemic. The pandemic prevented in person locating and interviewing. That likely cut response rates and increased the treatment/control difference in response rates. Partially in response to these survey fielding issues, Chapter 4 focuses more than was originally planned on National Student Clearinghouse data.

- *National Directory of New Hires (NDNH)* provided information on employment and earnings for jobs covered by Unemployment Insurance, augmented with data from the federal payroll system.

Renaissance provided Star Math® and Star Reading® assessment data for eligible applicants who applied to Job Corps in the Pacific Northwest (PNW) region between February 2017 and June 2019 who were eligible for and interested in the CCCA pilot program, and took either or both the Star Math® and Star Reading® assessments.

The NSC and NDNH describe college enrollment and employment outcomes, respectively, across a follow-up period that includes (but often goes beyond) Job Corps enrollment. Furthermore, these data sources are available for all eligible applicants randomly assigned, including survey non-respondents and those in the Pre-Survey and Post-Survey Cohorts.

Exhibit 1-3   Research Questions and Data Sources Used for the CCCA Evaluation

Research Question	Data Sources
How was the CCCA model implemented?	• Pilot implementation visits (including student focus groups) and phone calls with pilot center staff • Conventional Job Corps center visits
How do students flow through and experience the CCCA model?	• National Job Corps Management Information System • CCCA Management Information System Renaissance Star Assessment data
What were receipt of training and services for eligible applicants offered CCCA relative to what their experiences would have been in the absence of CCCA?	• Baseline Information Form • 18-month follow-up survey on the "Survey Cohort" • National Student Clearinghouse
What were outcomes relative to what their experiences would have been in the absence of CCCA?	• Baseline Information Form • 18-month follow-up survey on the "Survey Cohort" • National Directory of New Hires • National Student Clearinghouse

1.4. *The Structure of This Report*

The balance of this report proceeds as follows. Chapter 2 presents a summary of key findings of the Implementation Analysis. Chapter 3 presents the results of the Participant Flow Analysis. Chapter 4 presents the results of the Service Contrast Analysis and the Impact Analysis. Chapter 5 provides discussion of the findings and their implications for program design and future research.

The evaluation's *Technical Appendix* (Herr et al. 2021) provides details of data and methods supporting the analyses, as well as additional results cited throughout the report. It also includes the 18-month follow-up survey instrument and information on survey field methods.

2. Findings of the Implementation Analysis

The Implementation Analysis addresses the evaluation's RQ1: *How was the CCCA model implemented?* Full details and findings of the Implementation Analysis are provided in the CCCA Pilot Evaluation's *Report of the Implementation Analysis* (Olejniczak et al. 2021).

The analysis uses two types of data to describe the CCCA model, both as designed and as implemented: (1) qualitative field work (in-person and remote visits to the Cascades center and four other centers) and (2) quantitative data from all-center Job Corps and CCCA-specific administrative systems.

The main limitation of this implementation analysis is that the CCCA model was fielded at only one center, Cascades. Thus, the analysis often cannot disentangle what implementational achievements and challenges were unique to the Cascades center versus issues that would be universal to any center implementing this version of Job Corps. However, when an issue does seem to be linked to a site-specific challenge (such as the need to do far more extensive construction than expected before opening), this is noted.

The chapter begins by providing a brief overview of the Cascades pilot (Section 2.1). The following sections further describe key pilot components and elements *as implemented*: recruitment and enrollment practices (Section 2.2), the Cascades center culture (Section 2.3), and education and training services (Section 2.4). When applicable, each section provides information about the *initial vision* for the pilot component or element, including how the pilot differed from a conventional Job Corps program.

> **Key Findings: Implementation Analysis**
>
> - Limiting the pilot to two career pathways led to challenges with recruitment and to serving students with broader interests or who became uninterested in the limited options.
>
> - Many students were not ready for college despite having passed an academic assessment as part of the program eligibility requirements. Students did not have the necessary life skills nor were they prepared for the expectations of college. Students required academic and non-academic support before and during college.
>
> - The pilot's academic assessment requirement for program entry was likely a barrier for certain applicant populations either who failed to meet the requirement or who may have decided not to apply because of the requirement.
>
> - Tuition at the partner college was expensive. To fund tuition, the pilot relied on and benefited from funding by outside sources. However, having multiple funding sources and different eligibility for each source led to program management complications. Moreover, the outside sources imposed additional requirements on students, such as maintaining minimum credit enrollment that potentially caused them added stress.

2.1. Cascades Pilot Design

The conventional Job Corps program provides general education classes (usually leading to a General Educational Development/GED test or other high school equivalency exam, sometimes to a high school diploma); career and technical training (CTT); and career readiness, life skills, and stabilizing and supportive services (such as physical and mental health services) in a structured residential setting for up to two years. After completing the conventional program, many centers allow students to apply to continue participating in Job Corps for a third year to earn advanced credentials through the Job Corps Advanced Training (AT) program or College Education Program.[10]

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[10] The Advanced Training program and the College Education Program (formerly known as Advanced Career Training) offer a small percentage of Job Corps students the opportunity to complete an advanced CTT program or to enroll in a higher education institution to earn credits towards a college degree. A limited number of centers also offer the Other Training Program, which allows a very limited number of Job Corps students to enroll in college instead of a conventional CTT program. For more information about how Job Corps partners with colleges, see Grossman, Olejniczak, and Klerman (2021).

Exhibit 2-1   Comparison of Cascades Pilot Services and Conventional Job Corps Services

	CASCADES PILOT	CONVENTIONAL JOB CORPS
Participants	• Ages 16-21 • Sixth-grade competence in math and reading • Interested in college	• Ages 16-24
Enrollment	• Cohort enrollment	• Open enrollment
Orientation	• Orientation (two-week, group)[a]	• Individualized Career Preparation Period services[b]
Secondary Education	• General Educational Development Test (GED) • High school diploma (combination of in-person and online instruction, with credits also earned at college or partner)[c] • Basic and remedial education	• GED • High school diploma (typically online instruction) • Basic and remedial education
Career and Technical Training (CTT)	• Foundations[d] course • CTT (provided at Job Corps center, college, or partner) • Advanced CTT (provided at Job Corps center, college, or partner)	• CTT (typically provided at Job Corps center) • Advanced CTT (only offered through the AT program at a limited number of Job Corps centers)
College	• Courses towards transferable college degrees (provided at college)	• Offered to only a limited number of students through the College Education Program or other training program
Additional Academic Support Services	• College Readiness[e] • Supplemental college support • Evening Studies (Evening & Weekend Enrichment)[f]	• Evening Studies

Life Skills Activities	• Activities included as part of several program components:
	  • Orientation • Evening Studies
	  • Foundations • College Readiness
		• Career Success Standards as part of the Career Preparation Period services[g]
		• Evening Studies

Employment-Related Services	• Career Readiness • Work-based learning • Placement services	• Career Readiness • Work-based learning • Placement services
Support Services	• Residential • Counseling • Healthcare • Transportation assistance	• Residential • Counseling • Healthcare • Transportation assistance

[a] Orientation was an introduction to the pilot program that included assessments and life skills activities and incorporated some aspects of the conventional Job Corps Career Preparation Period services. Orientation was completed as part of a pathway-specific cohort.

[b] Career Preparation Period services are individualized conventional Job Corps services that introduce and prepare students for the program. Services include academic and soft skills assessments, counseling, career planning, and job readiness skills.

[c] The pilot dually enrolled students in need of a high school credential so that they could earn high school credits from college courses.

[d] Foundations was an industry-specific introductory CTT course that introduced students to the pathway and taught students skills such as study skills and financial literacy. Foundations incorporated some aspects of the conventional Job Corps Career Preparation Period services.

[e] College Readiness was a six-week, part-day module that assessed and prepared students for college.

[f] Evening Studies (Evening & Weekend Enrichment) provides additional life skills instruction and academic support. Evening Studies was not part of the conventional Job Corps program when the pilot was designed and launched but was incorporated during pilot implementation.

[g] There are eight Career Success Standards that students are evaluated on as part of Job Corps' Career Preparation Period: workplace relationships and ethics, interpersonal skills, personal growth, independent living, career and personal planning, communications, multicultural awareness, and information management. More detail on these can be found in the *Job Corps Policy and Requirements Handbook* (DOL/OJC 2016).

SOURCE: Authors' own illustration based on information collected from CCCA and from the *Job Corps Policy and Requirements Handbook* (DOL/OJC 2016).

The CCCA pilot, in contrast, was a three-year residential program for younger students (ages 16-21, rather than ages 16-24 in conventional Job Corps) that partnered with local colleges, service providers, and employers to implement a career pathways education and training approach leading to both early and advanced credential attainment in the healthcare or IT industry (see Section 2.2 for additional information regarding CCCA eligibility criteria). Exhibit 2-1 below summarizes the main service differences between the Cascades pilot and the conventional Job Corps model. (See Appendix A in the evaluation's *Technical Appendix* for more details about the vision for the Cascades pilot.)

The Cascades pilot began enrolling applicants in February 2017. In May 2017 students began arriving—in Job Corps terminology—"on center." The last students to enroll in CCCA and in the study arrived on center in June 2019.

As with any new program, the Cascades pilot encountered challenges during its start-up. Those challenges delayed its full operation. Adams needed to implement a newly designed program while operating out of a Job Corps center that had previously shut down and required a complete build-up, both physically and operationally.[11] In addition, changes to the physical plant, slow hiring, and ongoing refinement of the program model were resolved only after students arrived for training, and some challenges continued throughout the pilot.

> **Where is the Cascades Center?**
>
> The Cascades Job Corps Center is a 41-acre campus located about 70 miles north of Seattle in the foothills of the Cascade Mountain Range in Sedro-Woolley, Washington.

Thus, students experienced slightly different versions of the pilot depending on when they attended the program. In particular, pilot implementation can be characterized as having four phases:

Start-Up Phase (May 16, 2017–January 23, 2018). During the initial nine months of operation, the CCCA pilot experienced staffing challenges and several of the program components were underdeveloped. The pilot was still renovating classrooms, developing the IT pathway curriculum, staffing the IT pathway department, and working out the details of its partnerships with Skagit Valley College and other service providers. Adult Basic Education services, Evening & Weekend Enrichment services, career readiness services, and employment-related services such as work-based learning and placement services were also still under development. Outreach and recruitment were also a challenge, resulting in fewer students enrolled than expected. During this phase, on average, 54 students were in residence each month, or 18 percent of capacity.

Mature Phase (January 23, 2018–June 30, 2019). By the start of this phase, most of the key pilot services, components, and practices were operational; however, the pilot continued to refine the program. Some services, such as Evening & Weekend Enrichment, career readiness, and employment-related services such as work-based learning and placement services were still in development. A few of these services remained underdeveloped throughout later phases of the pilot. The average number of students on center each month was 186, or 62 percent of capacity.

Legacy Phase (July 1, 2019–March 20, 2020). In July 2019—about 24 months after the first Cascades pilot student arrived on center—NOJC directed the Cascades Job Corps center to stop enrolling students into the pilot. Instead, the Cascades Center began enrolling students for conventional Job Corps services, including an expanded set of CTT options, and using the standard Job Corps eligibility criteria. At the same time, students who had already enrolled in the pilot and arrived on center before July 2019 continued to receive pilot services. For pilot students, the center sought to maintain fidelity to services previously offered (such as Foundations, College Readiness, and college). However, the early-termination news, combined with conventional Job Corps students sharing the center, meant that the pilot center culture changed. The average number of pilot students on center each month during this phase was similar

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[11] Although Adams operated other Job Corps centers, the Cascades pilot could not use existing systems, policies, and procedures developed by Adams because of proprietary concerns. Adams had to build these components anew for the pilot.

to the Mature Phase (180 students). In this phase, there were also non-pilot students on center, but they are not included in this count.

COVID Phase (March 21, 2020–December 2020). Nine months after pilot enrollment ended, NOJC instituted a seven-and-half-week break for all Job Corps students at all centers due to the COVID-19 pandemic.[12] Following this break, the pilot reengaged with its students and transitioned to remote learning for the next seven months. Residential and support services previously afforded to them were not provided. The pilot provided students with resources for remote learning (e.g., laptops and Wi-Fi hotspots), but staff reported that some students still had challenges engaging in pilot services. As a result, staff said some students "paused" their participation in the program and others resigned from Job Corps. Staff reported that in November 2020, some students began returning to the Cascades center even though college services remained remote. About 130 pilot students were considered enrolled in the pilot each month during this phase (just under 90% of the pilot students on center at the start of the pandemic). About 30 students still remained on pause as of December 31, 2020.

2.2. *Cascades Pilot Recruitment and Enrollment Practices*

In many ways, pilot recruitment and enrollment practices were similar to conventional Job Corps, but there were several essential differences. This section describes how the Cascades pilot recruited and enrolled students, the pilot eligibility criteria, and how applicants moved through the enrollment process and arrived on center. It ends with a discussion of enrollment challenges and modifications.

- **The pilot required applicants to be ages 16 to 21, be interested in attending college, and score at least slightly below the seventh-grade level on both math and reading academic assessments. This was a lower threshold than originally intended, but one that was a barrier for some applicants.**

The pilot included all standard Job Corps eligibility requirements[13]—except those regarding age because the pilot was to serve a younger population.[14]

Conventional Job Corps has no minimum academic assessment. In contrast, the initial pilot design called for applicants to demonstrate at least eighth-grade skills in both math and reading. However, though the pilot implemented the standard Renaissance Star Math® and Star Reading® academic assessments to determine eligibility, it did not set the minimum score requirement at the eighth-grade level. Rather, the threshold was set to the equivalent of how a typical student (based on a national norming study) would score towards the end of their sixth-grade year (grade equivalent 6.8 on Math and 6.9 on Reading). In fact, average scores among pilot applicants who met both the math and reading requirements were grade 8.7 for both.

Still, some applicants found the sixth-grade threshold to be a barrier. About a third (34%) of the applicants who attempted the assessment never met the sixth-grade requirement for both math and reading—some even after retaking the assessment multiple times. Among the applicants who did meet the criteria, staff estimated that about 30 to 40 percent had to retake the assessment more than once to do so.[15] Additionally, an unknown number of applicants likely declined to apply to Cascades because they did not want to take the assessment.

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[12] Job Corps made exceptions to allow some students for whom there were safety concerns to remain on center during this time.

[13] Conventional Job Corps has 13 standard eligibility criteria that consider the applicant's income, age, barriers, education and training needs, and disqualifying convictions. For additional detail on these criteria, see the *Job Corps Policy and Requirements Handbook* (DOL/OJC 2016).

[14] Applicants assigned to the treatment group also had to pass a Cascades pilot center health and wellness department review before being offered admission.

[15] Renaissance Star Assessment data indicate that Job Corps applicants who met the sixth-grade requirement for both math and reading did so, on average, after 1.2 attempts. Applicants were allowed to take the assessments as many times as they wished.

- **The pilot had slower than expected enrollment and never filled the Cascades center to capacity.**

NOJC's request for proposals and its second amendment assumed that the center could recruit enough students to fill cohorts of 20 IT and 20 Healthcare pathway students every month. Given the need to fill a similar-sized control group, this implied a need to recruit about 80 students per month. As was to be expected for a new program, initial recruiting was challenging. By about a year in, the center was recruiting more than 40 students a month in most months (recruiting is typically low in December of any year).

While below the original goal of 80, 40 students a month was enough to eventually fill both the control group and a center with 300 beds. Indeed, the center filled steadily. Along with some help from changes in the randomization fraction,[16] the center was nearly full, with 257 students, in April 2019 just before the pilot was ended in June 2019. With no new students recruiting into the pilot and ongoing attrition, thereafter the number of pilot students drifted down.

The IT cohorts were generally larger than the Healthcare cohorts, especially during the Start-Up Phase— an average of 11 students per IT cohort and 8 students per Healthcare cohort. This resulted in a slightly heavier representation of IT students on the campus (about 57% of center residents).

Among those randomly assigned to the treatment group, 86 percent arrived at Cascades.[17] Some treatment group members changed their minds or lost interest. Some enrolled at a different Job Corps center, and some did not show up to the Cascades pilot center despite having a scheduled arrival date; others chose to postpone their arrival date. The approximately two-month lag times between acceptance and students' scheduled arrival date as part of a cohort gave space for these types of drop-offs.

- **The CCCA pilot encountered challenges with marketing and advertising, which, according to staff, may have limited the pilot's ability to reach the target audience.**

Rather than develop branding, marketing, and advertising unique to CCCA and consistent with its college-focused model, NOJC initially required CCCA to use conventional Job Corps branding, including the common Job Corps center website and national social media campaigns. At least one pilot staff member suggested that these limitations—especially those regarding social media—hindered their ability to reach young adults who might not have considered Job Corps but would perhaps have been interested in the program offered by the pilot. Conversely, applicants to Job Corps who had not specifically applied to the pilot were less likely to be interested in its college aspect.

