To Improve and to Prove: A Development and Innovation Study of Year Up's Professional Training Corps

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All interpretations and conclusions in this report are solely the responsibility of the authors and do not necessarily reflect the views of the Institutes for Education Sciences, Year Up, or its sponsors.

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Executive Summary

Having shown its legacy training program for low-income young adults to be highly effective (Fein & Hamadyk, 2018), Year Up undertook the challenge of adapting this intensive, stand-alone model for improved scalability. The resulting adaptation is its Professional Training Corps (PTC) program, which maintains key features of the original model but operates on college campuses and leverages college instruction and facilities to reduce costs.

Launched at one college in 2010, the PTC attracted strong interest and quickly spread to other locations. By mid-2019, PTC programs were operating on over 15 college campuses and serving over 2,000 young adults annually.

Year Up initially approached the PTC as a pilot initiative, emphasizing incremental, evidence-based improvements. In 2015, the organization began expanding the number of PTC sites in operation. It nonetheless kept local programs fairly small—generally serving fewer than 150 participants a year—while continuing to assess outcomes, address ongoing challenges, and conduct small impact studies. Once the program is meeting performance targets consistently, Year Up anticipates participating in a larger impact study. Its leaders describe their two-part approach to evidence-building as "to improve and to prove."

As part of its strategy for evidence-based improvement, Year Up partnered with a team of researchers at Abt Associates and the University of Pennsylvania to secure financial support for its development and improvement work from the Institute of Education Sciences (IES). This Executive Summary describes the research goals and main findings of the IES-funded project. The team completed fieldwork and data collection in early 2020. Hence, the report does not reflect any effects the COVID-19 pandemic may have had on PTC or associated outcomes.

The Professional Training Corps

The PTC program model includes all elements of Year Up's stand-alone core program but alters some features to reduce costs. A well-designed and implemented randomized controlled trial (RCT) found the core program very successful in increasing participants' earnings (Fein and Hamadyk, 2018). But the core program's high cost—about $35,000 per participant in 2018—makes scaling prohibitive.

Compared to the core program, PTC programs target a similar population of young adults and provide similar services over two six-month phases—learning and development (L&D) and internships. The target population is 18-24 year-olds from low-income backgrounds who have a high school diploma or equivalent. Local program staff recruit and screen to identify applicants who are motivated and face life challenges deemed manageable with the range of supports the program provides.

While preserving the main elements of the core program, the PTC model revises the service delivery approach, shifting some instruction responsibilities to colleges and reducing the intensity of other services. Like the core program, during the first six months (L&D), participants receive four types of services: (1) training in basic academic (mainly English), professional (i.e.,

"soft") and technical skills; (2) intensive coaching; (3) close monitoring; and (4) feedback on behavior and support from staff and peers within organized learning communities of about 40 participants. As in the core program, time is reserved for weekly learning community activities such as "Friday Feedback" and guest speakers.

During the second six months, program participants move to full-time internships at area firms, where they gain entry-level experience in a target field such as IT or financial services. The structure of the internship phase is similar to that in the core program. Participants work full-time four-and-a-half days a week and return to the Year Up site each week for a half-day workshop called the Internship Seminar.

As in the Year Up's core program, participants earn a weekly stipend throughout the year, conditional on meeting Year Up's strict behavior code. Performance standards under both program models emphasize full-time work at good wages in Year Up target occupations after program completion. Both programs draw heavily on revenue from employer payments for interns.

The main difference is that local PTC programs use college instruction and donated campus office space with the goal of reducing cost while maintaining performance comparable to that of the core programs. PTC participants take academic and technical courses from instructors at the partner colleges (usually as a cohort) and have access to the same college facilities and supports as other students at the college. Whereas internship revenue covers about 60 percent of the core program's costs, Year Up's goal for PTC is to cover costs entirely through employer payments.

Like their counterparts in the core program, PTC program staff provide training in professional skills, arrange and monitor internships, provide coaching and other supports, run learning communities, and monitor participants' behavior. However, participants in PTC programs have substantially fewer contact hours with Year Up staff than do participants in the core programs (about 22, compared to 35, contact hours a week during the L&D phase). Stipends also are lower in PTC than in the core program ($50/week during L&D and $150/week during internships versus about $150 and $225, respectively, in the core program).

The PTC financial model is calibrated to reach break-even by reducing the average cost per participant to about $20,000 and by generating commensurate revenue from employer payments for interns). The model aims to reduce costs primarily by substituting college courses for Year Up instruction (thereby reducing staffing costs), by using donated office space on campus, and by reducing stipend amounts. Hitting revenue targets requires retaining at least 83 percent of participants to the revenue-generating internship phase and collecting payments at the full rate ($26,000 per intern) for at least 90 percent of interns. Core programs are subject to the same revenue targets and generally have met them.

Study Approach

The project consisted of two overlapping periods of activity. Work began with in-depth study of several PTC program components and then shifted to a more global assessment of overall operations and impacts.

During the first three years of the project (which began in 2015), the study team conducted quick-turnaround "mini-studies" of three high-priority implementation challenges. Each sought to identify promising approaches to addressing these challenges and provide preliminary evidence on the response of Year Up and its local PTC programs to the study findings.

In the last two years of the project, the team assessed PTC from a more global perspective. One strand of evaluation was an assessment of implementation fidelity. A second strand measured impacts on education and employment outcomes through a small RCT in three PTC programs. As the length of follow-up possible under the IES grant timeline was very short, the goal for this small RCT was to implement an experiment whose outcomes could be followed over a longer time period in a subsequent study.[1] Thus, *though this report provides initial impact analyses, the findings do not yet provide a firm basis for assessing program success.* Finally, the team interviewed diverse program stakeholders towards the end of the project period to ascertain their perspectives on progress and challenges going forward.

The study team designed this project to address the major objectives of IES's Development and Innovation (D & I) grant program. Such grants support projects that develop and document evidence-based interventions to improve education outcomes. Closely related IES grant programs support more rigorous effectiveness and replication studies of interventions developed through D & I projects. By funding these complementary types of projects, IES aims to support progression across successively higher levels of evidence-building.

Key Findings: Mini-Studies

Unlike the typical IES D & I project, this one did not begin with a pre-specified focal intervention. Rather, the study team engaged practitioners—including Year Up and its college and employer partners—in prioritizing needs and solutions. In this way, the team sought to better identify critical improvement needs, mobilize experienced staff to generate more effective solutions, and promote ownership of, and commitment to, improvements.

The study team guided the process through a series of structured discussions to, first, identify a wide range of topics of interest and, then, progressively winnow the list to three issues that would be addressed in mini-studies. Key selection criteria were that the issue would be of high priority to PTC stakeholders, addressable via a relatively short-term study, and not already the focus of a major improvement effort.

Each mini-study used different research methods. In lieu of final written reports, study leaders communicated findings to Year Up national and local staff through more informal and explicitly interactive means—generally involving a series of PowerPoint briefings via webinars. Year Up's national staff played a key role in soliciting, sharpening, and guiding the program's responses to study findings and recommendations.

[1] A grant from Arnold Ventures to Abt Associates is supporting this longer-term follow-up.

Mini-Study #1: Improving Academic Outcomes and Retention

The first mini-study tackled a central challenge in the core-to-PTC adaptation—establishing strong monitoring of participants' academic performance and providing timely support to those experiencing challenges. It used an RCT to test staff-developed improvements in academic monitoring and supports during the program's six-month L&D phase. Over two enrollment cycles, the study team randomly assigned 317 PTC enrollees in three local programs to either a treatment group ("Improvement Strategies Group") or a control group ("Usual Strategies Group").

During cycle 1, program staff used the improvement strategies they had developed for monitoring and supporting PTC participants in the treatment group and used their usual strategies for participants in the control group. Based on experiences with the improvement strategies implemented for the first enrollment cohort, local staff modified their approaches for the second cycle.