The pilot continually sought out new and additional methods and opportunities to reach a broader audience of eligible and interested applicants. CCCA eventually gained approval to use pilot-specific marketing and advertising materials, such as flyers and a billboard. This pilot-specific marketing included information such as the age criterion and the opportunity to earn college credits. Additionally, the pilot encouraged its community and college partners to identify and refer to the pilot their current, non-pilot students who might need additional support.

The pilot took two other steps to increase enrollment. In July 2017—about five months after the start of enrollment—NOJC expanded the catchment area from Washington State to also include Idaho and

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[16] Specifically, starting September 2017, the randomization fraction was set at 1:1; that is, for every applicant randomly assigned to the treatment group, another applicant was assigned to the control group. With the closing of the Survey Cohort (i.e., those randomly assigned through December 2018) and responding to concerns about low OBS, starting in January 2019, the randomization fraction was raised to 2:1; that is, for every 2 applicants randomly assigned to the treatment group, only one was assigned to the control group.

[17] See Exhibit 3-4. About another 2 percent arrived at a conventional Job Corps center for a total arrival rate of 87.2% among those who enrolled between November 2017 and December 2018. Comparatively, about 56 percent of applicants admitted to conventional Job Corps arrived at a Job Corps center during the same period.

Oregon. Later that year, the pilot also added a Pre-Nursing track to the Healthcare pathway in hopes that it would attract more applicants.

2.3. *Cascades Pilot Culture*

The Cascades pilot design called for a different kind of Job Corps center culture. Conventional Job Corps centers are very structured with standardized rules and policies. In contrast, the vision for the Cascades pilot was to implement a variety of alternative services, components, policies, principles, and procedures to create a less structured and more college-like atmosphere. This section describes the Cascades pilot culture, the implementation of aspects that shaped that culture, and challenges in achieving the pilot's goals in this area.

- **The pilot eligibility criteria and the selected career pathway industries yielded a student body that was more academically skilled and with college aspirations participating. However, staff suggested these factors also reduced the diversity and maturity of those students.**

Arriving students scored better than conventional Job Corps students on the assessment—on average about 8th grade level (see Section 3.1, Exhibit 3-2) and were interested in college. This was consistent with the pilot's college-focused model. However, at least one staff member reported that these selection criteria contributed to a lack of diversity among admitted students.[18] For example, at least one staff member suggested that English language learners and non-White applicants were disproportionately challenged in meeting the academic assessment cutoffs. About 69 percent of white non-Hispanic assessment takers passed both math and reading, compared to 57 percent of other non-Hispanic and 58 percent of Hispanic assessment takers.

The limited number and types of pathways also affected the pilot's applicant pool. For example, staff said IT and healthcare seemed to attract more students from urban rather than rural areas. Additionally, by design, the age criterion for the pilot meant a younger student population, which staff said led to a lack of older peer role models for the younger students and a lower maturity level overall.

- **Staff suggested that the pilot's college and career pathway focus may have attracted students who embraced longer-term goals.**

By design, the pilot's career pathways approach additionally shaped the culture by setting an implicit expectation that students would participate in the program for several years and obtain more advanced credentials and college credit. The pilot design encouraged students to actively participate in developing an Individual Learning Plan. During Individual Learning Plan sessions, the student and a team of staff discussed the student's academic and non-academic interests, short- and long-term goals, and strengths and weaknesses. The Individual Learning Plan sessions began during the student's first two weeks on center. Subsequent sessions convened every 60 days, with additional staff members joining as the student progressed through the pilot services. Individual Learning Plan sessions within the first eight weeks focused on helping the student choose an occupational track within their previously selected pathway—IT or Healthcare—and on identifying goals and next steps.

Most students enrolled in the pilot because they had a goal to attend college. Staff suggested that students stayed longer at Cascades than in conventional Job Corps programs not only because they could but also because the pilot instilled these higher expectations via the career pathways. More than one student suggested they would stay for three years, and more than one student also indicated their interest in continuing college after they completed the pilot.[19]

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18 See Section 3.1 for more detail on pilot student characteristics.
19 For further discussion on student length of stay in the pilot, see Section 3.2.

- **To encourage student engagement and build responsibility, the pilot adopted a human-centered-design approach.**

The pilot design included a directive to seek out and embrace student input and thereby to give students a voice in center decisions. The pilot sought to create a culture supporting open communication and encouraged students to help shape the center, including its activities, services, rules, policies, procedures, and aesthetics. For example, the pilot conducted student interviews and focus groups, had suggestion boxes, created student committees, and held town halls. Through these forums, students provided input on the dress code; asked for and received flexibility to establish residential dorm cleaning schedules; and provided feedback about the lack of nonscheduled time, which led to the addition of independent study periods.

- **The pilot took a restorative justice approach to behavior management that was less punitive than other Job Corp centers.**

The pilot's behavior management approach was designed and implemented to avoid a rigidly punitive culture. Conventional Job Corps centers are governed by many rules and must implement a zero-tolerance policy enforced by punishment or expulsion. For example, Job Corps prohibits violence, drugs, and alcohol; students found to have committed these Level I offenses are immediately dismissed from Job Corps.[20] The pilot design followed the zero-tolerance requirement but attempted to implement less restrictive and less rule-based policies while still retaining the necessary structure that guides and supports the students. The pilot did this by implementing a restorative justice approach to behavior management.[21]

First, pilot staff acknowledged and rewarded good behavior with both verbal and written affirmation as well as awards. Second, rather than immediate and automatic punishment, whenever possible the pilot used coaching and mediation as a first step. If the student did not remedy bad behavior after coaching, then staff recorded an additional infraction. After two minor infractions, the student appeared before a panel of their peers, who helped identify actions to remedy the issue and then supported the student as needed. Five minor infractions resulted in expulsion from the program—especially if there were public safety concerns. At least one staff member, however, questioned the effectiveness of the behavior management system. They accused other staff of misinterpreting human-centered design and giving students too much freedom. They also believed students were not being held accountable for behavior that could affect their employability.

2.4. *Cascades Pilot Services*

This section describes the pilot's principal education and training services, as well as other components. The section begins by summarizing how students generally progressed through the services, followed by a description of each service or component along with any related modifications, challenges, and improvements.

As illustrated in Exhibit 2-2, students arrived at the pilot center and first completed Orientation as part of a pathway-specific cohort and received a pathway-specific introduction to the Cascades pilot. The first week covered topics such as socio-emotional intelligence, team building, and relationship building. It also

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[20] The type of punishment students receive in a conventional Job Corps program depends on the severity of the infraction. Infractions that are deemed to be moderately severe (Level II)—such as cheating, vandalism, plagiarism, and bullying—may result in expulsion with the option of re-admission after one year. Less severe ("minor") infractions—such as using profanity, not performing assignments, and violating the dress code—can result in progressive interventions. If a student has more than four minor infractions in a two-month period, the level of the next incident is elevated and a Fact-Finding Board is convened. For additional detail, see the *Job Corps Policy and Requirements Handbook* (DOL/OJC 2016).

[21] Restorative justice is an alternative to a traditional punitive disciplinary approach. Restorative justice focuses on repairing relationships damaged due to behavior and includes a continuum of practices that ranges from formal (e.g., restorative conferencing) to informal responses (e.g., peer mediation) (Wachtel and McCold 2001; Morrison, Blood, and Thorsborne 2005).

included aspects of the conventional Job Corps' Career Success Standards activities.[22] The second week prepared students for education and training services.

Following Orientation, students completed a CTT Foundations course, and a mixture of College Readiness activities and secondary education classes. Depending on interest and pathway, the students then followed one of several education and skills training routes that usually included a combination of CTT courses and college courses. Students went to college much sooner than possible at a conventional Job Corps center. Some students participated in work-based learning activities, such as internships or job shadowing, towards the end of their time in the program. Some students also received Career Transition Readiness services such as job readiness activities and other services meant to help prepare them for post-program life.

After finishing the program and leaving the pilot center, some students received Career Transition Services, which included placement services and other follow-up support services. Students were eligible to receive pilot services for up to three years, but there was no formal expectation of how long students would stay.

Exhibit 2-2   **Pilot Service Flow**
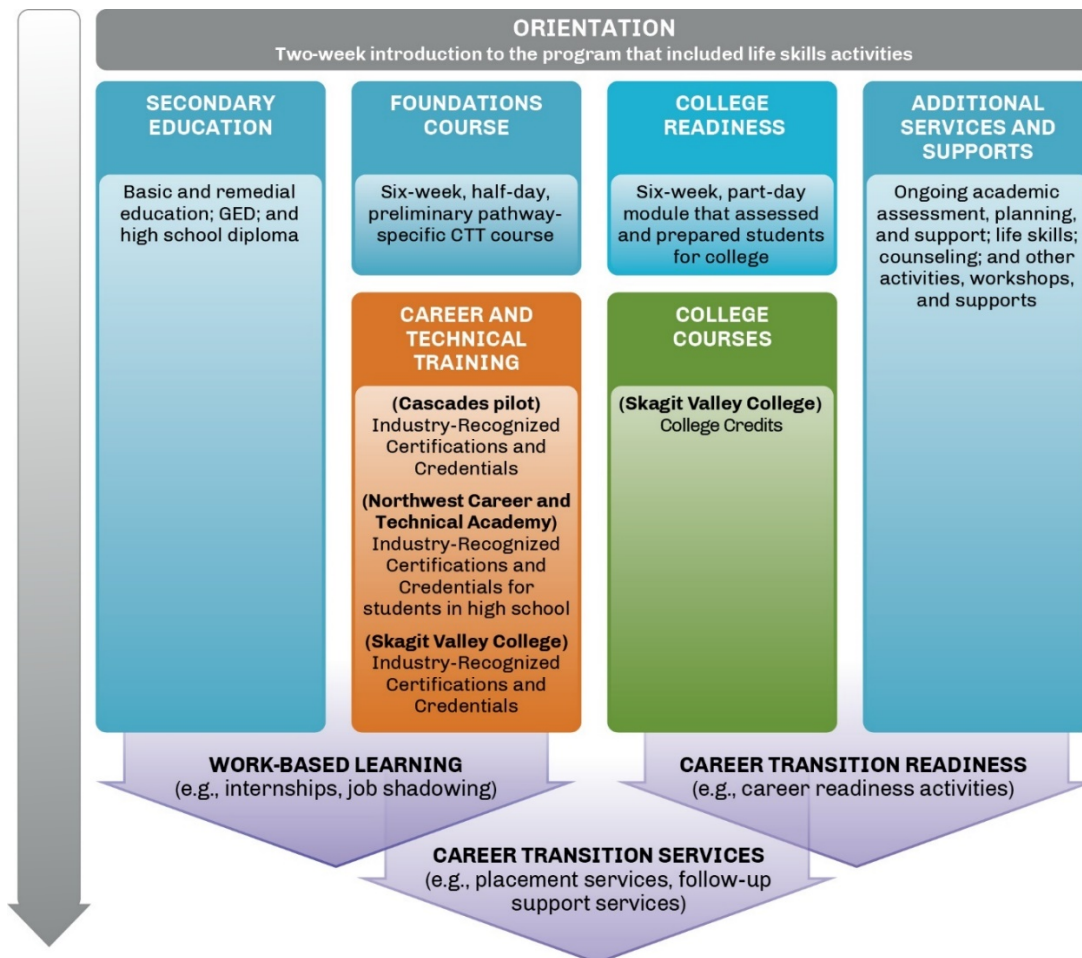
SOURCE: Authors' own illustration based on staff interviews and documents collected during pilot implementation visits at CCCA.

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[22]   Conventional Job Corps students create a plan and complete assessments and activities to meet eight Career Success Standards: workplace relationships and ethics, interpersonal skills, personal growth, independent living, career and personal planning, communications, multicultural awareness, and information management (DOL/OJC 2016).

- **Students—even those with a high school credential—often needed to increase their basic education skills to succeed in CTT and college.**

More than one staff member reported that even though all CCCA students satisfied the CCCA end-of-sixth-grade test score requirement, many were nevertheless not prepared for college. Staff suggested that in this, pilot students generally had similar academic barriers and challenges as typical Job Corps students. The pilot initially relied on Skagit Valley College (SVC)'s First Quarter Experience course to gauge a student's readiness for college.[23] However, these staff suggested that even if students passed this course, they did not necessarily perform well academically. In particular, at least one college staff member reported that lack of life skills affected student progress and caused behavioral issues in class.

More than one pilot staff member attributed some of the challenges that students faced at college to their young age. Staff suggested that many pilot students, especially those under age 18, lacked maturity. They therefore needed more guidance, more structure, and more college preparation courses than older students did. However, staff also reported that some students aged 18 and older had similar challenges at college. They said students were sometimes stressed and overwhelmed—perhaps because they were not fully aware of or prepared for the commitment that college requires. They also said, some students seemed to find it challenging to organize themselves, to follow instructions, and to turn assignments in on time.

In response to these challenges, in September 2018, the pilot designed and began implementing an on-center College Readiness module. College Readiness was a six-week, part-day module intended to assess and prepare students for college. Students completed writing assignments and teamwork activities; they learned about self-advocacy and growth mindset. In addition, students worked to build skills in time management, conflict resolution, and note-taking. Students also practiced completing the Free Application for Federal Student Aid (FAFSA), enrolling in college, and navigating the college's learning management platform.

Finally, as part of College Readiness, students took the required college placement exam on center. Based on the exam results, students who needed remedial education courses completed them at the pilot center rather than at the college. As necessary, staff worked with students to set goals to strengthen their academic and life skills. At the end of six weeks, the staff team designated each student as either (1) ready for college, (2) ready for college but with extra monitoring and support, or (3) in need of continued College Readiness activities to address deficiencies.

- **The pilot established education and training partnerships to offer students advanced credentials, including the opportunity to earn college credits.**

The pilot partnered SVC, a local community college; and with Northwest Career & Technical Academy (NCTA), a high school CTT program.[24, 25] The pilot also partnered with Microsoft to offer students the ability to earn Microsoft Office (Word, Excel, Outlook, etc.) certifications.

The partnership with NCTA had some logistical challenges. Early on, NCTA staff experienced communication challenges with pilot staff. These challenges were resolved, with the pilot eventually putting in place regular and effective communication strategies.

The main challenge, however, was the nature of the NCTA program. The NCTA program had only one program enrollment period per year, and there were only a limited number of slots for pilot students. This posed a challenge due to the pilot's rolling cohort admissions. The pilot attempted unsuccessfully to get

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[23] All SVC students had to complete a college orientation course called College and Career Success Skills (or First Quarter Experience) that taught, for example, study skills and allowed students to ask clarifying questions, get extra practice, or ask for additional help. https://www.mysvc.skagit.edu/cat_search3.asp?crs=305&cat=2020&highlight=

[24] NCTA requires that its students also be enrolled in high school.

[25] For more on partnerships between Job Corps centers and community colleges see Grossman, Olejniczak, and Klerman (2021).

NCTA to increase the number of slots and program cycles. Initially, some pilot students who enrolled in NCTA were not a good fit and did not finish its program, causing the pilot to lose valuable spots. To avoid this issue going forward, the pilot worked with NCTA staff to implement interview screening in Fall 2018 to better match students and program.

- **The pilot's reliance on outside funding sources led to program management complications and imposed additional requirements on students.**

The pilot provided access to NCTA and SVC education and training services using funding from the state of Washington's Open Doors Youth Reengagement program ("Open Doors"),[26] federal Pell grants, and the pilot's own operating funds. The pilot relied on Open Doors funding to pay for NCTA. To pay for students' college, the pilot first used Open Doors funding to cover approved courses that counted towards high school credit. As applicable, the pilot also required students to apply for and use any Pell grant funds. The pilot covered any remaining costs from its own operating budget.

These various funding sources had implications for the students, however. For example, if students did not qualify for Open Doors funding or Pell grants, the pilot was more likely to restrict the type or number of courses those students could take. Pell grants also required students to maintain a minimum number of credits per term—sometimes making students take more courses than was ideal. Finally, some students expected the pilot to pay for college and were reluctant to complete the Free Application for Federal Student Aid because they wanted to preserve their Pell grant eligibility.

- **The IT pathway offered supplemental certificate programs—such as Microsoft Office Specialist certifications—to increase the marketability of IT students.**

Pilot IT students pursued one of two occupational tracks: Game and Web Development or Network Technician.[27] IT pathway students worked to earn a variety of stackable certifications, including CompTIA Fundamentals, Microsoft Office certifications, Adobe certifications, and CompTIA Computer Information Systems certifications (A+, Network+, Security+, Linux+). Students also enrolled in general education courses at SVC that could go towards earning an Associate in Technical Arts degree.

If the student was pursuing a high school diploma, staff encouraged them to enroll in the NCTA Multimedia & Interactive Technology program instead because students still earned college credit for completing an NCTA course. For two reasons center staff preferred the NCTA option over the SVC option. First, NCTA was a high school program that offered a structured environment and in-person instruction. Second, relative to SVC staff, NCTA staff had more experience working with younger students.