The study team monitored the strategies being used with the Improvement Strategies Group and, after the two cycles of testing concluded, compared *program retention* and *college enrollment rates* for the two groups. Overall, the improved monitoring boosted retention to the internship phase by 10 percentage points and college persistence by 13 percentage points (statistically significant at the 10-percent and five-percent levels, respectively). Impacts on program retention and college persistence for cycle 2 were even larger: 14 and 20 percentage points, respectively (both statistically significant at the five-percent level).

A year after the mini-study ended, the three offices reportedly had institutionalized the improved coaching practices refined in cycle 2, and national staff were encouraging additional locations to adopt the improvements. Local PTC staff cited the mini-study's approach to collaborative development and testing as a best practice worth extending to other improvement needs.

Mini-Study #2: Setting Up Successful Internships

The second mini-study assessed strategies for working with employers to develop processes for setting up internships that consistently provide high-quality workplace experiences. It drew on in-depth interviews and focus groups with current PTC interns and other stakeholders to make qualitative assessments of current strategies and identify potential improvements in the processes for setting up successful internships.

Discussions with participants, employers, and program staff indicated that the quality of PTC's internship experiences was uneven. Some companies—particularly larger firms with established internship programs—consistently provided stimulating learning opportunities and supportive social environments, but others failed to consistently do so.

A brief literature review helped to identify markers of good internships, including clear learning objectives; well-designed skill development activities; opportunities for rotation through different types of positions; steps to minimize and otherwise make good use of downtime; and active engagement with supervisors and co-workers.

Based on the findings, the study team identified steps that Year Up national and local staff could take to support employers in setting up high-quality internships. The team made two overarching recommendations. The first was for Year Up national and local staff to inventory and make accessible a living inventory of firms' best practices, drawing on Year Up's deep reservoir of internship experience. The second was to create communities of practice among employers to foster networking, brainstorming, and sharing of best practices.

The mini-study also recommended that local staff: (1) create more detailed descriptions of each internship so that participants could better prepare in advance; (2) strengthen training and planning with employers around the kinds of activities and supports they would provide—potentially specifying these as part of written agreements; (3) provide technical assistance to employers and participants in developing individualized six-month learning plans for internships; and (4) help employers to establish high-quality processes for monitoring and coaching interns.

Interviews one year after the mini-study found Year Up staff still committed to making the recommended improvements. The organization had taken some steps to improve coordination with employers around describing internship positions. They also had augmented new manager training and had strengthened existing monitoring and feedback mechanisms. More substantial improvements recommended in this mini-study remained on Year Up's "to do" list.

Mini-Study #3: Fostering College Persistence

The third mini-study explored the tensions between Year Up's traditional emphasis on full-time employment and increased interest in college completion—tensions that arose from the partnerships of local PTC offices with local colleges and increased interest in fostering longer-term career advancement. The study team used a mixed-methods approach that combined statistical analysis of patterns of college persistence and employment following PTC and core program completion with insights from in-depth interviews and focus groups.

Both the literature and findings from analyses of Year Up data indicated that full-time employment substantially reduces the likelihood of college enrollment, considerably lengthens the time to degree, and decreases the likelihood of degree receipt. Although about twice as many PTC as core graduates attended college in the year following the program, longer-term analyses by Year Up show that few in either group earned degrees.

As context, this mini-study cited external evidence that a college certificate or degree can be critical for advancement in many fields. In interviews, a number of Year Up national leaders nevertheless questioned the "college for all" thesis, noting that experience and industry certifications offered viable alternatives in IT and other occupations. Other leaders affirmed the need for college degrees but felt that an intervening spell of work with good earnings was important for positioning many young adults to afford college.

In synthesizing input to arrive at recommended improvements, the team sought to identify ways that PTC programs could promote college continuation without weakening post-program employment outcomes. Our central recommendation was that Year Up introduce a systematic approach to career planning that would balance and further both goals. The recommendation envisioned local PTC programs working with participants—as well as college advisors and

worksite supervisors—to develop personalized career plans that include specific steps for both employment and continuing education. Plans would identify sequences and combinations of work and school consistent with each participant's goals. The plans would provide the basis for monitoring of graduates' progress and local programs' performance.

By mid-2019, Year Up had implemented the initial components of a "guided career pathways" approach along the lines recommended. These components included new tools, curricula, performance goals for Year Up staff, and progress goals for participants. Going forward, careful analysis is needed to determine whether the revised approach is identifying solid next steps for education and training (as well as employment) and the degree to which Year Up's young adults are taking those steps.

Key Findings: Implementation Fidelity

This component of the project assessed the degree to which the PTC program was operating as intended at the end of the four-year study period. Year Up's general goal was for PTC programs to meet the same performance targets as the core program—but at a substantially lower cost.

The study analyzed a series of performance outcomes up to mid-2019. Analyses are based on two primary data sources—administrative statistics from Year Up's management information system, and an online survey completed by all 15 PTC local program leads and 14 of their main college liaisons.

The findings show that Year Up had made substantial progress in implementing the PTC program by mid-2019. The program achieved high fidelity relative to goals for lowering per-participant costs, operating with a leaner staff, recruiting young adults who fit the target profile, collecting full payments for internships, and placing high proportions of graduates in well-paying jobs or in school.

The program consistently struggled to meet goals for recruitment and retention. In the discussion section below, we summarize recommendations for strengthening recruitment that emerged from a mid-2019 round of stakeholder interviews. Concerning retention, Mini-Study #1 showed that improved academic monitoring and supports could generate a substantial boost in retention for a modest cost.

Recruitment and retention shortfalls are the main reasons why local PTC programs to date have generated only three-fifths of the internship revenue needed to fully cover their costs.[2] Our findings suggest strong potential for addressing both shortfalls.

[2] During the same period, internship revenue also covered about three-fifths of the core program's costs, but for different reasons. Due to higher retention rates, the local core programs collected substantially more internship revenue per participant, effectively meeting their revenue targets. But because the core program's per-participant costs are substantially higher (about $35,000) than PTC's ($22,000), revenue covered a similar fraction of costs in the two programs.

Key Findings: Early Impacts on Education, Employment, and Earnings

A small RCT designed to measure the overall impacts of the PTC programs had generated only a short follow-up period as of the cut-off point for data used in the present report. Recognizing that local PTC programs had not yet reached the standards Year Up envisions for full implementation, the findings are useful for seeing whether impacts are headed in the right direction, but they do not represent the effects of a fully implemented program. Furthermore, as discussed earlier and below, only limited follow-up was possible during the period of this IES grant. *More time will be needed to determine if this RCT will yield promising impacts.*

Over a two-year period beginning in July 2017, staff at three PTC programs enrolled four cohorts of program applicants (554 young adults) in the study. Those randomly assigned to the treatment group were encouraged to participate in PTC. Those assigned to the control group were not allowed to participate in PTC, but they could apply to other education and training programs at the college or elsewhere. This report presents very early evidence of program impacts, focusing on short-term outcomes for the earliest two cohorts. Analyses draw on administrative data on college and employment outcomes from the National Student Clearinghouse and the National Directory of New Hires and cover the in-program and immediate post-program periods (Qs 1-4 and 5 following enrollment, respectively). Subsequent reports will analyze impacts for all four cohorts over a longer follow-up period.[3]

Year Up's local PTC programs produced moderately large increases in college enrollment during the program's L&D phase and smaller increases during its internship phase. Given the programs' close college partnerships—with participants taking college courses and PTC programs co-located on campus—one might have expected impacts on college enrollment larger than in the core program during the program year (as reported in Fein and Hamadyk, 2018). But impacts on any enrollment were about the same for the two programs.

One reason is that the PTC programs in the study served a population of young adults with higher rates of college enrollment than did the core programs. Higher enrollment rates in the PTC control group set a higher bar for the PTC treatment group to surpass in order to show impacts. Another reason is that attrition between random assignment and the start of classes was higher in PTC than in the core program, due to delays and uncertainties in the college admissions process—especially financial aid determination.

The PTC programs' impacts on cumulative months of full-time college enrollment nonetheless exceeded those of the core program in every quarter, mainly due to higher rates of full-time enrollment among the PTC participant group. By the end of Q5, the PTC treatment group had gained 2.8 more months of full-time college enrollment than their control group counterparts. The corresponding figure for the core program was 1.6 months.