- **The IT pathway confronted delays and challenges related to facilities, staffing, pathway design, and service provider partnerships—especially during the Start-Up Phase.**

During the Start-Up Phase, the pilot refined the design and structure of the IT pathway's occupational tracks. One issue the pilot remedied was the need for supplemental certifications to increase student employability. More than one staff member reported that though the Game Development portion of the Game and Web Development occupational track was very popular with pilot students, jobs in this field were highly competitive, opportunities were limited, and entry-level positions were extremely demanding yet low-paying. To make students pursuing this track more marketable, the pilot added Adobe, 3-D printing, and computer numerical control (CNC) machining certifications. To further enhance students' employability, at the beginning of 2018 (during the Mature Phase) the pilot partnered with Microsoft to

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[26] Open Doors provides postsecondary funding to high school students (ages 21 and younger) for approved college courses, along with case management and career services. https://www.k12.wa.us/student-success/support-programs/reengaging-reducing-dropouts/open-doors-youth-reengagement

[27] A third occupational track, Computer Support Technician, was eventually eliminated for lack of interest.

become a licensed Microsoft Office training provider. This partnership allowed the pilot to administer certification exams through which students could earn supplemental certifications.

During the Start-Up Phase, the pilot deepened its partnership with SVC. The SVC local campus did not initially have the necessary computer lab space (where students could practice taking apart and putting computers back together) or the ability to offer the IT certification exams. Because the pilot anticipated enrolling moderate numbers of IT students at SVC (as many as 60 students a term), the pilot staff encouraged the college to expand its IT program, which it eventually did. However, until SVC expanded its IT program,[28] pilot students had two options. First, they could participate in the classroom portion of the online courses as a group at the college campus with just an online instructor. Alternatively, they could participate at the Job Corps center, where in addition to the online instructor, pilot staff could provide immediate in-person assistance as needed. They would then complete the lab portion of the course at the Cascades center. Both pilot staff and students preferred students take in-person classes with in-person instructors, so ultimately SVC hired in-person instructors.

- **Like the IT pathway, the Healthcare pathway offered students the ability to complete a series of stackable credentials.**

Healthcare pathway students followed one of two occupational tracks: Pre-Nursing (Certified Medical Assistant and Certified Nursing Assistant) or Medical Administrative Specialist (Certified Billing and Coding Specialist).

Students in the Healthcare pathway began skills training at the Cascades center, earning CPR and other basic certifications during its healthcare Foundations course. Students then completed a 10-week Healthcare Core course to earn the Certified Medical Administrative Assistant (CMAA) credential. After CMAA, the occupational tracks split. Pre-Nursing students completed the Certified Medical Assistant course. Following that, some students also obtained the Certified Nursing Assistant (CNA) credential to increase their employment options. After earning their CMAA certification, students in the Medical Administrative Specialist track pursued the Certified Professional Coder and the Certified Professional Biller certifications. Except for the CNA credential offered through SVC, these were instructor-led group courses taught by pilot staff at Cascades. A few high school students had the opportunity to earn the CNA certification from NCTA instead. Some students also earned Microsoft Office certifications.

At the same time, or upon completing the skills training courses, pilot students enrolled at SVC to earn college credits. Like the IT pathway, there were modifications to the Healthcare pathway as it matured. For example, within the first six months, the pilot added the Pre-Nursing track. Additionally, in mid-2019, the Healthcare pathway shifted from independent, self-paced instruction to group instruction. Staff reported that this change improved student performance. The Pre-Nursing track prepared students for a nursing degree, but all Healthcare students had the opportunity to enroll in the college.

- **The Healthcare pathway's close resemblance to the conventional Job Corps program previously offered at the Cascades center may have made implementation of the pilot less challenging.**

The Healthcare pathway did not face as many challenges as the IT pathway. Staff suggested that this in part may have been because the Cascades center had offered a Healthcare pathway before the pilot and most of the pilot's CTT healthcare courses closely resembled what conventional Job Corps centers offered. Additionally, because the former Cascades center had provided a healthcare program, the healthcare classrooms and facilities required only minor upgrades or renovations. Finally, in contrast to the IT pathway, which struggled with hiring delays and staff turnover, the Healthcare pathway staffing was in place early and remained relatively stable.

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[28] By Fall 2019—more than two years after the start of the pilot—about half of the IT courses that pilot students took at SVC were available in-person; the rest continued to be available online only.

- **Staff suggested that access to college grades and frequent communication with students and college staff were important for identifying challenges and offering support.**

Students had access to tutoring and support at the pilot center as well as at SVC, where some students could access its Integrated Basic Education and Skills Training (I-BEST) program.[29] Nevertheless, students did not always seek out or take advantage of these supports and resources. To monitor students' progress and help identify when they might need additional academic support, pilot staff typically received each student's interim grade and final grade from the college. Whenever possible, the pilot used its access to the college's learning management platform to obtain more frequent interim progress reports. However, many instructors made little use of the system, often not recording missed homework, not flagging performance, and not even recording mid-term exam grades. As a result, the system provided little early warning as to which students were experiencing challenges. By the time students asked for help from Job Corps staff, it was often too late.

By mid-2018, the pilot began implementing a more proactive approach. This approach encouraged students to ask for help and to advocate for themselves to get needed support. The pilot also increased the frequency of Individual Learning Plan sessions from quarterly (that is, every 90 days) to every 60 days. If a student had challenges or needed additional support, the Individual Learning Plan staff team worked with the student to develop an action plan such as the student going over their notes after lectures. In addition to the action plan, staff continued to meet with the student weekly until they resolved the issue. Student mentors also supported students in fulfilling their action plans. Finally, pilot staff established stronger relationships and informal lines of communication with the college instructors so that they could check up on students directly with instructors long before critical exams.

- **Work-based learning was neither well developed nor common.**

Work-based learning had a different place in the pilot than in conventional Job Corps. In conventional Job Corps programs, students are typically expected to complete formal work-based learning activities such as internships, apprenticeships, or on-the-job training as a standard part of the program. In contrast, long-term work-based learning opportunities for pilot students were limited, and they received these services only on a case-by-case basis.

More than one pilot staff member gave several reasons for this lack of long-term work-based learning. First, pilot students were reluctant to participate in work-based learning that required longer-term commitments because it would have conflicted with their college schedules or required them to shift focus from their schoolwork. Second, the pilot did require students to participate in work-based learning. Finally, during the first year, staff focused on developing other aspects of the pilot program such as Foundations. Work-based learning opportunities take time to develop and staff did not begin to do so in earnest until the pilot's second year.

In total, staff reported that few pilot students participated in a formal internship. However, Healthcare students were required to complete clinical hours as part of some certifications, and the pilot prioritized helping them. Pilot staff also provided informal work-based learning services to all students, which were generally more accessible to students and easier for staff to execute than were the formal options.

- **Employment-related services and transition services were underdeveloped.**

Staff reported that conventional Job Corps students receive Career Transition Readiness services during their final 90 days in the program in preparation to leave Job Corps. Then for a year after leaving Job Corps, they are eligible to receive Career Transition Services (e.g., help with housing, money management, job search, and job placement). Finally, departing students qualify for a transition payment

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[29] I-BEST integrates basic education courses with skills training. https://www.skagit.edu/academics/areas-of-study/basic-education-for-adults/college-career-bridge/

based on their level of program completion (i.e., Training Achievement Record completion[30]); the more credentials they earn, the more they receive.

In contrast, Career Transition Readiness and Career Transition Services were underdeveloped at CCCA. The pilot delayed staffing the Career Transition Readiness services. When it eventually hired the staff, they had to develop and implement these services, but with little specialized training. As a result, pilot students received limited services—especially if they left during the earlier phases of the pilot. The pilot also delayed prioritizing the development of Career Transition Services because it did not anticipate students leaving the center until later in the program.

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[30] Training Achievement Record is Job Corps' system of tracking student progress towards the completion of program benchmarks. Job Corps students who earn a high school credential only receive $200, students who complete CTT only receive $500, and students who both earn a high school credential and complete CTT receive $1,000.

3. Findings of the Participant Flow Analysis

The previous chapter provided a narrative description of the program. Complementing that discussion, this chapter uses administrative data to provide a quantitative description of the program. Specifically, this chapter's Participant Flow Analysis addresses the evaluation's RQ2: **How do eligible applicants eligible applicants offered CCCA flow through and experience the CCCA model?** Although some treatment/control comparisons are reported, for reasons discussed below, those comparisons do not estimate impact. All impact estimates are deferred until the next chapter.

Specifically, this chapter presents two classes of analysis. First, Section 3.1 describes those arriving at CCCA and compares them to those arriving at other PNW and non-PNW centers. This section also describes actual arrival rates at a center. As noted in Chapter 1, the control group, while denied the chance to enroll in CCCA, was encouraged to enroll in other Job Corps centers. These results give the prevalence of such enrollment in other Job Corps centers. Together these results provide also crucial context for interpreting the impact results presented in the next chapter.

> **Key Findings: Participant Flow Analysis**
>
> CCCA students:
>
> - Had much higher academic achievement than other Pacific Northwest (PNW) students, but many scored below the original minimum eighth-grade level in reading and math.
> - Stayed longer and received more education than other PNW students, differences due not appear to be due to different students.
> - Did not differ substantially from other students in their pattern of disciplinary separation.
> - Were more likely to get a GED, but less likely to get a high school diploma.
> - Were much more likely to enroll in college and to stay longer in college.

Second, Sections 3.2, 3.3, and 3.4 present descriptive analyses of length of stay in Job Corps, disciplinary actions, and enrollment in education through Job Corps respectively. These outcomes are not defined for those who never arrive at a Job Corps center. As a result, formal impact analyses building on the experimental design are not possible. Instead, these sections present simple comparisons. These comparisons should not be interpreted as estimating causal impact.

All comparisons discussed in the text are statistically significant (see Appendix Exhibit G.1-3). Appendix D in the *Technical Appendix* presents additional detail on methods—in particular, who is included in the analysis and the comparisons made. The appendix also presents tabulations supporting the claims in this chapter.

3.1. Student Characteristics

This section compares CCCA students (that is those who arrived at the Cascades center) to several other groups of students (that is those who ever enrolled at some other center). Box 3-1 defines those other groupings, which are motivated by the discussion in this section. Consistent with the program design, CCCA enrolled a different type of student.. This section describes how those students did (or did not) differ. Appendix Exhibit G.1-1 provides more detail.

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Box 3-1: Grouping Students for the Participant Flow Analysis

This chapter's analysis compares four groups of students, all of whom were ages 16 to 21 at application and who participated in Job Corps at some center:

CCCA students: Those who applied to Cascades, listed a Pacific Northwest (PNW) home state (defined as Idaho, Oregon, or Washington State), were randomly assigned to the treatment group, and actually arrived at CCCA.

CCCA-eligible students: Those who applied to Cascades, listed a PNW home state, were randomly assigned to the control group, and participated in Job Corps at some other center. Consistent with the study design and the service embargo, none of these students arrived at CCCA.

Other PNW students: Those who never applied to Cascades but listed a PNW home state when they applied for Job Corps and participated in Job Corps at some non-CCCA center.

Non-PNW students: Those who never applied to Cascades, did not list a PNW home state when they applied for Job Corps and participated in Job Corps at some non-CCCA center.

</div>

As shown in Exhibit 3-1, compared to 16- to 21-year-old students in the non–Pacific Northwest (PNW) Job Corps population, a much larger percentage of Other-PNW students were White (66% versus 23%) and a much smaller percentage were Black (6% versus 50%). Percentages of Other Races and Hispanics were similar.

Exhibit 3-1   Racial Distribution for Students who Arrived at Job Corps
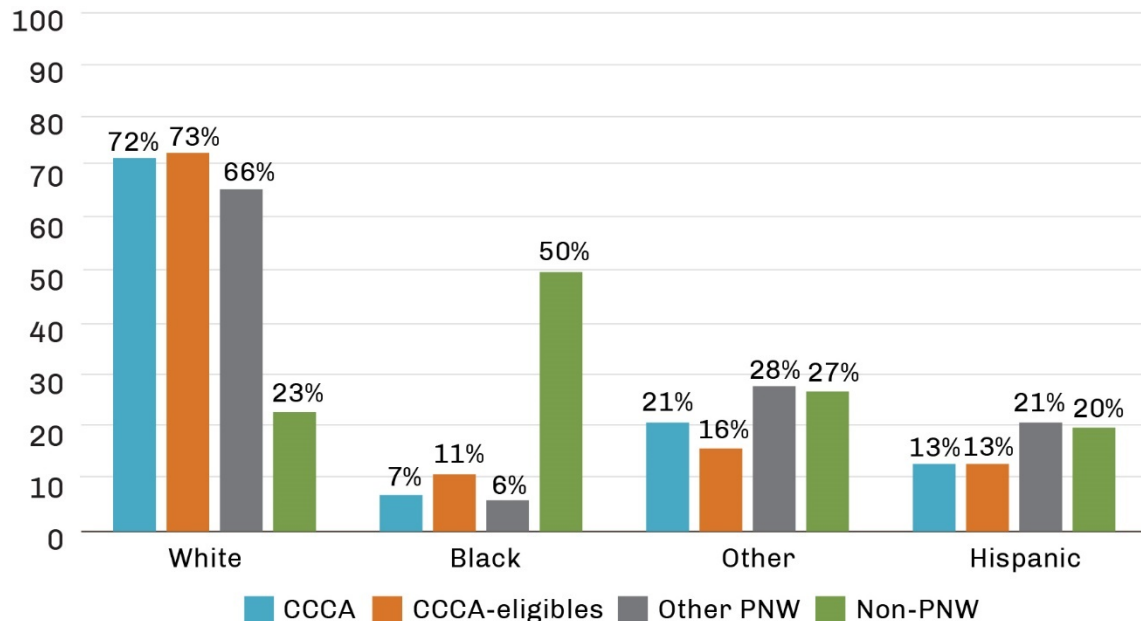
KEY: PNW=Pacific Northwest.
SOURCE: Outreach and Admissions Student Input System. *N*=41,646 (includes students ages 16-21 who applied to Job Corps between November 2017 and December 2018, and who arrived prior to July 2019; excludes withdrawals); *N*=261 for CCCA; *N*=168 for CCCA-eligibles; *N*=1,724 for Other PNW; *N*=39,493 for Non-PNW.

The Cascades center was located in Washington State and drew students only from PNW. It is thus not surprising that, compared to Non-PNW students a higher percentage of CCCA were White (72% versus 23%) and a lower percentage were Black (7% versus 50%). Compared to Other-PNW students, a higher percentage of CCCA students were White (72% versus 66%), while percentages of Other Races and Hispanic were lower (21% versus 28% for Other Races; 13% vs 28% for Hispanic).

Finally, note that, while not identical, CCCA and CCCA-eligible students have similar race and ethnicity distributions.[31]

Exhibit 3-2   *Academic Achievement at Application of Survey Cohort and Comparison Samples*

CCCA   CCCA-eligibles   Other PNW   Non-PNW
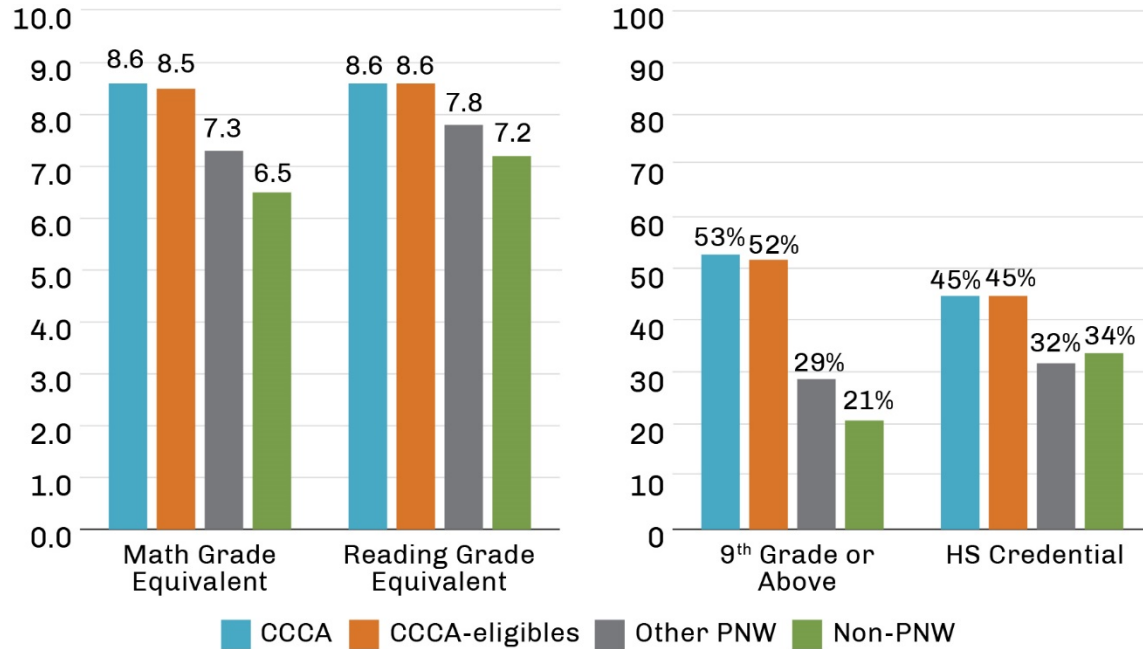
KEY: HS=high school. PNW=Pacific Northwest.
SOURCE: Outreach and Admissions Student Input System, Center Information System, and Renaissance Star Assessment data. *N*=41,646 (includes students ages 16-21 who applied to Job Corps between November 2017 and December 2018, and who arrived prior to July 2019; excludes withdrawals); *N*=261 for CCCA; *N*=168 for CCCA-eligibles; *N*=1,724 for Other PNW; *N*=39,493 for Non-PNW. "HS Credential" High School Credential.

- **Consistent with the CCCA vision, CCCA students were better prepared academically than both the national Job Corps population and the PNW Job Corps population.**

Other Job Corps centers have no minimum academic achievement level as an eligibility criterion. Consistent with CCCA's college-focused vision, CCCA did have a minimum academic achievement level. As discussed in Chapter 2, the vision was to require at least an eighth-grade achievement level in both math and reading. As implemented, the required minimum was slightly below seventh grade. Still, on average, CCCA and CCCA-eligible students scored at about grade 8.5 on math and reading[32] (Exhibit

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[31] Similarity of those who arrived at CCCA to CCCA-eligibles who arrived at other centers does not follow from random assignment. Appendix Exhibit H-2 reports baseline balance testing for everyone randomly assigned. There is little evidence of imbalance.

Random assignment need not lead to balance when the sample is selected based on a post-random assignment outcome. That is the case here; the exhibit tabulates a group selected based on a post-random assignment outcome—actually arriving at a center.

[32] See Appendix D.1.3 for a discussion of how the scores on the Renaissance Star Assessments that CCCA applicants took were equilibrated to scores on the Test for Adult Basic Education (TABE®) taken by those starting at other Job Corps centers.

3-2). These grade-level equivalents for CCCA students (8.6 for both math and reading) are roughly a grade and a half above Other PNW students (7.3 for math and 7.8 for reading) and Non-PNW students (6.5 for math and 7.2 for reading). Relatedly, compared to Other PNW students, twice as many CCCA and CCCA-eligible students have an average math/reading score at grade 9 or above. More of them have a high school credential (i.e., a diploma or a GED); the difference is more than 10 percentage points, or 40 percent greater than Other PNW and Non-PNW students.

- **Relative to students in the Healthcare pathway, more students in the IT pathway were men, more came from a household that received public assistance, and were older.**

In the IT pathway, 89 percent of the CCCA students were men; in the Healthcare pathway, only 28 percent of the students were (Exhibit 3-3). In the IT pathway, 19 percent of the students came from a household that receives public assistance; in the Healthcare pathway, the rate was 43 percent. IT pathway students are about half a year older than Healthcare pathway students (average ages 19.1 and 18.6, respectively). Other characteristics—including race/ethnicity, disability, tests scores, and educational background—were more similar (see Appendix Exhibit G.1-2).

- **CCCA moderately expands the market; that is, offering a college-focused Job Corps program draws in new students.**

Comparing enrollment patterns of the treatment group and control group implies that about a third (36%) of those who arrived at CCCA would otherwise not have arrived at Job Corps at all (Exhibit 3-4 below).[33] Section 4.1 expands this analysis in several ways.

Exhibit 3-3   *Student Characteristics, by Pathway at Application of Survey Cohort and Comparison Samples*

SOURCE: Outreach and Admissions Student Input System. *N*=429 (includes CCCA and CCCA-eligible students ages 16-21 who applied to Job Corps between November 2017 and December 2018, and who arrived prior to July 2019; excludes withdrawals). *N*=106 for CCCA-Health, *N*=155 for CCCA-IT, *N*=66 for CCCA-Eligibles Health, *N*=102 for CCCA-Eligibles IT.

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[33]   This estimate assumes that differential enrollment is due to CCCA's college-focus. It is possible that other factors made CCCA more attractive (e.g., its geographical location). This single site pilot does not allow exploration of that conjecture.

The 36 percent figure is derived as follows. Random assignment implies that the CCCA-eligible group is a proxy for what the CCCA group would have done if it had not been offered CCCA: 86 percent of the CCCA group arrived on center at Cascades and just less than 2 percent arrived at some other center for a total arrival rate of 87 percent, but only 56 percent of the CCCA-eligible applicants arrived at their Job Corps centers. So if CCCA had not been available, 36 percent (= (87% − 56%) / 87%) would not have joined Job Corps.

Exhibit 3-4   *Arrival Rates of Survey Cohort and Comparison Samples*
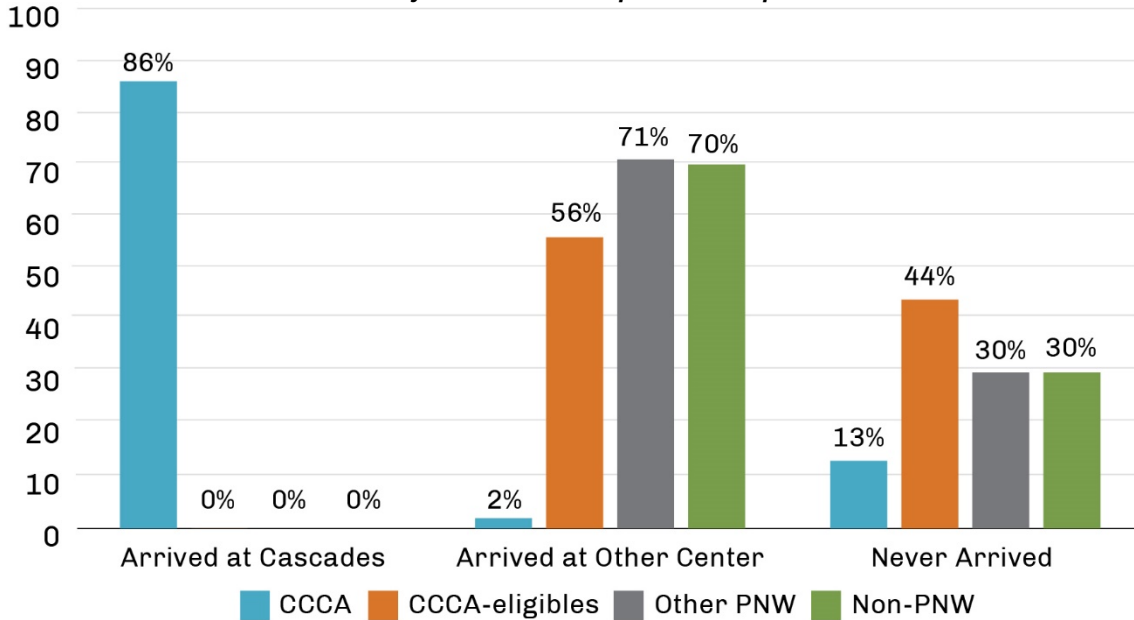
KEY: PNW=Pacific Northwest.
NOTES: Arrival rate is the percentage of those accepted to a program who ever arrive at the center. There are 5 students in the CCCA group who arrived at other Job Corps Centers. All other analyses and exhibits in this chapter (Chapter 3) exclude these students. Impact analyses presented in Chapter 4 do not exclude these students.
SOURCE: Center Information System. *N*=59,559 (includes students ages 16-21 who applied to Job Corps between November 2017 and December 2018 and who arrived prior to July 2019; excludes withdrawals); *N*=305 for CCCA, *N*=299 for CCCA-eligibles, *N*=2,446 for Other PNW, *N*=56,514 for Non-PNW.

3.2. *Length of Stay*

To be affected by a program, participants must stay long enough to receive sufficient training and services.[34] The CCCA program model implicitly assumes stays of several years: enough time to get a GED or a high school diploma, transition to college, and get a credential there. This section examines time at a Job Corps center. Specifically, the section focuses on median time at a center;[35] that is, the point at which exactly half of the students in a group have left.[36] Appendix Exhibit G.2-1 provides more detail.

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[34]   Consistent this with logic model assertion, Flores et al (2012) finds that longer stays in Job Corps lead to larger impacts.

[35]   Some students are still on center at the end of the follow-up period. Their total time and therefore overall mean time on center can only be computed with additional assumptions. In contrast, in all groups, more than half of the students have left the center, so the median is easily computed.

    Using Stata's approximation to durations past the last point of observation suggests that means are about a quarter larger than medians. The shift in differences between groups is likely also about a quarter (i.e., all the means for both groups are likely about a quarter higher than their medians).

[36]   Like other analyses in this chapter, these analyses consider time at a center among those who ever arrive. Section 4.1 reports impact estimates, regardless of whether a randomized individual ever arrived on center. Specifically, those analyses treat sample members who never arrive as having zero days at a center.

Box 3-2: Understanding Why CCCA Outcomes Differ

There are two reasons why CCCA outcomes might differ from non-CCCA outcomes. The experiences of CCCA-eligible students—that is, those randomly chosen not to be offered CCCA and who arrived at some other Job Corps center (control group)—can be used to understand the role of each reason.*

1. ***Different Students***. CCCA recruited different types of students than did other Job Corps centers. In part, this is because CCCA imposed a minimum test score; and in part, it is because CCCA provided training only for IT or Healthcare occupations and was a college-focused program. Perhaps CCCA outcomes are different from outcomes at other PNW centers because the CCCA students are different.

   Given that CCCA-eligible students are similar to CCCA students, but enrolled at other centers, we can proxy for the effect of *different students* by comparing outcomes for CCCA-eligible students to outcomes for Other PNW students. Both groups start at some non-CCCA center. When the difference in outcomes between CCCA-eligible students and Other PNW students gets close to the full CCCA/Other PNW difference, we say that "*the difference seems to come from the students.*"

2. ***Different Program***. The CCCA program was different from the program in other centers; in particular, it focused much more on college. Perhaps CCCA outcomes are different from outcomes at other PNW centers because the programs the students attended were different.

   We can proxy for the effect of *different programs* by comparing outcomes for CCCA students to outcomes for CCCA-eligible students, given that the students themselves are similar. . When the difference in outcomes between CCCA-students and the CCCA-eligible students gets close to the full CCCA/Other PNW difference, we say that "*the difference seems to come from the program.*" Building on the experimental design, the next chapter presents experimental estimates of the impact of the program.

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* Throughout this chapter, the Participant Flow Analysis compares CCCA students to Other PNW students. Furthermore, this analysis implicitly assumes that the CCCA student group (randomly offered CCCA and arrive on center) are similar to the CCCA-eligible group (randomly not offered CCCA and arrive at some other center). This is not exactly correct. Random assignment implies the treatment and control groups are similar, or more precisely that there are not systematic differences. Random

- **Compared to Other PNW students, CCCA students stay much longer**

Half of CCCA students had left the center by 10.3 months after arrival. CCCA-eligible and Other PNW students both have the same median stay, 8.0 months. Thus, little of the difference seems to come from the different students. This is an important result. The longer students stay on center, the more Job Corps can help them. Flores et al. (2012) finds that longer stay cause larger impacts. Furthermore, much of the value of college comes from completing credentials (Jaeger and Page 1996; Lange and Topel 2006; Bound and Turner 2011), and completing most credentials takes longer than several months.

That CCCA students stay longer has implications for how much offering a college-focused Job Corps program would increase the number of students in Job Corps centers—what NOJC calls total "on-board strength" (OBS). Section 3.1 noted that about a third of the students who arrived at CCCA would not have arrived if Job Corps had not offered a college-focused option. Even if no additional students came to Job Corps, assuming those who come stay longer—as this finding suggests—OBS would increase. The

total increase in OBS would combine both effects: more applicants arriving and longer stays among those who arrive. Section 4.1 expands this analysis in several ways.

- **Length of stay varies widely with student characteristics.**

Relative to women, men stay on center about three months longer. Relative to Healthcare students, IT students also stay about three months longer. See Appendix Exhibit G.2-1 for additional detail. These two results are likely related. Male students overwhelmingly chose the IT pathway (83%); female students overwhelming chose the Healthcare pathway (81%).

Relative to younger students (ages 16 to 17), older students (ages 18 to 21) stay about four months longer. See Appendix Exhibit G.2-1 for additional detail.

3.3. *Disciplinary Separations*

This section examines how CCCA's behavior management approach might have affected disciplinary separations; that is, when Job Corps forces a student to leave the program because of the student's behavior. Appendix Section G.3 provides more detail.

Job Corps has a two-tiered disciplinary system.[37] Job Corps centers execute a Level I disciplinary separation if a student violates Job Corps' zero-tolerance policy. Centers execute a Level II disciplinary separation as result of multiple disciplinary infractions that each, by themselves, would not warrant immediate removal from the program. Though CCCA followed this conventional two-tiered system and the Job Corps–wide zero-tolerance policy, CCCA also incorporated a restorative justice approach to behavior management that stressed students correcting their mistakes. For example, CCCA sought to remedy bad behavior instead of punishing students, and to promote and reward good behavior, whenever possible and safe to do so.

- **Compared to Other PNW students, fewer CCCA students separated because of a Level 1 (zero-tolerance) violation.**

Only 12 percent of CCCA students left CCCA for a Level I reason (Exhibit 3-5). This rate is lower than the Other PNW student rate of 17 percent. Differences are larger for drug and alcohol reasons (7% for CCCA versus 10% for Other PNW) than for violence reasons (5% for CCCA versus 6% for Other PNW). See Exhibit G.3-1 for detail. CCCA-eligible students have similar rates to Other PNW students. Thus, some, but far from all, of the difference seems to come from the different students (though other causes cannot be ruled out).

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[37] Job Corps prohibits violence, drugs, and alcohol. Offenses of this kind fall under the zero-tolerance policy and result in immediate separation from Job Corps. For additional detail, see the *Job Corps Policy and Requirements Handbook* (DOL/OJC 2016).

Exhibit 3-5   *Disciplinary Separation Rates of Survey Cohort and Comparison Samples*
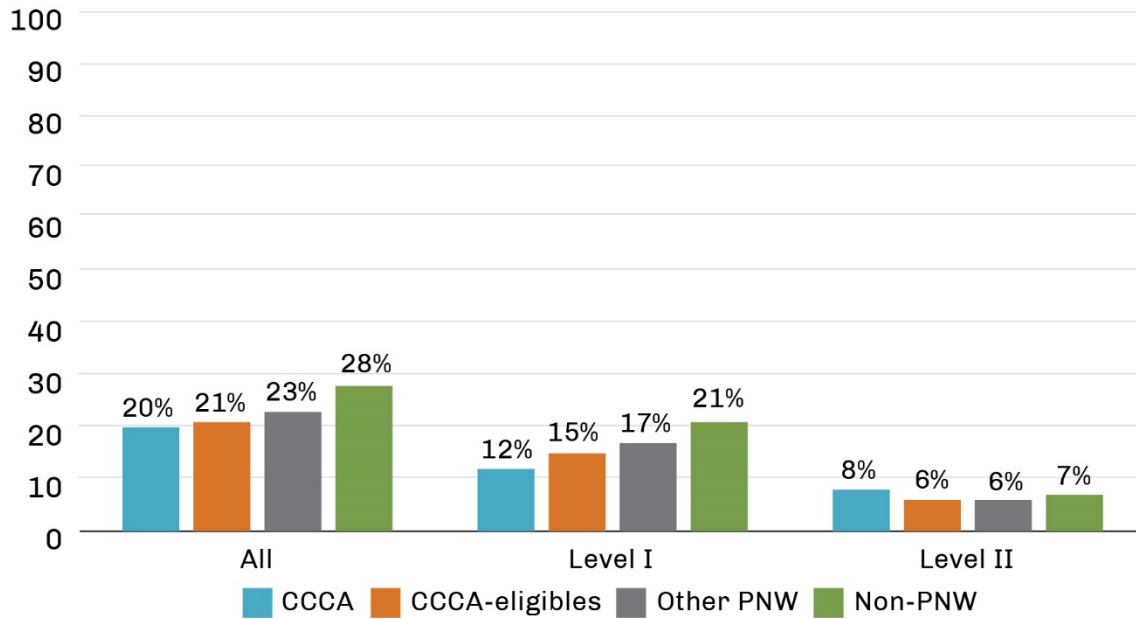
KEY : PNW=Pacific Northwest.
SOURCE: Center Information System. *N*=41,646 (includes students ages 16-21 who applied to Job Corps between November 2017 and December 2018 and who arrived prior to July 2019; excludes withdrawals); *N*=261 for CCCA; *N*=168 for CCCA-eligibles; *N*=1,724 for Other PNW; *N*=39,493 for Non-PNW.
NOTES: Tabulation summarizes reason for first separation from any Job Corps center.