The early PTC findings on employment and earnings impacts also mirror those for the core program (as reported in Fein and Hamadyk, 2018). During the in-program period (Q1-Q3), the PTC treatment group had significantly lower employment rates than the control group

[3] Future reports will be developed under a separate grant from Arnold Ventures.

(reductions varying from 10 to 25 percentage points). However, by the Q4, when participants were beginning to complete the program, the reduction had shrunk to 7 percentage points. By Q5, when none of the treatment group was still in the program, employment rates were similar in the treatment and control groups.

For the full program year (Q1-Q4), the PTC treatment group's average earnings were 50 percent below that of the control group ($5,367 versus $12,984). The treatment-control gap of $7,617 is about 40 percent larger than was seen for the core program, after adjusting for different rates of program participation.

As in the evaluation of Year Up's core program, PTC treatment group members' employment and earnings increased substantially as they completed the program. By the time all participants had completed the program, the average earnings of the PTC treatment group slightly exceeded those of the control group, though the difference was not statistically significant. Longer-term follow-up is needed to determine whether larger, statistically significant earnings impacts emerge.

Discussion

By mid-2019, Year Up had made substantial progress in developing and implementing its PTC program model. The required adaptations were not trivial, and launching programs at more than 15 colleges is a notable feat. Attesting to the model's viability, PTC programs continue to operate at all but one of the colleges where they were launched, and enrollments have grown—albeit more slowly than Year Up envisioned.

Implementation fidelity analyses show that the PTC programs made substantial progress on many performance goals. They have yet to consistently meet some key targets—for example, recruitment, retention, and revenue. The study team explored the prospects for surmounting these and other challenges in a final (spring 2019) round of phone interviews with stakeholders: Year Up national leaders, local PTC leads, liaisons at partner college, and employers.

Interviewees identified a number of plausible sources of recruitment difficulties. Some causes were quite broad—such as declining numbers of 18- to 24-year-olds, plentiful (if not highly remunerative) job opportunities in a strong economy, and aggressive competition for students from a burgeoning for-profit education sector. PTC-specific challenges included convincing young adults that PTC offered a surer route to a good career than traditional college programs, and addressing attrition of applicants before the start of classes.

Stakeholders suggested a variety of responses to recruitment challenges. These responses included hiring staff with stronger community ties, formalizing efforts to increase contact frequency within and across recruitment cycles, strengthening collaboration with colleges and other local entities in developing applicant pipelines, and adjusting the PTC model to accommodate a wider target population.

Year Up and college staff agreed that local arrangements sometimes operated more like "real estate deals" than authentic partnerships. Year Up staff believed that greater engagement by college staff and faculty in program activities would help to extend and strengthen the PTC

learning community and thereby promote higher retention. College liaisons said they would like to see PTC staff and students more often at campus events.

More generally, college liaisons identified a number of motives for partnering with Year Up, including boosting enrollment of non-traditional students, increasing completion rates while maintaining academic standards, and connecting PTC program graduates to follow-on college programs. Colleges also expressed keen interest in learning how to offer Year Up–style professional skills training and internships to their students more widely.

Finally, Year Up, college staff, and employers interviewed agreed that the program should do as much as is feasible in one year to promote participants' longer-term career success. Thinking on how to accomplish this evolved somewhat during the study period, due in part to improvements in career planning growing from Mini-Study #3. The main advance was to strengthen and formalize services to equip graduates with clear long-range plans and next steps for education and employment. Relatedly, Year Up committed to monitoring whether graduates were "on track" with their plans as part of its one-year post-graduation follow-up.

At this juncture, several aspects of a robust "guided career pathways" approach remain to be fully implemented and assessed. A number of local PTC programs have taken steps to strengthen alignment among participants' career interests, available PTC training tracks, and occupational foci of internship opportunities. But more can and should be done to implement the team's recommendations for career planning. One good step would be to do more to involve college advisors and internship supervisors in career planning during PTC.

Perhaps most importantly, while Year Up continues to monitor against program-wide standards for employment goals, the new career planning approach largely defers to young adults' preferences on goals for education and training. With such an approach, monitors might find that graduates are "on track" with their career plans and yet had made little formal commitment to or progress in education and training. Year Up should assess the skills-focused goals in the career plans that its new approach is producing and strengthen related guidance as needed.

Looking Ahead

This report has documented substantial progress on PTC program implementation to date and Year Up's clear grasp of the remaining challenges. Although the current IES grant has ended, there are still many possibilities for valuable mini-studies to help solve these challenges and a variety of possible approaches to related research collaborations.

As of the end of this IES grant, only limited follow-up was available to assess PTC's impacts based on the two small RCTs implemented for this project. Under a separate grant, the study team will extend analysis and reporting on impacts over a longer follow-up period.

The large, ongoing RCT of the core program (Fein and Hamadyk, 2018)—which similarly followed years of work by Year Up to perfect implementation and a small pilot RCT—shows the value of the "to prove" step in Year Up's improve-prove paradigm. Once the PTC program model has worked out remaining challenges in meeting its performance goals, the study team

will be working with Year Up to assess potential approaches to a larger-scale RCT to measure its effectiveness.

1. Introduction

Millions of young adults leave high school with high hopes but limited prospects for a successful career. Insufficient financial and social capital make it difficult to access, navigate, and complete college. Absent a college credential, it has become increasingly difficult to find a well-paying job. Failure to take initial education and career steps during young adulthood elevates sharply the risk of long-term economic disconnection and its wider societal ramifications (Belfield et al., 2012; Lewis & Gluskin, 2018; Loprest et al., 2019; National Research Council, 2014; Ross et al., 2018).

The last two decades have brought a variety of promising programs addressing these challenges. Randomized controlled trials (RCTs) have found that a wide range of education, training, and employment strategies can improve outcomes.[4] Most of the programs tested have been small, however, and few have fostered success on both the college and employment fronts. This report provides early evidence on a next-generation program designed to address both domains—Year Up's Professional Training Corps (PTC) program.

The PTC program model is an adaptation for college settings of Year Up's successful stand-alone program, which it calls the "core" program. A federally-sponsored RCT conducted as part of the Pathways for Advancing Careers and Education (PACE) project found that the core program produced large increases in earnings extending to the end of an initial three-year follow-up period (Fein & Hamadyk, 2018). Like the core program, PTC programs serve young adults aged 18-24 with a high school diploma or equivalent. Both programs provide six months of full-time basic skills and technical training and supports followed by six-month internships in information technology (IT), financial services, and other high-demand occupational sectors.

Unlike Year Up's core program, PTC programs operate on college campuses and use college instruction and donated facilities to reduce Year Up's costs and improve scalability. The core program's earnings gains were not accompanied by improved college outcomes (Fein & Hamadyk, 2018). College partnerships heighten both the expectations and possibilities for doing more to foster college success.

Since PTC began in 2010, more than 15 colleges have started PTC programs, and additional partnerships are in the pipeline. All locations succeed in putting the program's major components in place and all programs have operated continuously since their inception. As this report documents, the PTC program to date has made substantial progress but has not yet reached the level of performance Year Up expects. Key performance gaps include shortfalls in recruitment and retention and a general need to tighten college partnerships.

Anticipating challenges, Year Up has maintained a strong emphasis on research and improvement throughout its developing of the PTC program. One strategy in its learning agenda

[4] Illustrative are studies of college success strategies such as ASAP (Weiss et al., 2019) and the LaGuardia Bridge Program (Kallison, 2017) and of employment-focused sectoral training programs such as Per Scholas (Maguire et al., 2010; Schaberg, 2017), Project QUEST (Roder & Elliot, 2019), and the Year Up core program (Fein & Hamadyk, 2018).

has involved partnering with outside evaluators to conduct research on performance gaps and promising program improvements.

In 2015, the study team for this study—comprising researchers at Abt Associates and the University of Pennsylvania—received a four-year grant from the federal Institute of Education Sciences (IES) to study the developing PTC initiative. The goals of the project were to identify and develop evidence-based responses to high-priority implementation challenges; assess the fidelity of local program operations to the PTC model; and mount a small-scale RCT of the model in several high-fidelity programs. This report presents findings from the project.