- *Total* **disciplinary separations were similar for CCCA and Other PNW students, however.**

While Level I (zero-tolerance) separations were *less* common in the CCCA group than in Other PNW (12% for CCCA versus 17% for Other PNW), Level II (accumulation of less severe violations) separations were *more* common in CCCA (8% for CCCA versus 6% for Other PNW). Considering Level I and Level II violations together, there was little difference (20% for CCCA versus 23% for Other PNW).

Consideration of the timing of separations yields a slightly richer characterization (see Appendix Exhibit G.3-3). Consistent with Level II separations arising from *multiple* violations, Level II separations occur later—but only slightly later, about a week and a half—than Level I separations. However, on average, all separations occur about three and a half weeks later in CCCA than in Other PNW (on average about eight weeks after arrival for CCCA students; about four weeks after arrival for Other PNW students).

In net, the differences are consistent with CCCA's stated behavioral management approach with students. There is a shift from Level I to Level II separations and later separations at all levels. But the differences are small—a few weeks for a few percentage points of the student population.[38]

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[38]   There are two possible—and not mutually exclusive—interpretations of these small differences. One possibility is that the CCCA program model—which gave more responsibility to students and provided more coaching and mentoring—led to *changes student behaviors*: less violence, less drug and alcohol use. The other possibility is that—consistent with its deemphasis on punishment and more chances to remedy behavior—CCCA was *slower to separate* students for any given behavior. There is no direct evidence. The indirect evidence is inconsistent. Rates are more similar for violence and more different for drug and alcohol use. Perhaps violence has a victim, such that it was harder to not report. This might be consistent with the "slower to separate" explanation. Or perhaps, even for violence, separations occurred later at CCCA. This might be consistent with the "changes in student behaviors" explanation.

- **Disciplinary separations vary widely with student characteristics.**

For CCCA students, disciplinary separation rates are higher for men (23% versus 15% for women), younger students (24% for ages 16-17 versus 19% for ages 18-21), those without a documented disability (24% versus 18%), and those with no high school credential (24% versus 16% for those with a high school credential). See Appendix Exhibit G.3-2 and Appendix Exhibit G.3-3 for additional detail.

3.4. *Enrollment in Education while in Job Corps*

This section considers enrollment in high school and college while in Job Corps.

- **Compared to Other PNW students, many more CCCA students who needed a GED earned one while in Job Corps.**

Compared to Other PNW students, more CCCA students arrived with a high school credential (Exhibit 3-6). Thus, there were fewer students who needed to earn a GED or a high school diploma after arriving at Job Corps. Nevertheless, more CCCA students earned a GED while in Job Corps than did Other PNW students (30% versus 15%). Among those who started a GED, more CCCA students finished while in Job Corps (91% versus 71%; see Appendix Exhibit G.4-1), and CCCA students earned their GED faster (3.0 months versus 4.0 months; see Appendix Exhibit G.4-1). Among all CCCA-eligible students in the Survey Cohort, one-fifth (20%) completed a GED while in Job Corps (unconditional on completing or starting a GED prior to arrival; see Appendix Exhibit G.4-1 for detail). This is closer to Other PNW students (15%) than to CCCA students (30%), suggesting that some, but not much, of the difference was due to different students.

Exhibit 3-6   Receipt of High School Credentials while in Job Corps of Survey Cohort and Comparison Samples
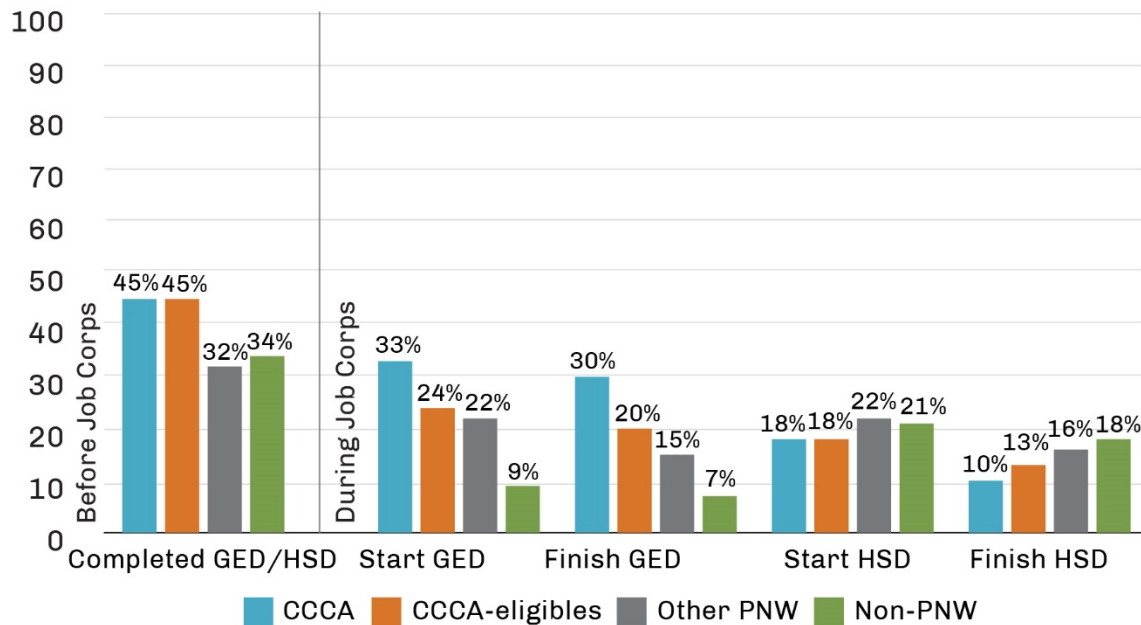
KEY: HSD=high school diploma. PNW=Pacific Northwest.
SOURCE: CCCA tracking data for high school completions while at Cascades (*n*=261) and Center Information System (CIS) for students ages 16-21 who applied to Job Corps between November 2017 and December 2018 who arrived prior to July 2019 (*n*=41,646); excludes withdrawals. *N*=261 for CCCA; *N*=168 for CCCA-eligibles; *N*=1,724 for Other PNW; *N*=39,493 for Non-PNW.
NOTES: Most GEDs and high school credentials are captured in CIS. Where CCCA indicated a student completed a GED or high school diploma while at Cascades but the credential was not recorded in CIS, the credential was counted.

In contrast, fewer CCCA students who were enrolled in high school diploma programs while in Job Corps earned a high school diploma than did Other PNW students (54% versus 73%). This pattern is consistent

with CCCA's funding strategy. CCCA students were often enrolled in courses towards a high school diploma even if they had a GED and without an intention that they would actually obtain a high school diploma. This strategy allowed CCCA to claim Washington State's Open Doors funding to pay for qualifying college courses. Additionally, CCCA students were typically enrolled in GED and high school diploma programs at the same time and often never intended to earn a high school diploma (Exhibit 3-6 above).

There were some no differences in GED and high school diploma by pathway (IT versus Healthcare; see Appendix Exhibit G.4-2).

- **Consistent with the CCCA's emphasis on college, more than three-quarters of the CCCA students enrolled in college while in CCCA.**

Overall, 79 percent of Cascades CCCA students enrolled in college while in CCCA (see Appendix Exhibit G.4-1). Perhaps, in part, because the IT pathway had more of its courses taught at SVC than did the Healthcare pathway, a higher percentage of IT students enrolled at the college (85% for IT versus 69% for Healthcare; see Appendix Exhibit G.4-2).

Consistent with CCCA's college-focused design, rates of college enrollment while in CCCA are much lower at other centers (see Appendix Exhibit G.4-1): 1.1 percent among Other PNW students. Furthermore, some, but not a lot, of the difference seems to come from difference in the students. College enrollment rates are slightly higher among CCCA-eligible students than for Other PNW students (7.1 percent compared to 1.1 percent), but still far below the CCCA rate of 78.5 percent.[39]

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[39] This analysis combines information across two data systems and therefore should be treated with some care. CIS does not capture measures of college enrollment while on site. The CTS data do include a measure of participation in Advanced Training, which includes college enrollment; however, enrollment at Skagit Valley College as part of the CCCA pilot was not counted as Advanced Training. Thus, the CCCA college enrollment rates are from SVC enrollment data and the CCCA-eligible and Other PNW rates are from CTS data (administrative data from the Job Corps Data Center).

Box 4-1: How to Read Impact Exhibits

Most exhibits presenting impacts in Chapter 4 use the format shown below. The leftmost column (**Outcome**) identifies the outcomes for findings that appear in the rows, as well as the units of the outcomes (e.g., percentage points, months). To the right are the following data columns:

- **Treatment Group Mean** is the adjusted mean outcome for the treatment group, adjusted to correct for random baseline differences between it and the control group (as explained in Appendix Section D.2.3).

- **Control Group Mean** is the mean outcome for the control group.

- **Impact (Difference)** is the difference between the adjusted treatment group mean and the control group mean—that is, the adjusted mean outcome for those students offered the CCCA pilot program less the mean outcome for those not offered it. The impact represents what the treatment group's outcome *would have been* absent the offer of the program.

- **Standard Error** is a measure of uncertainty in the impact. It reflects chance variation due to randomization and measurement error in the outcome.

- **Relative Impact (%)** is the impact as a percentage change from the control group mean. Relative impact offers a sense of how "big" or "small" the impact of the program is relative to the control group mean.

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Ever attended any high school, occupational, or work-based training (%)	94	87	6**	3	7

SOURCE AND FOLLOW-UP PERIOD: 18-month follow-up survey; college credits as of 18 months after random assignment, all other outcomes as of survey interview.
NOTES: ***Confirmatory outcome is bolded and italicized***; **secondary outcomes are bolded**; exploratory outcomes are not bolded. *Outcomes in italics* apply to the subset of survey respondents who attended any training, and thus are non-experimental. Where not italicized, outcomes apply to the full survey sample, and impact estimates are experimental. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. The total sample of 383 includes 208 treatment group and 175 control group members who completed the 18-month follow-up survey. Appendix H tables report item-specific sample sizes.
Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

In this example:

- **Impact**. 94 percent of the treatment group ever attended any high school, occupational, or work-based training between random assignment and follow-up, compared to 87 percent of the control group. So the CCCA pilot increased *attendance of high school, occupational, or work-based training* by 6 percentage points. That the impact is flagged with two asterisks (**) means that the evaluation is quite confident that the impact is not zero (formally, that the null hypothesis of no impact of the CCCA pilot on this outcome is rejected with a *p*-value smaller than .01).

- **Standard Error**. The standard error on this impact is 3 percentage points. This standard error can be used to construct a *confidence interval*—meaning the reader can have strong confidence that the true impact is within roughly two standard errors of the reported impact. In this example, then, a strong confidence interval runs from an impact of 0 percentage points to 12 percentage points.

- **Relative Impact**. The relative impact is (before rounding the numbers in the computation) a 7 percent increase, calculated as [100 x [6 / 87].

Confirmatory, secondary, and exploratory outcomes are discussed in detail in Appendix Section D.2.6. In brief, to address multiple comparison concerns, the evaluation pre-assigned each outcome to be measured to one of three groups—confirmatory, secondary, or exploratory—with each group to receive progressively less focus in interpreting the results.

4. Impacts of CCCA on Service Receipt, Education, and Employment

The CCCA conceptual model (see Exhibit 1-2) posits that the offer of CCCA will lead to receipt of more training/education and services. These training and services are expected to lead to treatment group members earning more academic and occupational credentials, which in turn are expected to lead to improvements in their labor market outcomes and broader measures of well-being.

This conceptual model suggested RQ3 and RQ4:

3. *How did receipt of training and services for eligible applicants offered CCCA differ from what their experiences would have been in the absence of CCCA?*

4. *How did outcomes for eligible applicants offered CCCA differ from what their experiences would have been in the absence of CCCA CA?*

This chapter presents estimates of the impact of being offered CCCA on each step of the conceptual model.[40] As noted in Chapter 1, those randomly assigned to the control group were encouraged to enroll in some other Job Corps center (through the conventional process). Thus, the (regression adjusted) treatment/control comparisons in this chapter estimate the impact of adding the CCCA option. They do not estimate the impact of CCCA versus no Job Corps.

This chapter's first three sections describe impacts corresponding to the "**Services**" steps of the conceptual model and RQ3: time spent at a Job Corps center ("participation") and how those impacts vary with eligible applicant characteristics (Section 4.1); time spent in education and occupational training ("receipt"; Section 4.2); and receipt of support services and other types of preparation necessary for academic and workplace success (Section 4.3).

> **Key Findings: Service Contrast Analysis**
>
> In the short term, the offer of CCCA:
>
> - increased months in Job Corps;
> - increased months of occupational training (the study's pre-specified single confirmatory outcome);
> - increased full-time-equivalent months of college (a pre-specified secondary outcome);
> - decreased work-based training; and
> - has mixed impacts on receipt of support services and soft skills training.
>
> **Key Findings: Impact Analysis**
>
> In the short term, the offer of CCCA:
>
> - increased receipt of occupational credentials (a pre-specified secondary outcome);
> - decreased labor market outcomes, including employment, hours of work, and earnings (a pre-specified secondary outcome); and
> - has no impact on risky behaviors.
>
> Impacts on training and college were much larger for students who:
>
> - enter better prepared (GED or high school diploma);
> - scored a ninth-grade level equivalent or higher on the Star Math and Star Reading assessments; and
> - are pursuing IT jobs.

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[40] All results are for the Survey Cohort; that is, those randomly assigned between November 1, 2017, and December 31, 2018. The follow-up period continues past the onset of COVID-19 and the shift to a remote CCCA program. For the Survey Cohort that is the focus of this chapter's analysis, that shift occurs 15 to 28 months after random assignment. It seems plausible that in the absence of COVID-19, the program would have been more effective, and impacts would therefore have been larger.

Using administrative data, Appendix H reports impacts for some outcomes for everyone randomly assigned. For two reasons, the appendix provides only limited discussion of these results. First, those randomly assigned prior to the Survey Cohort received an immature implementation of the program. Second, those randomly assigned after the Survey Cohort received the pilot program for only a few months before non-pilot students started to arrive at the Cascades center and, subsequently, when COVID-19 hit and the center and the college shifted to a remote learning model.

The next three sections consider impacts related to the last "**Outcomes**" step of the conceptual model and RQ4: impacts on attainment of academic and occupational credentials (Section 4.4); impacts on labor market outcomes (Section 4.5); and impacts on broader measures of well-being (Section 4.6). Appendix H in the *Technical Appendix* presents more detailed results for this chapter, including definitions.

The key limitation for this analysis is that the study's follow-up period is relatively short. Some outcomes based on administrative data are available through up to 27 months after random assignment.[41] In contrast, most outcomes were measured in the follow-up survey at 18 months after random assignment.

In general, a longer follow-up period would be preferable. CCCA allowed students to stay on campus (during the COVID Phase, the virtual equivalent of "on center") for up to 36 months. For those eligible applicants who participated in CCCA for 18 months or more, we would expect to see favorable impacts on within-CCCA outcomes (e.g., receipt of education/training), but unfavorable impacts on labor market outcomes, as eligible applicants are still in the program and not in the workforce. That is, any favorable earnings-related consequences of their job training will not yet have emerged. In the longer term, earnings are the appropriate key outcome for a job training program, including CCCA. Detecting any such earnings impacts, though, would require data from longer follow-up.

However, for this study, longer follow-up includes the COVID-period. For the survey cohort, COVID-19 (dated as March 2020) arrives between 15 and 28 months after random assignment. How COVID-19 shifts impacts is unclear and would have made impacts for longer follow-up less informative.

Other limitations include the following: Sample sizes are smaller than originally projected, so precision is weaker than originally expected. Survey data are subject to non-response bias, though survey weights partially control for such bias. Survey data are also subject to potential response bias. These considerations lead the evaluation to prefer administrative data when they are available.

Consistent with that expectation and as is common for short-term findings of youth training programs (e.g., Schochet, Burghardt, and McConnell 2008), the results are mixed. As of the time of the 18-month follow-up survey, CCCA *improved* some measures of service receipt (in particular, months in Job Corps, education and training, college); but it *decreased* the likelihood of employment and earnings. Given that the offer of CCCA had increased enrollment in Job Corps at the follow-up survey and that Job Corps students are not usually allowed to work for pay while enrolled, the unfavorable impact on labor market outcomes at about 18 months after entering the program is not surprising. The treatment group and control group were equally "connected" to education or employment, just in different proportions.

4.1. *Participation in Job Corps*

This section presents impacts on time in Job Corps (Exhibit 4-1 and Exhibit 4-2), for the Survey Cohort, as measured in NOJC administrative data. The more time eligible applicants spend in Job Corps, the more training and services they can receive from Job Corps.

- **The offer of CCCA substantially increased both the rate of enrolling in Job Corps and time in Job Corps.**

As shown in Exhibit 4-1 and consistent with results in Exhibit 3-4,[42] through 18 months after random assignment, the offer of CCCA increased the likelihood of ever enrolling in Job Corps by more than half

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[41] For those applicants randomized earlier in the program (the Pre-Survey Cohort) Appendix H reports impact estimates based on administrative data available for longer follow-up periods (i.e., CIS, NSC, NDNH). Those estimates, however, are subject to two concerns. First, samples are smaller, so precision is weaker. Second, those longer follow-ups are for students who experienced an early and immature version of the pilot program. As a result, estimated impacts at longer follow-up—available for the Pre-Survey Cohort only—might not be representative of impacts at those longer follow-up intervals for the Survey Cohort, who experienced a more mature program implementation. Given these concerns, we do not discuss results for the Pre-Survey Cohort in this chapter.

[42] The estimates presented in this chapter are superior to those in Chapter 3, as these estimates adjust for covariates.

(from 57% in the control group to 86% in the treatment group), and nearly doubled time in Job Corps (from 136 days for the control group to 261 days for the treatment group, an impact of 125 days—about four months).[43]

This increase in months is not that surprising. These are youth who applied to CCCA specifically. Some of them likely were interested in Job Corps only because of the CCCA program; other Job Corps options might not have been of interest. Nevertheless, even conditional on enrolling (a non-experimental comparison; see **How to Read the Impact Exhibits**), through 18 months after random assignment, CCCA caused the length of stay in Job Corps to increase by nearly a fifth (from 241 days for the control group to 304 days for the treatment group).

For the Survey Cohort, data on time in Job Corps are available past 18 months. At 27 months, the impact on time in Job Corps grows to 163 days; that is, the impact grows about 4 days for each additional month of follow-up. Furthermore, the impact on Job Corps seems likely to continue growing given that more eligible applicants offered CCCA were in Job Corps 27 months after random assignment (20% versus 10%).

Exhibit 4-1 *Enrollment in Job Corps (from NOJC administrative data)*
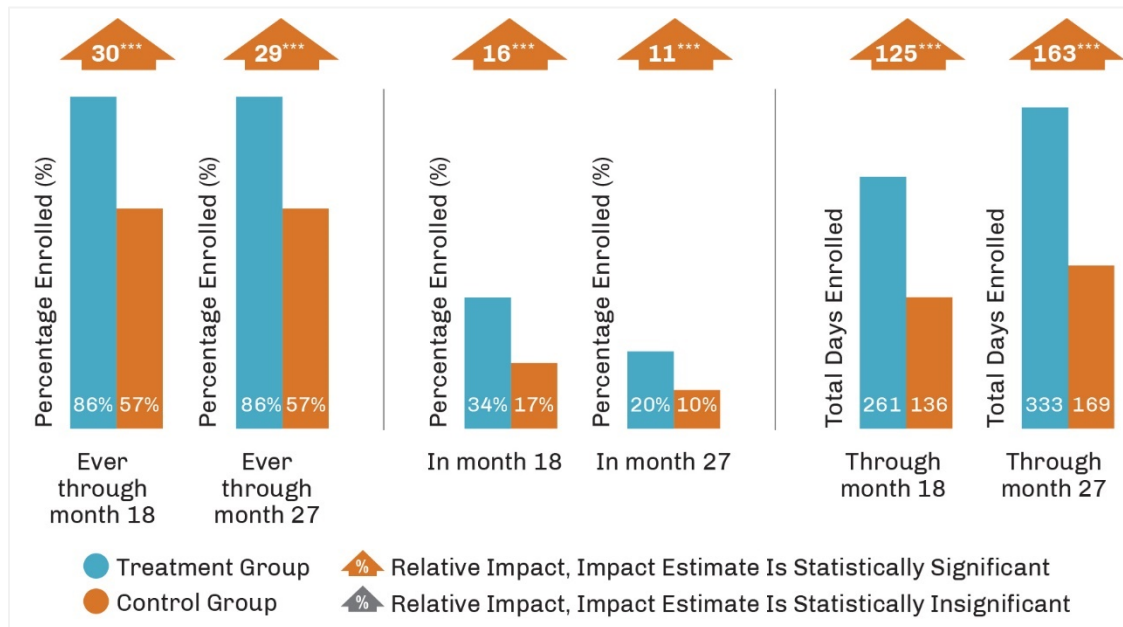
SOURCE AND FOLLOW-UP PERIOD: Center Information System, from random assignment to 2 months after random assignment.
NOTES: All outcomes are exploratory. Statistical significance based on two-sided hypothesis tests; significant levels are as follows: ***= 1 percent; ** = 5 percent; * = 10 percent.

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[43]   This analysis considers everyone randomly assigned, including those who never arrive at a Job Corps center. They are coded as zero days at a Job Corps center.

Exhibit 4-2   Enrollment in Job Corps, by Enrollment Follow-Up Period (from NOJC administrative data)

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Month 18 (after random assignment)					
Ever enrolled in Job Corps through the end of month 18 (%)	86	57	30***	3	53
Total days enrolled in Job Corps through the end of month 18	261	136	125***	14	92
If any, days enrolled to date	*304*	*241*	*64***	*15*	*27*
Enrolled in Job Corps in month 18 (%)	34	17	16***	3	93
Month 27 (after random assignment)					
Ever enrolled in Job Corps through month 27 (%)	86	57	29***	3	52
Total days enrolled in Job Corps through the end of month 27	333	169	163***	20	97
If any, days enrolled to date	*388*	*298*	*90***	*24*	*30*
Enrolled in Job Corps in month 27 (%)	20	10	11***	3	108

SOURCE AND FOLLOW-UP PERIOD: Center Information System, from random assignment to 27 months after random assignment.
NOTES: All outcomes in this table are exploratory. *Outcomes in italics* apply to the subset of sample members who attended any training through the given month, and thus are non-experimental. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. Table reports impacts estimated on the Survey Cohort only. The total sample of 612 includes 306 treatment group and 306 control group members. Appendix H tables report item-specific sample sizes.
Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

- **Adding a national college-focused Job Corps option could potentially substantially increase total on-board strength; that is, the total number of students in Job Corps, perhaps by 19 percent.**

The CCCA Pilot occurred in the PNW and in a particular period. In as much as similar patterns would occur nationally and in other time periods, the results in Exhibit 4-1 suggest that a national college-focused Job Corps option has the potential to substantially increase on-board strength. About a fifth of PNW Job Corps applicants requested to be placed at CCCA.[44] Those applying for CCCA who were offered a CCCA slot (the treatment group) spent nearly twice as many days in Job Corps as those not offered CCCA (the control group): through 27 months, 333 days versus 169 days,[45] an increase of 97%. Thus, relative to not offering CCCA at all, if every CCCA applicant had been offered CCCA, total days in Job Corps for PNW applicants could potentially have increased by 19 percent.[46]

- **The impact of the offer of CCCA on time in Job Corps is much larger for men and those with a high school credential at application.**

Impacts on time in Job Corps vary with eligible applicant characteristics (Exhibit 4-3 and Appendix Exhibit H.1-2). The impact of the offer of CCCA on time in Job Corps for men is nearly twice its impact for women (as of 27 months after random assignment: 195 days versus 112 days). Similarly, the impact on those entering with a high school credential (diploma or GED) is more than twice that of those entering without a high school credential (as of 27 months after random assignment: 239 days versus 109 days). Impacts are also larger for those in the IT pathway (196 days versus 115 days). Impacts are larger for older eligible applicants (ages 18 to 21) and those with higher test scores, but those differences are not

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[44] During the period during which the evaluation was enrolling the Survey Cohort, 612 applied to CCCA and 2,455 did not; 20% = 612 / (612 + 2,455).

[45] Note that this estimate is unconditional on ever arriving. Thus, total days in Job Corps are larger both because more of those offered CCCA arrived on center (87% versus 58%) and because those offered CCCA who arrived on center stayed longer (381 days versus 299 days).

[46] Holding all else constant, if all 20% of the PNW Job Corps applicants who applied for CCCA were offered a slot at CCCA and the experimental impact (97% increase in length of stay) extrapolated to all of them, the result would be a potential overall impact of 19% (= 97% × 20%).

statistically significant. The male and IT results are likely related, as pathway choices were strongly correlated with gender (see Section 3.1).

Exhibit 4-3   *Variation in Impact on Days in Job Corps, through 27 Months after Random Assignment*
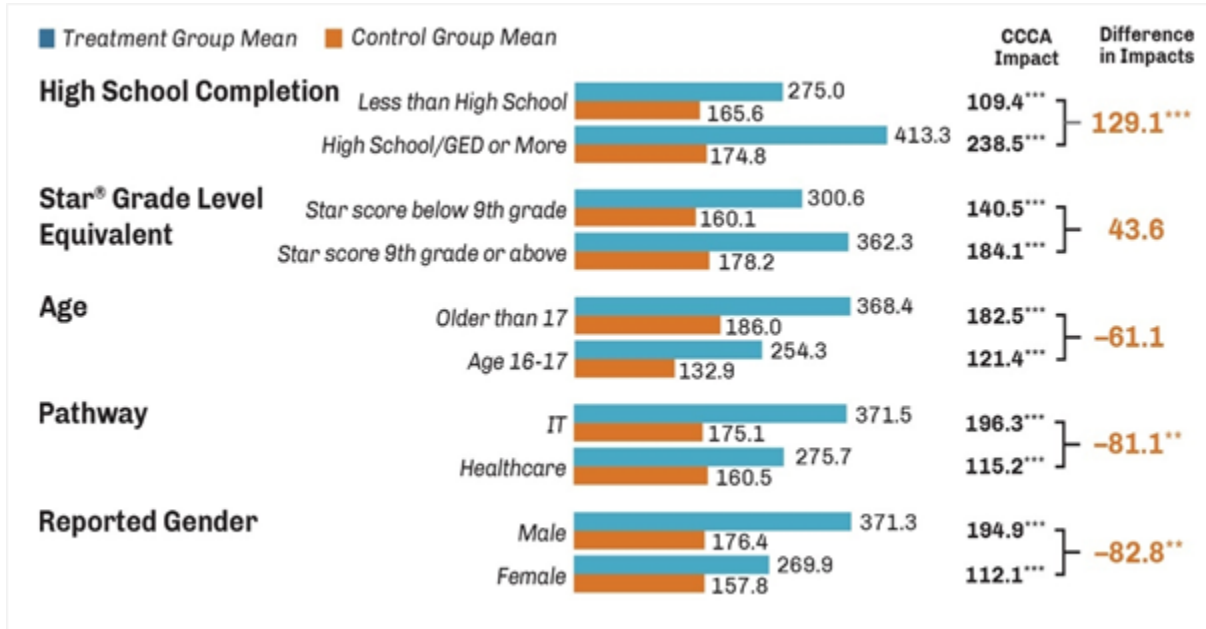
SOURCE AND FOLLOW-UP PERIOD: Center Information System, from random assignment to 27 months after random assignment.
NOTES: All outcomes in this table are exploratory. Exhibit reports impacts estimated on the Survey Cohort only. The total sample of 612 includes 306 treatment group and 306 control group members. Appendix H tables report item-specific sample sizes.
Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Patterns of differential impact on enrollment at 27 months after random assignment (Exhibit 4-3) are similar to patterns of differential impact on days in Job Corps (Appendix Exhibit H.1-2 and H.1-3), but the differences are more dramatic. Specifically, impacts are larger for older eligible applicants who were offered CCCA compared with those who were younger (25% versus 11%), those in the IT track versus those in the healthcare track(27% versus 10%) and male eligible applicants versus female applicants (25% versus 10%). Given that enrollment remains relatively high (around 25% or higher) for certain eligible applicants even 27 months later, and that conventional Job Corps programs are designed to end after 24 months, differential impacts for older, high-achieving, or male eligible applicants, and those in IT are likely to persist and possibly grow over time.

4.2.   *Education and Occupational Training Receipt*

This section presents results for attending education and training classes as well as work-based learning activities. Unless otherwise noted, all outcomes are measured in the follow-up survey through 18 months after randomization.

- **The offer of CCCA increased attendance at education/occupational training.**

The offer of CCCA increased receipt of any occupational training by 16 percentage points (from 69% in the control group to 84% in the treatment group). This is a relative increase—that is, impact as a percentage of control group level—of nearly a quarter. There is also some evidence that CCCA increased

attendance at high school or GED classes[47] (by 8 percentage points, from 45% in the control group to 54% in the treatment group; Exhibit 4-4).

Exhibit 4-4   Participation in Education and Training (from survey)

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Ever attended any high school classes, occupational training, or work-based training (%)	94	87	6**	3	7
Education and Occupational Training					
Ever attended (%)	92	81	10***	4	13
Attended any high school or GED classes (%)	54	45	8*	4	18
Attended any occupational training programs (%)	84	69	16***	5	23
Total months of education or training attended	***9.5***	***6.6***	***2.8****	***0.6***	***43***
Total months, for attendees	*10.2*	*8.2*	*2.0****	*0.6*	*25*
Total hours of education or training attended	1,320	919	402***	96	44
Total hours, for attendees	*1,427*	*1,134*	*293****	*98*	*26*
Hours per week, for attendees	*31*	*31*	*−0*	*1*	*−1*
Completed or currently attending at least one training program (%)	54	57	−4	5	−6

SOURCE AND FOLLOW-UP PERIOD: 18-month follow-up survey; as of 18 months after random assignment.
NOTES: ***Confirmatory outcome is bolded and italicized***; exploratory outcomes are neither bolded nor italicized. *Non-bolded outcomes in italics* apply to the subset of survey respondents who attended any training, and thus are non-experimental. Where not italicized, outcomes apply to the full survey sample, and impact estimates are experimental. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. The total sample of 383 includes 208 treatment group and 175 control group members who completed the 18-month follow-up survey. Appendix H tables report item-specific sample sizes.
Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

- **The offer of CCCA sharply increased months and hours of training received.**

The evaluation pre-specified months of training as its single confirmatory outcome; that is, the main indicator of the extent to which the CCCA pilot is making progress towards its goals through this 18-month follow-up period. As shown in Exhibit 4-4, the offer of CCCA increases that confirmatory outcome by 2.8 months, an increase that is nearly half the control group level (6.6 months in the control group versus 9.5 months in the treatment group).

Hours of training received also increased by nearly half. Given that the offer of CCCA substantially increased the fraction of eligible applicants still in Job Corps at 18 months—and even at 27 months (as shown in Exhibit 4-2)—the impact on occupational training seems likely to grow, perhaps substantially, past 18 months.

- **The offer of CCCA increased months of education or training more for eligible applicants who were better prepared at random assignment.**

There is broad evidence that impacts vary with eligible applicants' level of preparation at random assignment (Appendix Exhibit H.2-2). The impact of the offer of CCCA on months of education or training was more than three times larger for those who entered with a high school diploma or GED compared with those who had neither (5.0 months versus 1.3 months). Similarly, impacts were twice as large for eligible applicants with a Star Assessment grade level equivalent of ninth grade or above compared with those with a lower score (4.0 months versus 1.5 months). No differential impacts by age, pathway, or gender were detected, but statistical power is low.

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[47]   The survey does not distinguish between regular high school classes and GED classes.

Earlier results in this section were for survey-based outcomes. This section now reports results for NSC-based outcomes.

- **As measured in the NSC, the offer of CCCA increased full-time-equivalent months of college attendance, but the levels were low.**

The core of the CCCA model was close integration between Job Corps and Skagit Valley College. Consistent with that program model, the offer of CCCA increased total and full-time-equivalent (FTE) months of college enrollment (Exhibit 4-5). Relative to the control group level, total FTE months of enrollment—a secondary outcome—more than tripled. Even then, the treatment group received only about 2.0 months of FTE college.[48]

Exhibit 4-5 *College Enrollment, for Survey Cohort (from NSC)*

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Months Enrolled in College between Random Assignment and Quarter 6					
Full-time-equivalent (FTE) months	**2.0**	**0.6**	**1.4***	**0.2**	**249**
Total months	2.9	0.7	2.2***	0.2	307
Full-time months	1.0	0.4	0.6***	0.2	159
Part-time months	1.8	0.3	1.5***	0.2	509

SOURCE AND FOLLOW-UP PERIOD: National Student Clearinghouse; through the end of the sixth quarter after random assignment, counting the quarter of random assignment as Quarter 0.
NOTES: **Secondary outcomes are bolded**; exploratory outcomes are not bolded. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. Table reports impacts estimated on the Survey Cohort only. The total sample of 612 includes 306 treatment group and 306 control group members. Appendix H tables report item-specific sample sizes.
Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Like cumulative months of education and training, months of college enrollment also seem likely to grow past 18 months. A quarter of the treatment group is still in college at 18 months after random assignment, and that rate is more than twice as large as the control group rate (Appendix Exhibit H.2-4). As a result, it seems likely that both the levels and impact on cumulative FTE months of college will grow, perhaps substantially, past 18 months.