The team had completed its fieldwork and data collection by early 2020. Hence, the report does not reflect any effects the COVID-19 pandemic may have had on the PTC program or associated outcomes.

This introductory chapter provides background on the PTC model and this evaluation. It begins with a summary of the PTC model (Section 1.1). Section 1.2 discusses Year Up's approach to launching pilots at a growing number of sites and how dissemination to date attests to the new model's viability. Finally, Section 1.3 provides an overview of the study approach.

1.1 The PTC Program Model

To understand the PTC program model, it is helpful to provide a brief sketch of the Year Up core program on which it is based. This section describes the core model, adaptations for PTC, and the PTC financial model.

1.1.1 The Year Up Core Program

Refined over nearly two decades, Year Up's stand-alone core program provides a year of full-time education, training, and work experience. It currently serves about 2,000 low-income young adults (aged 18-24) annually in nine major cities. Local admissions teams screen applicants for motivation and indications they will be able to handle and benefit from the program.

During the first six months—the learning and development, or L&D, phase—participants receive training from Year Up staff in professional and technical skills, help with academic and personal challenges, feedback on behavior, and positive reinforcement from organized learning communities of staff and peers. The roughly 40 young adults in each learning community take classes and participate in weekly activities together. In the second six months—the internship phase—the program places students in full-time internships at major firms, where they gain entry-level experience in IT, financial services, or other high-demand occupations.

Year Up provides its core program participants a weekly stipend, conditional on meeting standards in a written behavior contract. Stipends average just under $150 a week during the L&D phase to $225 a week during the internship phase. Contract infractions trigger reductions in stipends. Repeated infractions can reduce stipends to zero, at which point students are dismissed from the program.

A novel aspect of the core program's financing is that employers make substantial payments to Year Up in exchange for hosting interns. In addition to the value of the work that interns do, the

internships can provide employers with a cost-effective pipeline for recruiting new hires. Revenue from internships covers about 60 percent of Year Up's costs. Private philanthropy covers nearly all of the rest: Only two percent of costs are funded through grants from government agencies.

As noted previously, a large RCT found that Year Up's core program had high retention and produced substantial increases in participants' earnings (Fein & Hamadyk, 2018). Of young adults randomly assigned to the treatment group, 75 percent completed the intensive one-year program. Following an initial year of reduced earnings during program, treatment group members' average earnings climbed to levels that remained 40 percent above those of the control group over the next two years. The study found large impacts in all subgroups examined and in all eight local offices.

In contrast, the core program had mixed impacts on college persistence. During the first (program) year, the practice of co-enrolling participants at local partner colleges boosted treatment group members' college enrollment well above the level in the control group. As treatment group members found jobs in Year 2, their college enrollment fell to levels below those of the control group. In Year 3, the two groups' enrollment rates equalized.

Notwithstanding these generally positive results, Year Up recognized that certain features of the core program would make it difficult to reach the scale needed to achieve the organization's mission to close the "Opportunity Divide" for millions of young adults. In Year Up's analysis, key constraints included the core program's high costs ($28,290 per participant in 2013-2014)[5] and the operational burden involved when a single organization directly provides all of the program's extensive services.

In response, Year Up began exploring a variety of strategies for improving the scalability of its services. These strategies include adaptations preserving the core program's main features; efforts to package and disseminate individual program strategies; and wider campaigns to influence attitudes, practices, and policies in ways that encourage adoption of key principles underlying Year Up models. The Professional Training Corps program is the largest Year Up initiative focused on adapting the core model for improved scalability.

1.1.2 The Professional Training Corps (PTC) Model

The PTC program model preserves the core program's components but shifts some costs to colleges and reduces the intensity of some services. Exhibit 1-1 summarizes the key similarities and differences between the two models.

Similarities with Year Up's core program. Like the core program, PTC begins with a six-month L&D phase. During this period, participants receive four types of services: (1) training in basic academic (mainly English), professional (i.e., "soft"), and technical skills; (2) intensive coaching; (3) close monitoring; and (4) feedback on behavior and support from staff and peers

[5] As noted in Chapter 3 of the present report, by 2018 average costs for the core program had risen to around $35,000 per student.

organized into learning communities. As in the core program, time is reserved for weekly learning community activities such as "Friday Feedback" and guest speakers.

Exhibit 1-1: Comparison of Year Up's Core and PTC Programs

Program Phase	Core Program	PTC
Recruitment	• Broad community outreach • Digital advertisement and social media outreach campaigns • Multi-step screening process	• Generally similar, PTC recruitment mostly adding to regular college admissions pipeline (versus tapping into it) • Close coordination with college admissions and registration processes
Learning & Development	• Six months of full-time training and support in stand-alone Year Up offices • Courses in technical, English, and professional skills taught by Year Up staff • College credit for coursework available via American Council on Education-accredited curriculum[a] • Participants and staff organized into learning communities (35 hours/week) • Regular and ad hoc professional development activities • Substantial coaching and supports provided by staff advisors and social workers • Contracts with each participant specify expected behaviors • Stipends of up to $150/week, reduced for contract infractions	• Same basic components as core program • PTC staff teach professional skills. College instructors teach technical and English courses • Students earn credit at partner college • Students spend about 22 hours each week in learning community with staff • Stipends of $50/week, reduced for contract infractions
Internship	• Six-month, full-time internship with major local employers • Workshops and advising at Year Up one afternoon/week • Close monitoring and troubleshooting of internship experience by Year Up staff • Stipends of up to $220/week, reduced for contract infractions	• Very similar to core program • Stipends of $150/week, reduced for contract infractions
Post-Program	• Up to 12 months of job search and placement services after graduation	• Same, with somewhat more emphasis on college enrollment in addition to employment

[a] During the PACE study period (2013-2014) core program participants were eligible for credit through agreements with local colleges at each site, rather than through the American Council on Education (ACE)'s Credit Recommendation Service, and post-program employment services extended four months after graduation, rather than 12 months (Fein & Hamadyk, 2018).

In the second six months, PTC program participants move to full-time internships at area firms, where they gain entry-level experience in areas such as IT and financial services. The structure of the internship phase is similar to that in the core program. Participants work full-time four-and-a-half days a week and return to the Year Up site each week for a half-day workshop called the Internship Seminar.

As in the Year Up's core program, participants earn a weekly stipend throughout the year, conditional on meeting Year Up's strict behavior code. Performance standards under both

program models emphasize full-time work at good wages in Year Up target occupations. Both programs draw heavily on revenue from employer payments for interns.

Differences between the core and PTC programs. One major difference is that the PTC program uses college instruction and donated campus office space with the goal of reducing costs while maintaining performance comparable to that of the core program. PTC participants take academic and technical courses from instructors at the partner colleges (usually as a cohort) and have access to the same college facilities and supports as other college students. Year Up staff continue to provide training in professional skills, arrange and monitor internships, provide coaching and other supports, run learning communities, and monitor behavior against Year Up contracts.

The PTC model requires effective coordination between local Year Up staff and their college partners on recruitment and admissions. It also requires effective instruction in academic and technical skills that participants need to succeed in jobs and education following the program. Fostering longer-term educational success requires good alignment of the college courses PTC participants take with longer programs of study leading to marketable college credentials.

Course loads for PTC participants are comparable to a full-time college schedule. Because these courses are all taught by college instructors rather than Year Up staff, as is the case in the core program, PTC participants spend fewer hours each week in Year Up learning communities. PTC participants average about 22 hours in learning communities with other participants and staff each week during the L&D phase, compared to 35 hours for core program participants.

Stipends are lower in PTC than in the core program. PTC participants receive up to $50/week during L&D and $150/week during internships—about one-third and two-thirds of the corresponding core program amounts in each phase, respectively. Year Up's initial reasoning for lower stipends was that many PTC participants would receive pocket money from Pell and other grants after paying tuition costs.

Differences between academic and PTC program calendars lead to slight differences in programming compared to the core program. For example, academic terms typically are somewhat shorter than the six-month L&D phase. PTC programs commonly fill the gap with "boot camps" and other training to prepare participants for their internships.

The PTC program puts more emphasis on securing college credit for internships and on participants taking one or more additional courses during internships. In addition to contributing to progress towards degree attainment, this emphasis on college credit helps to maintain participants' eligibility for student financial aid. This aid generates additional revenue for Year Up's college partners and helps to make the PTC program financially worthwhile for them.

Year Up staff provide career and alumni services to PTC program graduates to foster positive career outcomes. As in the core program, Year Up's main goal for participants is full-time employment. The PTC program puts somewhat more emphasis on encouraging young adults to continue taking college courses while working in full-time jobs after graduation. Later chapters of this report explore the relationship between these goals.

Year Up's financial model for PTC assumes a need for fewer Year Up staff than for the core program. Participant-to-staff ratios range from 10:1 to 7:1 in PTC program offices, compared to about 4:1 in core program offices.

1.1.3 PTC Financial Model

Year Up's core program has demonstrated the possibility of securing substantial revenue from employers in the form of internship payments. This revenue covered 59 percent of the core program's average $28,290 per participant cost during the PACE study—an unprecedented level of private sector financing for a workforce training program serving low-income youth. Employers interviewed for PACE expressed satisfaction with the return on their investments. They cited the value of the work that interns performed, a cost-effective pipeline to entry-level hires post-internship, and positive feelings from contributing to local communities (Fein & Hamadyk, 2018).

A key financial goal is for PTC programs to produce outcomes comparable with the core program while covering costs entirely through revenue from employers' internship payments. The PTC financial model is calibrated to reach break-even by reducing the average cost per student to about $20,000 and by generating commensurate internship revenue.

As noted in the previous section, the PTC model reduces costs by substituting college courses for Year Up instruction (thereby reducing staffing), by using donated office space on campus, and by reducing stipend amounts. To hit revenue targets, PTC programs must retain 83 percent of participants to the revenue-generating internship phase and collect payments at the full rate ($26,000 per intern) for at least 90 percent of interns. Core offices generally have met these revenue targets.

As discussed in Chapter 3, most local PTC programs have not yet achieved these financial targets. Lower than anticipated retention in PTC programs has meant that fewer participants have reached internships, and internship revenue thus has fallen short of levels needed to break even.

1.2 Assessing Usability

An initial research objective in IES Development and Innovation projects is to assess the degree to which newly developed interventions are "usable." Usability is very similar to viability, as defined by IES: "the extent to which the intended user understands or can learn how to use the intervention effectively and efficiently, [that they are] physically able to use the intervention… and willing to use the intervention." To establish usability, researchers must show that interventions are viable in "authentic educational settings." [6]

Year Up's successful launch of PTC programs at 15 colleges—mostly since 2014—provides strong evidence of the model's usability. As summarized in Exhibit 1-2, these colleges vary in enrollment, geographic setting, and type (e.g., public/private, two-year/four-year/university).

[6] See the Institute of Education Sciences' 2014 *Request for Applications, Education Research Grants*, CFDA Number: 84.305A, p. 43 at https://ies.ed.gov/funding/pdf/2015_84305A.pdf.

Exhibit 1-2: College Contexts for PTC Programs Launched by 2018

Year Launched	PTC Program Location	College Partner	Type of College	Undergrad. Enrollment in Fall 2018	PTC Training Tracks Offered
2010	Baltimore	Baltimore City Community College	Public, 2-year	4,523	Information technology (IT), business operations
2012	Miami	Miami Dade College	Public, 4-year or above	54,973	IT, sales, business operations
2013	Philadelphia	Pierce College	Private not-for-profit, 4-year or above	1,271	IT, financial operations
2015	Seattle	Bellevue College	Public, 4-year or above	13,226	Business operations, software development
2015	Jacksonville, FL	Florida State College at Jacksonville	Public, 4-year or above	23,413	IT, business operations
2015	Woodbridge, VA	Northern Virginia Community College	Public, 2-year	50,929[a]	IT, business operations
2016	Atlanta	Atlanta Technical College	Public, 2-year	3,562	IT, software development
2016	New York	Borough of Manhattan Community College	Public, 2-year	26,506	Financial and business operations
2016	Dallas	El Centro Community College	Public, 2-year	11,729	IT, business operations
2016	Los Angeles	West Los Angeles College	Public, 4-year or above	11,743	IT, business operations
2016	Phoenix, AZ	Gateway Community College	Public, 2-year	5,081	IT, business operations, software development
2017	East SF Bay, CA	Diablo Valley College	Public, 2-year	20,271	IT
2017	Chicago	Harold Washington Community College	Public, 2-year	8,643	Financial operations, sales
2017	Boston	Roxbury Community College	Public, 2-year	2,007	IT
2017	Wilmington, DE	Wilmington University	Private not-for-profit, 4-year or above	9,042	Financial operations, software development

Source: Integrated Postsecondary Education Data System (IPEDS) tabulations for institutional characteristics and enrollments.

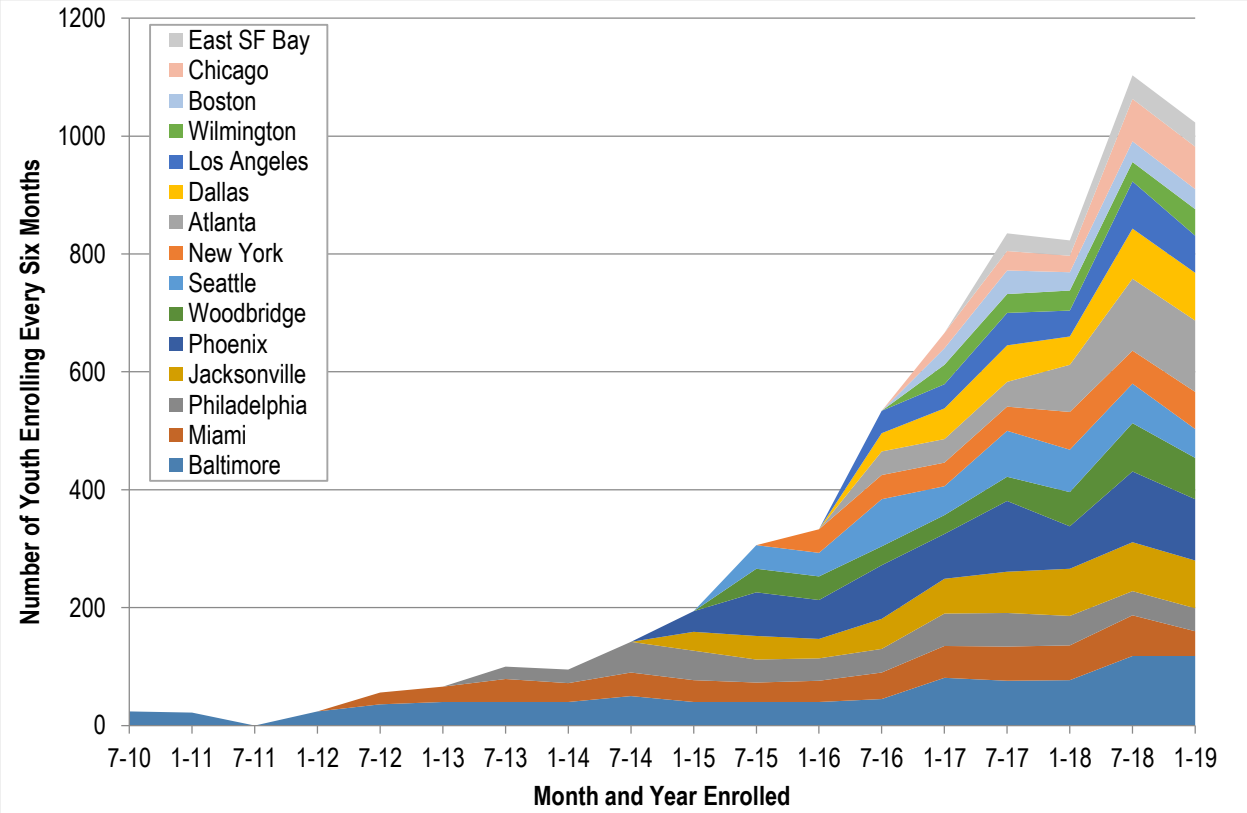
[a] Number represents enrollment at all Northern Virginia Community College campuses.