- **As measured in National Student Clearinghouse data, the offer of CCCA increased FTE months of education and training much more for eligible applicants who were better prepared at random assignment.**

Like impacts on months of education and training as measured in the survey, impacts of the offer of CCCA on NSC-measured FTE months of college enrollment were one to two times larger (see Exhibit 4-6 for detail) for those eligible applicants better prepared: high school credential (versus no credential), average Star Assessment score ninth grade or above (versus less than ninth grade), age 18 or older (versus age 17 or younger), IT pathway (versus Healthcare pathway), and men (versus women). Again, these are large and policy-relevant differential impacts.

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[48] Note that this estimate is fundamentally different from the one in Section 3.4. The estimate in Section 3.4 is for college through Job Corps; this estimate is for all college—through or outside of Job Corps.

Exhibit 4-6   *Variation in Impact on FTE Months of College Enrollment, by Baseline Characteristics (from NSC)*
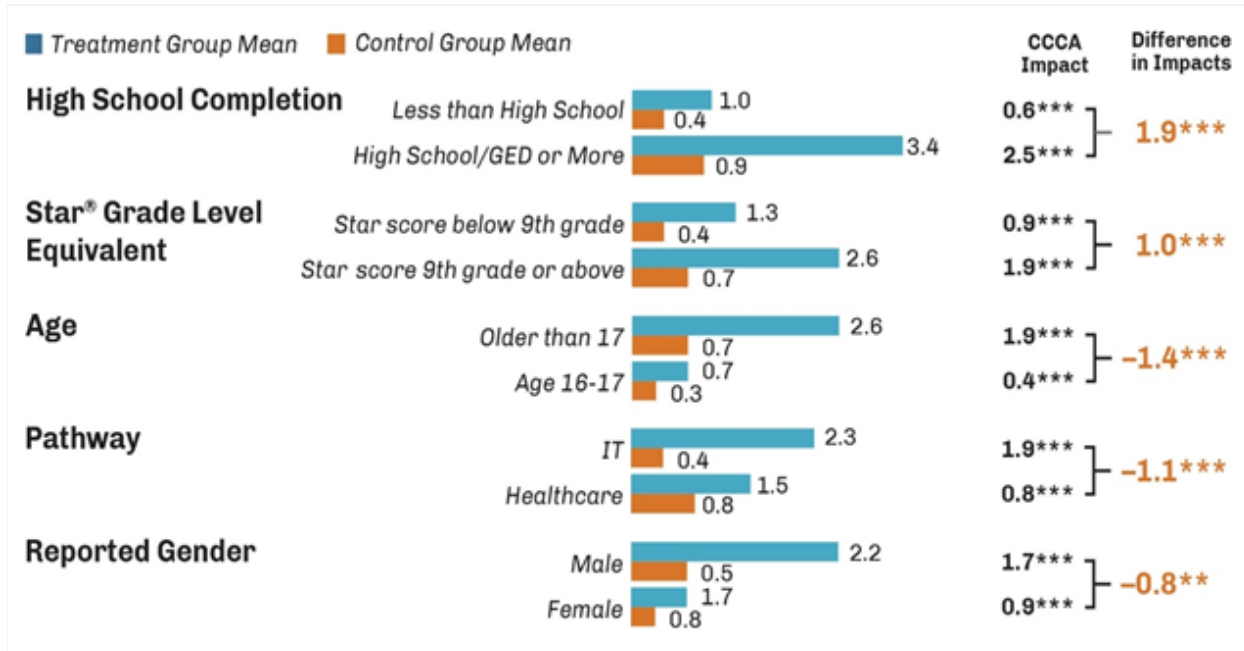
SOURCE AND FOLLOW-UP PERIOD: National Student Clearinghouse; through the end of the sixth quarter after random assignment, counting the quarter of random assignment as Quarter 0.

NOTES: Exhibit reports impacts estimated on the Survey Cohort only. The total sample of 612 includes 306 treatment group and 306 control group members. Appendix H tables report item-specific sample sizes.

Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Some of these differences are likely due to pathway. Relative to the Healthcare pathway, the IT pathway shifted earlier from on-center instruction to instruction at college. Furthermore, the IT pathway attracted better prepared and older eligible applicants as well as more men (Exhibit 4-6 above). Impacts were larger for each of these groups: better prepared and male.

- **The offer of CCCA made work-based learning activities *less* common.**

Returning to survey-measured outcomes, the offer of CCCA *decreased* work-based training (37% in the treatment group from 52% in the control group; Exhibit 4-7 below). The decrease is apparent across several forms of work-based training: work-study job (9 percentage points), internship or similar (9 percentage points, but only weak evidence), and other work-related training (19 percentage points).

These results are consistent with the implementation results discussed in Section 2.4. Specifically, work-based learning activities were expected to occur relatively late in a Job Corps student's time at the center. Pilot staff therefore prioritized developing earlier activities. As a result, relationships with employers and work-based learning activities were not prioritized until relatively late in the pilot.

Exhibit 4-7   Participation in Work-Based Training (from survey)

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Any work-based training (%)	37	52	−15***	5	−29
Types of work-based training:					
Internship, practicum, clinical experience, or similar (%)	16	24	−9*	4	−35
Work-study job (%)	5	14	−9***	3	−65
Employer-provided training (%)	20	22	−2	5	−11
Apprenticeship (%)	3	6	−3	2	−45
Other work-related training (%)	6	25	−19***	4	−76

SOURCE AND FOLLOW-UP PERIOD: 18-month follow-up survey; as of survey interview.
NOTES: All outcomes in this table are exploratory. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. The total sample of 383 includes 208 treatment group and 175 control group members who completed the 18-month follow-up survey. Appendix H tables report item-specific sample sizes.
Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

4.3.   *Receipt of Other Services*

Based on survey responses, this section presents results on receipt of support services (Exhibit 4-8 below) and programming related to other academic/workplace success skills ("soft" skills; Exhibit 4-9).

- **The offer of CCCA increased receipt of academic advising, but not of tutoring, career counseling, or job search assistance.**

As shown in Exhibit 4-7 above, the offer of CCCA increased receipt of any academic advising by more than half (47% in the control group to 75% in the treatment group). Including those eligible applicants who receive no academic advising, the treatment group received academic advising an average of seven times from random assignment through the 18-month survey follow-up period. In contrast, there is no evidence of an increase in tutoring, career counseling, or job search assistance.[49]

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[49]   Given that many students are still in Job Corps after 18 months, and more so among the treatment group than the control group, it may be too soon to expect impacts on job search assistance.

Exhibit 4-8   Receipt of Support Services (from survey)

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Academic advising:					
Any (%)	75	47	28***	5	60
Number of times	7	5	2***	1	43
Tutoring:					
Any (%)	20	24	−4	4	−17
Number of times	3	4	−1	1	−20
Career counseling:					
Any (%)	45	41	3	5	8
Number of times	2	3	−0	0	−5
Job search assistance:					
Any (%)	47	49	−1	5	−3
Number of times	2	3	−1	1	−26

SOURCE AND FOLLOW-UP PERIOD: 18-month follow-up survey; as of 18 months after random assignment.

NOTES: All outcomes in this table are exploratory. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. The total sample of 383 includes 208 treatment group and 175 control group members who completed the 18-month follow-up survey. Appendix H tables report item-specific sample sizes.

Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

- **The offer of CCCA increased receipt of information in several areas related to success in school, the workplace, and life.**

As shown in Exhibit 4-9 below, the offer of CCCA increased instruction in study skills (by 22 percentage points). There is also some evidence of increased receipt of help with problems at school, work, or home (by 10 percentage points); working in groups (by 9 percentage points); and help with behaving professionally in the workplace (by 7 percentage points).

The offer of CCCA did not detectably change eligible applicants' receipt of information about time management; communicating well; managing stress, anger, and frustration; or handling parenting and other family responsibilities.[50] Furthermore, the offer of CCCA *lowered* receipt of information on managing money and personal finances (by 14 percentage points).

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[50] Few members of either the treatment group or the control group are married (less than 1 percent) or have children (2 percent in both groups).

Exhibit 4-9   *Receipt of Instruction in Academic/Workplace Success Skills (from survey)*

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Respondent received information on the following topics:					
Study skills (%)	69	47	22***	5	48
Help with problems at school, work, or home (%)	62	52	10*	5	20
Time management (%)	67	63	4	5	7
Working in groups (%)	72	63	10*	5	15
Communicating well (%)	73	72	1	5	2
Managing stress, anger, and frustration (%)	51	47	4	6	8
Behaving professionally (%)	85	78	7*	4	9
Managing money and personal finances (%)	34	48	−14***	5	−29
Handling parenting and other family responsibilities (%)	14	21	−7	4	−33

SOURCE AND FOLLOW-UP PERIOD: 18-month follow-up survey; as of survey interview.

NOTES: All outcomes in this table are exploratory. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. The total sample of 383 includes 208 treatment group and 175 control group members who completed the 18-month follow-up survey. Appendix H tables report item-specific sample sizes.

Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

4.4. *Educational Attainment*

This section presents results on educational attainment from the 18-month follow-up survey (Exhibit 4-10) and then from the NSC (see Appendix Exhibit H.4-2).

- **The offer of CCCA increased receipt of postsecondary degrees, occupational certificates, and other credentials, but there was no impact on receipt of a high school diploma or receipt of any industry-recognized certification, credential, or license.**

The offer of CCCA increased receipt of any postsecondary degree or occupational certificate or other credential—a secondary outcome—by 11 percentage points (41% in the control group versus 52% in the treatment group). Sample members earned few college credits—less than one credit per member of the treatment group—and there is weak evidence that CCCA caused eligible applicants to earn slightly *fewer* credits. This could be because courses on center did not provide credit. This could also be because these eligible applicants were taking certificate or credential programs at the college that involve non-credit courses (Rutschow, Tessler, and Lewy 2021).

The offer of CCCA did not increase high school completion, a secondary outcome. About 40 percent of both the treatment group and control group completed either a GED or high school diploma. Note, however, that there was limited scope to increase completion; about 40 percent of the sample had a GED or high school diploma at baseline.

The offer of CCCA did not increase receipt of any industry-recognized certification, credential, or license: slightly less than 40 percent in both groups.

Exhibit 4-10   Educational Attainment (from survey)

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Received any degree, certificate, credential, or license (%)	76	66	10**	5	15
Degrees, Certificates, and Credentials					
Received a high school diploma (%)	**41**	**38**	**3**	**5**	**8**
Received any postsecondary degree or occupational certificate (%)	**52**	**41**	**11****	**5**	**26**
College Credits					
Number of college credits earned	0	1	−1*	0	−84
Professional Certification, Credential, or License					
Received any industry-recognized certification, credential, or license (%)	39	38	1	5	2

SOURCE AND FOLLOW-UP PERIOD: 18-month follow-up survey; college credits as of 18 months after random assignment, all other outcomes as of survey interview.

NOTES: **Secondary outcomes are bolded**; exploratory outcomes are not bolded. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. The total sample of 383 includes 208 treatment group and 175 control group members who completed the 18-month follow-up survey. Appendix H tables report item-specific sample sizes.

Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

From the NSC, there is no evidence of impact of the offer of CCCA on college degrees or college certificates (see Appendix Exhibit H.4-2). Rates of receipt of college degrees were low; never more than 1 percent.

4.5. Labor Market Outcomes

This section presents results for labor market outcomes; first from the follow-up survey (Exhibit 4-11 below) and then from the National Directory of New Hires (NDNH; Exhibit 4-12 and Exhibit 4-13). This section also presents results for composite hours in productive activities, defined as time in education/training, employment, or military service, as measured in the survey (Exhibit 4-14).

Results in this section need to be interpreted with care. Time in Job Corps is usually time not working. As of the survey (18 months after random assignment), 34 percent of the treatment group was still in Job Corps and substantially more of the treatment group was in Job Corps than of the control group (see Exhibit 4-1). Thus, through the follow-up survey, impacts on labor market outcomes are *expected to be negative*; less employment, fewer hours, lower earnings. The findings presented in this section are consistent with that expectation. This pattern of negative impact is common for as long as program participation is substantially higher in the treatment group than in the control group (e.g., Schochet, Burghardt, and McConnell 2008.

- **Both as measured in the survey and as measured in the NDNH, through 18 months after random assignment, the offer of CCCA had clear negative impacts on a wide range of labor market outcomes.**

Using survey-measured outcomes, the offer of CCCA *decreased* the percent of eligible applicants ever employed or in the military since random assignment (−17 percentage points; 75% in the control group versus 58% in the treatment group). Enrollment in the military was rare and the offer CCCA had no impact on this outcome.

The offer of CCCA also *decreased* several measures of the intensity of employment. As of follow-up, hours per week—including zero hours for those not employed—decreased by 7 hours (17 hours in the control group versus 10 hours in the treatment group). Cumulative months and hours of employment or military service since random assignment both *decreased* (by two months and 509 hours, respectively).

Exhibit 4-11   Employment (from survey)

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Employment					
Employed or in the military 18 months after random assignment (%)	42	49	−7	5	−15
Ever employed or in the military since random assignment (%)	58	75	−17***	5	−23
Ever employed since random assignment (%)	58	75	−17***	5	−23
Ever in the military since random assignment (%)	1	2	−1	1	−54
Intensity of Employment					
Total hours worked per week 18 months after random assignment	9.8	17.0	−7.2***	2.0	−42
Hours worked per week, if employed	*24*	*35*	*−11****	*2*	*−31*
Total months of employment or military service since random assignment	4.2	6.2	−2.0***	0.6	−32
Total hours of employment or military service since random assignment	439	948	−509***	96	−54

SOURCE AND FOLLOW-UP PERIOD: 18-month follow-up survey; as of 18 months after random assignment.

NOTES: All outcomes in this table are exploratory. *Outcomes in italics* apply to the subset of survey respondents who were employed or in military service 18 months after random assignment, and thus are non-experimental. Where not italicized, outcomes apply to the full survey sample, and impact estimates are experimental. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. The total sample of 383 includes 208 treatment group and 175 control group members who completed the 18-month follow-up survey. Appendix H tables report item-specific sample sizes.

Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Similar patterns were observed in the NDNH administrative data. In the first six full calendar quarters after random assignment, the offer of CCCA *decreased* rates of ever employed by a fifth and earnings by about half (a decrease of $4,073 per quarter relative to $8,805 in the control group). There is some weak evidence that the impacts are becoming less negative past the fourth quarter after random assignment (Appendix Exhibit H.5-2).

Exhibit 4-12   Employment and Earnings for Survey Cohort (from NDNH)

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Employment					
Total quarters employed during Q1 through Q6	2	3	−1***	0	−28
Ever employed during Q1 through Q6 (%)	63	78	−15***	4	−19
Earnings					
Cumulative earnings in Q1 through Q6 ($)	4,732	8,805	−4,073***	701	−46
Cumulative earnings, if ever employed, in Q1-Q6 ($)	*7,435*	*11,294*	*−3,859****	*881*	*−34*

SOURCE AND FOLLOW-UP PERIOD: National Directory of New Hires, through six quarters after random assignment.

NOTES: All outcomes in this table are exploratory. *Outcomes in italics* apply to the subset of sample members who were ever employed during Q1 through Q6, and are thus non-experimental. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]). The total sample of 589 includes 294 treatment group and 295 control group members of the Survey Cohort of the Experimental Impact Study sample. Appendix H tables report item-specific sample sizes.

Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
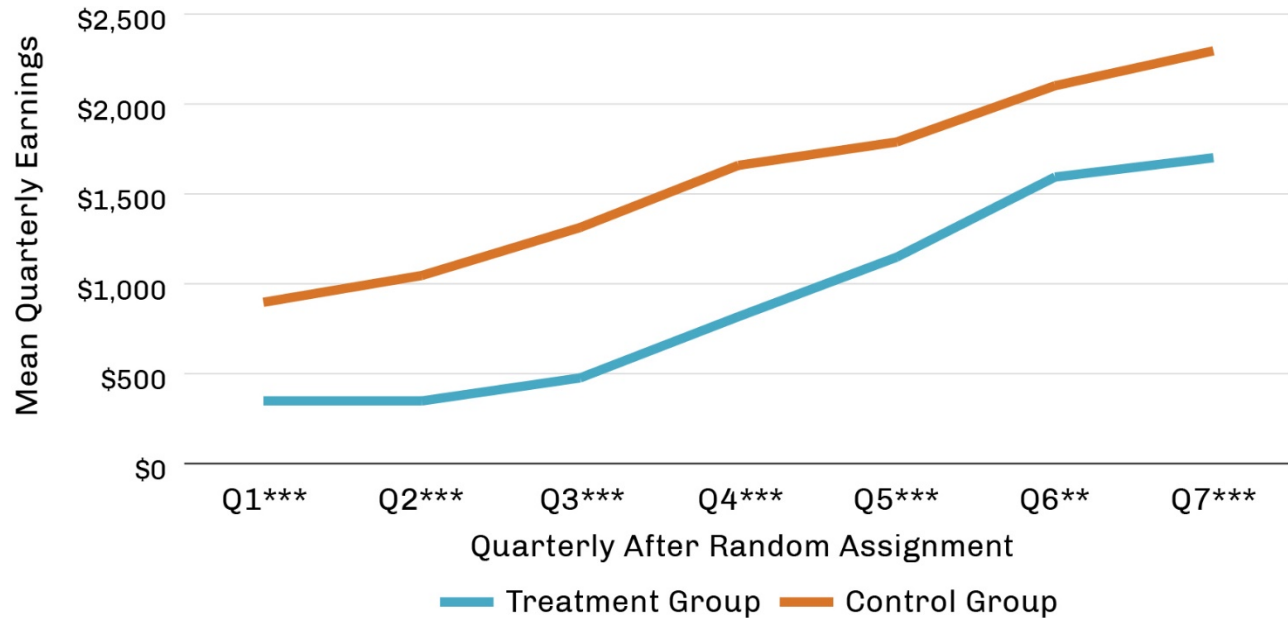
Exhibit 4-13   Earnings, for Survey Cohort (from NDNH)

SOURCE AND FOLLOW-UP PERIOD: National Directory of New Hires, through seven quarters after randomization.
NOTES: All outcomes are exploratory. Impacts are estimated on the Survey Cohort only. The total sample of 589 includes 294 treatment group and 295 control group members with available NDNH data.
Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

During the 18-month follow-up period, equal fractions of treatment and control group members were productively engaged, defined as in school or employed. The youth development literature defines "disconnected" as being neither in school (including occupational training) nor employed (including the military; Fernandes-Alcantara 2015). The offer of CCCA had no impact on disconnection. Both the treatment and control group members were connected productively (in school or employed) for 13 of the 18 follow-up months. This appears to be because more hours of education/training in the treatment group were offset by more hours of employment/military in the control group.

Exhibit 4-14   Months of Productive Activities (from survey)

Outcome	Treatment Group Mean	Control Group Mean	Impact (Difference)	Standard Error	Relative Impact (%)
Total Training/Education, Employment, or Military Service					
Total months	**13.7**	**12.9**	**0.8**	**0.8**	**7**
Total months, if any	*13.9*	*13.4*	*0.5*	*0.8*	*4*
Total hours	1,766	1,871	−105	118	−6
Total hours, if any	*1,793*	*1,947*	*−153*	*116*	*−8*
Hours per week, if any	*30*	*34*	*−4****	*1*	*−11*

SOURCE AND FOLLOW-UP PERIOD: 18-month follow-up survey; as of 18 months after random assignment.
NOTES: **Secondary outcomes are bolded**; exploratory outcomes are not bolded. *Outcomes in italics* apply to the subset of survey respondents who attended any training or were ever employed or in military service, and thus are non-experimental. Where not italicized, outcomes apply to the full survey sample, and impact estimates are experimental. "Relative impact" represents impacts as a percentage of the corresponding control group mean (i.e., 100 x [impact / control group mean]); relative impact is blank if the control group mean is zero. The total sample of 383 includes 208 treatment group and 175 control group members who completed the 18-month follow-up survey. Appendix H tables report item-specific sample sizes.
Statistical significance based on two-sided hypothesis tests; significance levels are as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

4.6. *Broader Measures of Well-Being*

This section presents results for broader measures of well-being (all from the follow-up survey): risky behaviors (Appendix Exhibit H.6-1) and participation in public assistance programs in the last three months (Appendix Exhibit H.6-2).

- **There is no evidence that the offer of CCCA shifted risky behaviors or participation in public assistance programs.**

Rates of participation in risky behaviors were similar in the treatment group and control group: about 7 percent of eligible applicants had been arrested since random assignment, about 20 percent had used substances "to get high" in the previous week, and about 1 percent had committed a property offense in the last week. The lack of impacts on these outcomes is notable because there were favorable impacts on crime (but not drug use) in the National Job Corps Study (Schochet, Burghardt, and McConnell 2008). It is possible that the legalization of marijuana in Washington State in 2012, including for those under 21 with a prescription, may have influenced these results (both arrests and prevalence of substance use). This finding may be related to Cascades slightly looser disciplinary strategy (consistent with the goal of a college-like environment; see Section 2.3)

Rates of participation in public assistance programs in the last three months were also similar in the treatment and control groups: about 35 percent for the Supplemental Nutrition Assistance Program, 6 percent for Temporary Assistance for Needy Families, and 25 percent for Medicaid. Lack of impact of the offer of CCCA is slightly surprising. To the extent that more treatment group members were on center at follow-up, fewer of them should have needed these programs, as Job Corps provides food, housing, healthcare, clothing—without charge to the student. Nonetheless, low rates of participation overall were expected given that very few of the eligible applicants had dependent children (an eligibility criteria for many public assistance programs).

5. Discussion

This final chapter briefly summarizes findings of the evaluation's Implementation Analysis, Participant Flow Analysis, Service Contrast Analysis, and Impact Analysis and discusses their implications. Section 5.1 summarizes findings. Section 5.2 considers implications for the CCCA program model and for further evaluation of that model. Section 5.3 provides some closing thoughts.

5.1. *The Evaluation's Findings*

The CCCA pilot was to be a proof of concept for a college-focused version of Job Corps. Like the conventional Job Corps model, the vision was for a residential program that took care of students' basic needs—food, housing, healthcare, clothing—allowing them to focus on their education and training. Entry was to be limited to those most likely to enroll in college courses while in Job Corps—defined as having achieved at least an eighth-grade equivalent in math and reading skills prior to enrollment. As needed, students were to complete high school while in the pilot, either a diploma or a GED—primarily on center. Most other instruction was to occur at a partner community college.

- **National Office of Job Corps and operator Adams and Associates succeeded in implementing the program vision.**

Restarting a closed Job Corps center is hard. Restarting a closed center with a new and untried program model is much, much harder. Working together, the NOJC and Adams succeeded in that task. As with any attempt to implement a new program model, there were challenges. NOJC and Adams worked through the challenges, revising and refining the model to align with emerging experience. Over the pilot's three-year term, the program matured. By the end, most—but not all—of the components were in place.

- **The pilot revealed substantial demand for a college-focused Job Corps model.**

The pilot vision assumes that there are enough potential applicants for Job Corps who are interested in a college-focused program, and meet the test score requirements to fill a center. During the pilot's period of operation, about a fifth of PNW applicants met those criteria. In steady state and without the need to fill a control group, this would easily have been enough to fill the center. That the Cascades center could recruit students strongly suggests that there is an interested population.

- **Much of the demand for a college-focused Job Corps model is from applicants who would not otherwise be interested in Job Corps.**

A college-focused program would not simply attract applicants who would otherwise have enrolled in Job Corps centers not focused on college. Instead, a college-focused program "expands the market"; that is, a college-focused program attracts students who would otherwise not be interested in Job Corps. About a quarter of those who arrived at CCCA would otherwise not have arrived at Job Corps at all. Furthermore, treatment group members stay longer in Job Corps. In net, the estimates suggest that offering a college-focused Job Corps program to everyone interested would increase total OBS (i.e., students in Job Corps centers) by about 19 percent.

- **The offer of CCCA increases total time in education and training (the study's single pre-specified confirmatory outcome).**

The study's 18-month survey collected information on months in any form of education or training—college (whether or not though Job Corps), Job Corps (whether or not in association with a college), and non-college non-Job Corps education and training. Analyses of these data imply that the offer of CCCA substantially increased total months in education and training: from 6.6 months in the control group to 9.5 months in the treatment group. This increase of 2.8 months is a relative increase of nearly half (43%).

The control group had more employment. In net, the offer of CCCA does not shift months of connection—that is, either education and training or employment: about 13 of the 18 months in both group.

The offer of CCCA also increased overall (not college-specific) receipt of credentials or certificates (a pre-specified secondary outcome): from 41 percent in the control group to 52 percent in the treatment group.

- **Recruited Job Corps students can succeed in college—with crucial caveats.**

CCCA concluded formal agreements with Skagit Valley College and—over time—seems to have developed a constructive and mutually beneficial working relationship. After some time on center, students shifted—at least partially—to instruction at the community college. The Implementation Study suggests that the transition, however, did not go as smoothly or as soon after their arrival at CCCA as had been implicit in the vision.

The vision was not explicit on these issues, but the implicit assumption appears to have been that almost any student admitted to CCCA could proceed to and perform successfully in community college—after only a short orientation period on center and with only moderate levels of support while in college. Staff interviews suggest that—at least for some CCCA students—that assumption was too optimistic. Most community college students are old enough to have completed high school (age 18 or older); have the personal discipline to complete conventional high school (as evidenced by a high school diploma); and given their higher educational attainment, are likely to have higher literacy and numeracy skills than at least those treatment group members without a high school diploma. In contrast, treatment group members were as young as age 16 (and many were age 17 and younger at application), most had not completed high school, and the minimum math and reading assessment for admission was about equivalent to a typical late sixth grader's achievement level.[51]

This disjunction between community college students and at least some of the CCCA population should inform our expectations about the success of the CCCA program. Specifically, given this disjunction, that some students found community college challenging should not be surprising. Some college and center staff reported that many students lacked maturity and had academic challenges to succeeding in college. The center responded in two complementary ways. First, the center lengthened the on-center component of the program and instituted a set of checkpoints to be satisfied before students could proceed to college. Second, the center substantially increased support for college students, both at the college campus and back on center.

Further, the Impact Analysis suggests that there are identifiable applicants who will stay longer in Job Corps and get more months in college. Given the previous description of the typical community college student, the characteristics of applicants who tend to do have more months of college and larger impacts on months of college are not surprising: they are older, have a high school credential at application, and achieved higher test scores. Slightly more surprisingly, these are also the characteristics of eligible applicants with larger impacts on time in Job Corps and months of college—that is, who the pilot helps

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[51] Actual average test scores of CCCA students approximated a grade level equivalent of grade 8.5.

more. A plausible interpretation of these findings is that the younger and less academically prepared eligible applicants were also less likely to derive any benefit from a college-focused program.

- **There are no short-term impacts of the offer of CCCA on attainment of college credentials or degrees.**

The National Student Clearinghouse provides high-quality data on college enrollment and credentials. Through 27 months after random assignment, the evaluation found moderate impacts on FTE months of college—about a month and a half and more than two months in some subgroups. Compared to other non–Job Corps programs that provide community college for disadvantaged youth, this is a moderate to large impact. Alone, it is probably not large enough to generate detectable long-term earnings impacts.

Detectable long-term earnings impacts would probably require some combination of a larger impact on months of college and attainment of degrees or other credentials such as certificates. Through 27 months after random assignment, the evaluation found no evidence of impact on degrees or other credentials. In the absence of COVID-19, 27 months of follow-up might have been enough to expect to see impacts on at least non-degree college credentials. Given COVID-19, when (if ever) to expect impacts on credentials is less clear.

- **Short-term impacts of the offer of CCCA on earnings are strongly negative, as expected in early follow-up.**

The National Directory of New Hires provides high-quality data on employment and earnings. Through 18 months after random assignment, the impact of the offer of CCCA is strongly *negative*. This is as expected. More time in Job Corps is less time working. We would not expect to see positive impacts of Job Corps until after most eligible applicants have left CCCA and after any post–Job Corps time in community college is also completed. Even in the absence of COVID-19, that is probably at least three years after random assignment.

- **CCCA's results should be interpreted with nuance as the evaluation was not able to fully test a college-focused Job Corps program.**

For three reasons, the evaluation did not estimate the impact of a robust college-focused Job Corps program. First, the Survey Cohort that is the focus of this evaluation begins and continues through a period in which the program was still maturing. A study of a more mature program could provide better evidence of the likely impact of a college-focused Job Corps model

Second, the nature of the pilot changed radically in July 2019. As of that date, the center stopped enrolling students in CCCA and started enrolling students in a more conventional Job Corps program. Job Corps intended to continue the pilot program for students still enrolled in it, but this was not entirely possible given necessary changes to accommodate non-pilot students on site. As a result, some students received a hybrid or more traditional services as time went on. More fundamentally, with non-pilot students on campus, the culture and management focus shifted.

Third, COVID-19 arrived in March 2020. The center closed to almost all students. After a lag and with implementation challenges, the center and the college converted to a virtual model. That virtual model likely reduced the strength of the intervention and tempered impacts on education and training, compared with an in-person model. In part this is true because not all students successfully made the transition to a virtual mode. More fundamentally, Job Corps provides an on-center experience and the pilot included in-person college because planners believed that those were important and positive parts of the model. It is therefore important to interpret the results knowing that not all students received in-person services which may impact results.

5.2. *Implications and Next Steps*

The evidence to date is promising, but not conclusive. A follow-on evaluation could provide evidence of longer-term impacts on college credentials and earnings. There are at least two strategies for generating more evaluation evidence.

- **Long-term follow up of the CCCA sample.**

An administrative data follow-up of the CCCA sample could provide some insights into the longer-term impact of the pilot on college and earnings. If NDNH earnings data are available for future analysis, a follow-up study could provide insight into long term impacts on employment and earnings.

However, any such long-term follow-up would test the imperfect implementation described earlier (non-pilot students at the center and then the pandemic).Furthermore, given the small sample size, such a study could only detect large impacts on earnings.

- **A rigorous, multi-site, random assignment, scale-up evaluation of a refined residential, college-focused Job Corps model would provide additional evidence in various settings.**

A pilot—utilizing and building upon lessons learned from CCCA—would add evidence on the effectiveness of a college-focused Job Corps model. Possible considerations for a larger, rigorous study include:

- The CCCA pilot vision included a college-like atmosphere (no non-college-focused students) for up to three years. Thus, a better test would operate the pilot for a longer period of time and with careful thought about creating a college-like atmosphere (such as not having non-college focused Job Corps students at the same center)

- The subgroup findings suggest screening even more intensively at application. Perhaps move from the de facto late-sixth-grade standard to the original vision of an eighth-grade standard, and perhaps even higher.

- The subgroup findings also (but more weakly) suggest requiring some high school credential (either a GED or a high school diploma) at application. If such a requirement were imposed, NOJC might allow lateral transfer from a conventional Job Corps program to a college-focused Job Corps program on receiving a high school credential at the conventional Job Corps center.

- Given that impacts were larger for older pilot students, NOJC might consider expanding eligibility through the top age range of the Job Corps program (i.e., age 24, rather than CCCA's top age of 21 for CCCA).

- Given the evidence of larger impacts across a range of proxies for preparation, consider requiring higher standards (e.g., test scores, high school status) for younger applicants (perhaps those younger than age 18).

- Pilot results suggested that not every student is ready to succeed in college shortly after arrival at the center. In addition to requiring better academic preparation, a future college-focused Job Corps program model might consider screening intensively—at least as intensively as in the Mature Phase and perhaps more intensively—before allowing students to proceed from the on-center phase to the college phase of the program.

- Finally, pilot results suggested that even students ready to make the transition to college, need continued intensive support while in college. Thus, in addition, to screening students before allowing them to proceed to college, a future college-focused Job Corps program model might consider providing intensive support at the college phase—at least as intensive as in the Mature Phase and perhaps more intensive.

Such a scale-up evaluation should have a **longer follow-up period**. This evaluation suggests that to detect impacts on earnings, a follow-up period of at least five years after random assignment would be appropriate. An **experimental evaluation design** (i.e., using random assignment) was feasible for CCCA; an experimental design should be feasible for a scale-up evaluation with careful planning.

A multi-center pilot could fill gaps in knowledge. First, a multi-site pilot would provide larger samples. As noted, the CCCA sample is small, such that it could only detect relatively large impacts on earnings. Larger samples could detect smaller and more plausible impacts on earnings. An impact of $500 per quarter would be plausible, but would require a sample of more than 4,000, split between the treatment group and the control group. Few centers could generate a sample that large, even over several years.

Second, a multi-center pilot would allow exploration of the replicability of the program model across different regions and operators, different types of students, and different community college partners. It would also allow exploration of whether and how impacts of a college-focused Job Corps program vary with sub-populations, such as for women, Hispanic students, and Black non-Hispanic students. Similarly, impacts appear to vary with occupational pathway. A larger pilot could explore if and how impacts vary by the occupational focus of the training.

5.3. *Closing Thoughts*

This evaluation of the CCCA pilot supports the basic vision in DOL's solicitation. There exists a moderately-sized eligible population that would enroll in and be well served by a college-focused Job Corps program. With the support provided by a residential program, as well as the strong academic and non-academic supports that Job Corps can provide, such a college-focused Job Corps program can substantially increase time in college. More time in Job Corps and more time in college would plausibly lead to higher earnings (Flores, et al., 2012; Becker 1990; Stevens, Kurlaender, and Grosz 2019).

This evaluation should be viewed as a proof of concept. Implementation was imperfect and then COVID-19 arrived, so further research is needed to determine impacts of a better implemented program. Longer follow-up and likely larger samples are needed to detect impacts on earnings. A multi-center study would enable the exploration of how impacts vary with demographic groups and specific occupations.

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