Further attesting to the new model's viability, PTC programs have continued to operate in all cities since inception.[7] The number of programs and total enrollment have risen steadily since the program's 2010 inception (Exhibit 1-3). By mid-2018, PTC programs were serving around 2,000 participants per year. Most of the enrollment growth was due to additional programs

[7] In all but one case, programs operated continuously at the same colleges. Year Up relocated the earliest PTC program from the Community College of Baltimore County to Baltimore City Community College in the program's second year of operation.

rather than increased enrollments at operating programs. In 2018, the average enrollment across the 15 operating programs was still fairly low: about 130 per site.

Exhibit 1-3: Number of Young Adults Enrolling in PTC, 2010-2018 (Programs Launched by 2018)



The team visited eight local PTC programs over the course of the study. Evidence from on-site interviews and observations supplemented by several rounds of telephone interviews showed that all major PTC program components were in place and operating in all locations.[8]

Year Up's approach to screening and developing potential sites explains the PTC's viability to date. A "launch committee" comprised of Year Up national senior staff coordinate site development. The process in each location operates on a timetable that is adjusted as circumstances warrant up to the point that the committee commits to launch. The process unfolds in four stages:

1. **Review statistics and other evidence of the "market potential" of candidate locations.** Indicators of potential include demographic statistics on the number and characteristics of young adults, demand for entry-level workers in Year Up target

[8] As discussed in subsequent chapters, the quality of implementation varies across programs; as of mid-2019, no program had achieved high fidelity in implementing all key model elements.

occupations, good public transportation access, multiple possibilities for community college partnerships, and an active philanthropic community.

2. **Engage in initial discussions with potential local partners and assess the "momentum" these interactions generate.** The launch committee rates momentum with local colleges, employers, and funders as either strong, moderate, or minimal based on levels of expressed interest and commitment.

3. **Continue to work with potential partners and gauge when momentum is sufficient to proceed to launch.** Decisions to proceed typically entail considering the balance of signals across conditions. For example, in one site, a strong longstanding corporate relationship and good potential for support from national funders convinced the committee to proceed despite a relatively weak local philanthropic base and longer likely commute times for students.

4. **Proceed to launch.** Later stages shift to progressively more operational activity needed to launch a site. Twelve months prior to the target launch date, planning staff aim to have agreements in principle with local college partners, verbal commitments for internships from a good number of employers, an assured source of start-up capital, and promising connections to recruitment sources in the community. Six months prior to launch, activity moves into high gear on all fronts. The program hires staff, finalizes agreements on courses and admissions processes with colleges, commences recruitment, and accelerates internship development efforts.

1.3 Study Approach

The study team designed this project to address the major objectives of IES's Development and Innovation (D & I) grant program. The grants support projects that develop and document evidence-based interventions to improve education outcomes. Closely related IES grant programs support effectiveness and replication studies of interventions developed in D & I projects. By funding these complementary types of projects, IES encourages and supports progression across successively higher levels of evidence-building.

Many D & I projects start with a proposed intervention clearly in mind. For this project, the study team deliberately did not pre-specify a focal intervention. Rather, it designed the project to identify focal program improvements as a key early task. This task involved engaging practitioners—including Year Up and its college and employer partners—in prioritizing needed improvements and then in developing improvements.

The study team took this approach in part because the intervention of interest was a promising multi-component program already operating in multiple locations. Although all basic components were in place, the program was not performing at the level intended in a number of important respects. This approach to the project enabled testing the idea that closer collaboration with practitioners would help us to identify critical improvement needs, mobilize experienced staff to generate more effective solutions, and promote a sense of ownership leading to longer-term adoption of improved strategies.

The team identified three high-priority topics for quick-turnaround improvement studies we called “mini-studies”:

1. Lower-than-desired retention during the first six months of the PTC program (i.e., the L&D phase), which Year Up and college informants attributed to academic difficulties in college classes.
2. Uneven quality of internships during the second six months, which PTC program staff and participants attributed to varying employer approaches to internships.
3. Perceived difficulties in promoting both follow-on education and full-time employment immediately after program completion—difficulties arising from constraints on participants’ time and differences in interests and abilities.

For each focal issue, the study team used different methods to identify and assess improvement strategies in concert with key stakeholders. Chapter 2 describes the process for identifying mini-study topics and the methods, data, and findings for each study. The initial years of the project were spent largely selecting and conducting the mini-studies.

In the final two years of the project, the study team shifted its focus to a more global assessment of the local PTC programs. This activity included three major tasks: (1) a quantitative analysis of implementation fidelity; (2) a small RCT to measure PTC’s education and employment impacts in three programs; and (3) a round of in-depth interviews to assess perspectives on areas of progress and priority needs for program improvement going forward. Chapters 3, 4, and 5 summarize the research methods and findings from each of these tasks, respectively.

2. Development and Innovation: Three "Mini-Studies"

A major goal of this project was to apply an evidence-based approach to accelerating improvements in Year Up's PTC program. To this end, the study team engaged a diverse array of stakeholders to identify program challenges and apply research strategically to aid Year Up in addressing them. The team then conducted focused investigations, or "mini-studies," of three high-priority challenges.

This chapter first describes the approach to the mini-studies (Section 2.1). The rest of the chapter takes up each of the three studies in turn (Sections 2.2 to 2.4), presenting findings, recommendations, and resulting program changes by Year Up.

2.1 General Approach to Mini-Studies

In developing its PTC program model, Year Up took on the challenge of providing services on par with its stand-alone "core" program, but at substantially lower costs that could be covered by revenue from employer-sponsored internships. The main adaptations entailed co-locating the PTC programs on partner college campuses and relying on the colleges for basic academic skills and technical training. Under these partnerships, Year Up has less control over instruction and less contact with participants than in its core program. It also faces expectations of the college partners that the local PTC programs will help to encourage college persistence after the programs. For both the core and PTC programs, meeting needs of its employer partners for well-prepared interns is critical for creating enough revenue-generating internships and, if all goes well, post-program job offers.

To identify mini-study topics, the study team conducted interviews and focus groups with a diverse array of PTC program stakeholders, including Year Up national and local staff, program participants, and college and employer partners. Some discussions were by phone, and others occurred during site visits to four local PTC programs. In this outreach, the study team used a discussion guide designed to explore the program's four major phases (recruitment and admissions screening, learning and development, internships, and post-program services) and important cross-cutting issues. The team also reviewed program documents and statistical reports from Year Up's management information system.

This outreach generated an initial list of 13 topics (Appendix Exhibit A-1). Through a series of discussions with national staff, the team refined the list to three issues that were high priority, could be evaluated relatively quickly and well, and were not already the focus of a substantial Year Up improvement effort.

- **Mini-Study #1** tackled a central challenge in the PTC program adaptation: establishing strong monitoring of academic performance of participants and effectively providing support to participants experiencing challenges.
- **Mini-Study #2** assessed strategies for working with employers to develop processes for setting up internships that consistently provide high-quality workplace experiences.

- **Mini-Study #3** sought strategies to reconcile the tensions between Year Up's traditional emphasis on full-time career track employment and the increased emphasis in the PTC programs on continuing in college after program graduation.

For each study, the team worked with Year Up staff to develop quick turnaround evaluation strategies that imposed relatively low burden on program staff. They drew on methods from multiple evaluation traditions, including randomized controlled trials (RCTs), improvement science, design-based implementation research, and continuous quality improvement (Orr, 1999; Bryk et al., 2011; Russell et al., 2017; Sokovick et al., 2010; Fishman et al., 2013; Anderson et al., 1995).

The study team tailored methods to each mini-study's focal question, readily available data, and resource and time constraints. Mini-Study #1 used n RCT to test staff-developed improvements in academic monitoring and supports during the program's six-month learning and development (L&D) phase. Mini-Study #2 drew on in-depth interviews and focus groups with current PTC interns to make a qualitative assessment of current strategies and potential improvements for setting up successful internships. Mini-Study #3 took a mixed-methods approach—combining statistical analysis of college persistence following the PTC and core programs with insights from in-depth interviews and focus groups.

The mini-studies used an iterative approach to generate program improvements. This approach included informal reporting to Year Up national staff as findings emerged, and it culminated in webinars with Year Up national and local program staff to discuss findings and next steps. To support timely reporting, make results easier to absorb, and mesh with Year Up's accustomed communication style, these briefings relied on PowerPoint rather than written reports. Typically, the study team sent a detailed slide deck as a "pre-read" about a week prior to each webinar. They then prepared a shorter version of the PowerPoint for live presentation and followed up on meetings with minutes and notes highlighting emerging recommendations. Year Up national staff coordinated the program's responses to mini-study findings and recommendations.

In mid-2019, the study team conducted another round of interviews with key national and local staff to document program improvements resulting from each mini-study. These final interviews captured improvements over a period of one-and-a-half to two-years following the initiation of each study.

As the following sections describe, each mini-study produced promising improvements.

2.2 Mini-Study #1: Improving Academic Outcomes and Retention

Year Up's logic model assumes that strong basic academic and occupational skills are required for young adults to succeed in the workforce and continue in postsecondary education. Year Up's PTC program aims to help participants develop these skills through academic and occupational courses offered by college partners during a six-month L&D phase of the program. Youth who successfully complete L&D apply and further develop these skills during a six-month internship in preparation for transitioning to regular career-track jobs.

Failure of participants to successfully complete L&D poses three concerns for Year Up. First, it commonly signals a failure of participants to master the technical skills needed to succeed in their focal career track. Second, participants who fail to complete L&D are not eligible to enter internships, which are the primary means through which Year Up earns revenue to cover its operating costs.[9] Third, youth who fail to progress to internships likely will see little or no return on their investment of time and effort in the program.

At the time this project was launched in 2016, most PTC programs were both struggling to meet their enrollment targets and falling short of their goals for participant retention through L&D. PTC staff frequently found out about participants' academic struggles and their failing in college courses very late in the L&D phase, making it nearly impossible to provide meaningful assistance and ensure participants received supports they needed to remain in the program.

The study team gathered initial suggestions for improvement strategies during outreach to prioritize mini-study topics. On selecting this as a mini-study topic, the team worked with three local PTC sites to develop and rigorously test promising strategies for monitoring and strengthening responses to the young adults' academic challenges during L&D. As an initial step, we worked with local staff to document current practices and identify opportunities for improvement.

Having identified promising strategies, we worked with staff to develop and test effectiveness of the strategies in improving participants' success in college courses, measured by completion of L&D and continuation in college post L&D. The study also examined the nature and prevalence of challenges participants faced, the strategies staff used to monitor and support academic success, and views on the usefulness of various strategies.

To preview this mini-study's main finding:

- The improved academic monitoring and support strategies substantially increased retention through L&D and persistence in college immediately after L&D.

Staff credited much of the success of the improvement strategies to the establishment of routine processes for sharing information on students' academic successes and challenges. These processes typically involved better information sharing between Year Up coaches and participants. This information sharing then allowed coaches to connect struggling participants with academic and other supports in a timely manner. An important by-product of the study was the creation of a resource toolkit to facilitate coaches' efforts to monitor and support academic performance of participants during L&D.

2.2.1 Study Design

This mini-study drew on principles of design-based implementation research (Fishman et al., 2013), improvement science (Bryk et al., 2015), and social experimentation (Gueron & Rolston,

[9] Under Year Up's cost model, 83 percent of program participants must advance to the internship phase of the program for revenues to cover costs.

2013) to design and test strategies for better monitoring and supporting participants in their college courses. Design and testing was a three-stage process.

The first stage entailed developing the improvements to be tested in the study. The study team conducted a quick but intensive examination of current practices across the three participating PTC programs and reviewed relevant literature. The team then selected three local PTC programs that differed in the nature and degree of challenge they faced to develop and rigorously test low-cost, high-promise strategies for improving academic success and retention during L&D. The strategies intentionally aimed to create more effective monitoring of academic performance to achieve quicker identification of participants at risk of failing their courses, which would allow timelier and more effective responses. The study team encouraged program staff to design improvement strategies for testing that were tailored to local needs and opportunities.

The second stage of the mini-study entailed two cycles of testing the staff-developed improvement strategies. The first cycle tested the strategies that were designed as part of the planning stage; the second cycle reflected changes to the initial improvement strategies based on experiences during the first testing cycle. During both testing cycles, the team randomly assigned half of each cohort of new PTC enrollees to an Improvement Strategies Group that would receive the improved monitoring and coaching strategies. The team assigned the remaining half to a Usual Strategies Group that would continue to receive existing strategies.

Over the two testing cycles, a total of 317 participants enrolled in one of the three PTC programs participating in the study—154 in the Improvement Strategies Group and 163 in the Usual Strategies Group (Appendix Exhibit A-2). Randomization ensured that there were no systematic differences in the characteristics of the two groups prior to enrollment (Appendix Exhibit A-3).

The main analyses measured the impact of the improvements on the target outcomes—retention through L&D and continuation in college post L&D. The study also gathered additional data to support exploratory analyses of impacts on other outcomes and provide context for the study findings. These other data sources included bi-weekly monitoring calls with site staff, semi-structured observations of coaching sessions, brief surveys of coaches and participants, and in-depth interviews with participants and staff.

To estimate impacts of the improvement strategies, the study team compared outcomes for participants in the Improvement Strategies and Usual Strategies Groups, controlling for background characteristics at the time the participants applied for the PTC program, site, and occupational training track. Because participants were randomized to the two groups, differences in average outcomes provide unbiased estimates of the true impacts of the improvement strategies tested.

2.2.2 Background Literature

Retention is a major challenge faced by two-year colleges throughout the nation. Only about one-fifth of students who enroll in a two-year college, and fewer than 20 percent of those enrolling part-time, earn a certificate or degree within three years of program entry (Juszkiewicz, 2017). Among the factors contributing to the low completion rates are poor academic

preparation, financial burdens, family responsibilities, housing instability, and food insecurity (Sowers & Yamada, 2015; Maroto et al., 2015; Brock & LeBlanc, 2005; Goldrick-Rab, 2010).

The literature suggests that many of the strategies embedded in the Year Up logic model could mitigate some of these challenges. For example, quality academic supports such as tutoring, counseling, student centers, advising, and learning communities have been shown to improve outcomes (Bishop & Brenneman, 1986; Boyd et al., 1996; Brock & Richburg-Hayes, 2006; Gupta, 2017; Scrivener et al., 2009; Weiss et al., 2010; Weissman et al., 2012; Scrivener & Weiss, 2009; Mahlberg, 2015). However, the literature does not directly address questions about how these various strategies should be implemented to ensure participants' needs are identified and addressed in a timely manner.

2.2.3 Improvements Tested

The study team worked with program staff in the study sites to come up with improvement strategies targeting three goals: (1) improve access to and tracking of participants' academic performance; (2) use real-time academic performance information to inform coaching of participants; and (3) improve participants' access to needed resources and support services.

The strategy development process began with guided reflection on current practices and outcomes. During facilitated meetings, program staff at each study site brainstormed their options for addressing performance gaps. The ultimate product at each of the study sites was a set of improvement strategies tailored to local conditions.

At the outset, the study team and Year Up national leaders deliberately maintained an agnostic stance towards the improvements discussed. The approach presumed that local program staff working as coaches were in the best position to identify participants experiencing academic challenges and help them overcome those challenges.[10]

The PTC staff in the study sites developed the initial plans for implementing the improvement strategies to be tested with participants entering the program in July 2017. After one round of experience in cycle 1, staff then refined the strategies for cycle 2. Appendix Exhibit A-4 summarizes the improvement strategies used in cycles 1 and 2.

Cycle 1. At the outset of the study, staff in all three sites actively encouraged college instructors to attend orientation sessions. The aim was to better acquaint instructors with Year Up culture and establish communication channels with the PTC staff. Staff also sought to set up mechanisms for systematically gathering feedback on participants' academic performance from college instructors.[11] Neither of these efforts produced much engagement of instructors with Year Up staff.

In two of study sites, responsibility for gathering this information was assigned to existing staff. The third site hired a part-time staff member who was tasked to collect performance data on all

[10] All Year Up staff also serve as coaches.

[11] Due to FERPA restrictions, it was not possible for PTC staff to have direct access to the colleges' learning management systems (LMS). Moreover, not all instructors routinely use their LMS in ways that would provide the timely feedback PTC staff were looking for.

participants but share information only with coaches of Improvement Strategies Group members.

All three programs included a focus on academics in coaching sessions with participants in the Improvement Strategies Group. Coaches also encouraged these participants to emphasize their academic work in the final portfolio projects that PTC requires. In contrast, coaching for participants in the Usual Strategies Group focused mainly on professional and life skills development. Usual coaching practices included a mainly reactive approach when participants raised personal, social, and academic concerns.

Early on, individual coaches working with the Improvement Strategies Group developed their own approaches to academic coaching. After observing that coaching practices could be more intentional and consistent, Year Up national staff and a member of the study team gathered best academic coaching practices from Improvement Strategies Group coaches and distilled them in a coaching guide.

Each study site had modest discretionary funds that coaches could tap to help participants in the Improvement Strategies Group who were struggling in their academic courses. One site invested in a textbook library to address purchasing delays some participants experienced when their financial aid awards were late. Another site initially planned to obtain portable hot spot devices to address online access issues faced by some participants, but the site did not follow through due to logistical snags.

Cycle 2. All three study sites refined their strategies for cycle 2. Most significantly, all coaches in the Improvement Strategies Group began using a one-page *Weekly Academic Coaching Notes Sheet*. This tool was developed from the prototype academic coaching guide used by coaches in cycle 1. It was meant to help coaches facilitate conversations with participants about academics.

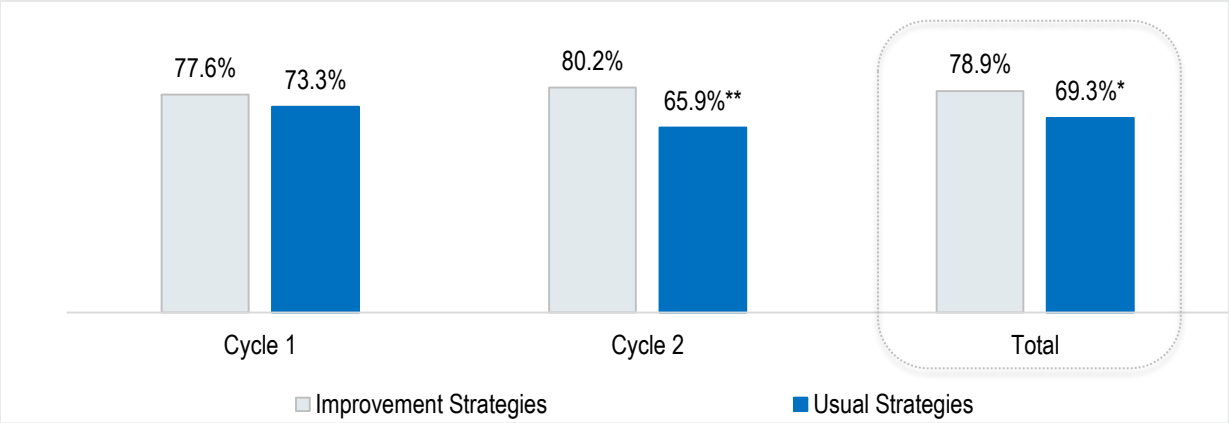
Coaches in cycle 2 also had access to *The Academic Coaching Binder* (Baelen et al., 2020). This *Binder* included tools that coaches working with the Improvement Strategies Group during cycle 1 found useful. Some of the tools were adaptations of existing tools, and others were created by the coaches working with the Improvement Strategies Group.

2.2.4 Findings

The strategies tested proved to be effective in improving retention during L&D. Across all three sites, participants in the Improvement Strategies Group had a nearly 10 percentage point higher L&D retention rate than did their counterparts in the Usual Strategies Group (79 and 69 percent, respectively—see third set of bars in Exhibit 2-1). This impact closed 70 percent of the gap between the 69 percent retention rate achieved with the usual approach to monitoring and supports and Year Up's target 83 percent retention rate needed for PTC to break even financially.

Looking separately at each cycle, point estimates appear to be substantially larger for cycle 2, although the difference across cycles is not statistically significant (p=.29). The difference between the Improvement and Usual Strategies Groups is quite large (14 percentage points) and statistically significant (p<.05) for cycle 2.

Exhibit 2-1: Mini-Study #1 – Retention of Participants in Improvement Strategies Group versus the Usual Strategies Group through the End of the Learning and Development Phase by Testing Cycle

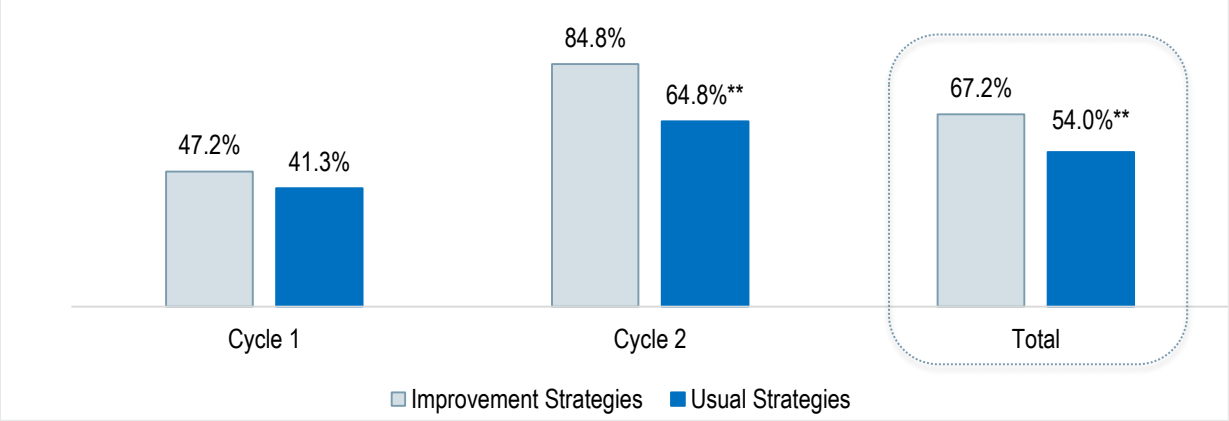


Source: Data on retention from Year Up's management information system.

Notes: These data are weighted to account for different probabilities of selection within enrollment blocks. The estimates of the mean differences between the Improvement Strategies Groups (treatment groups) are based on regression models that included covariates for sample characteristics at the time of program enrollment. Means for the Usual Strategies Group are unadjusted. The difference between impacts for cycle 1 and 2 is not statistically significant (*p*-value = .29). Asterisks identify impacts statistically significant in a two-tailed test: *** = 1-percent level; ** = 5-percent level; * = 10-percent level.

Findings for impacts on college enrollment in the month following L&D (Exhibit 2-2) are very similar to those for L&D retention. The overall difference between the two groups is 13 percentage points (67 versus 54 percent) and statistically significant ($p < .05$, Exhibit 2-2). Again, impacts are larger for participants in cycle 2 than cycle 1, though the between-cycle difference is not statistically significant (p=.11).

Exhibit 2-2: Mini-Study #1 – College Enrollment in the Month Following Scheduled Completion of the Learning and Development Phase by Testing Cycle



Source: Data on college enrollment from the National Student Clearinghouse.

Notes: The difference between estimated impacts for cycle 1 and cycle 2 is not statistically significant (*p*-value = .11).

In more detailed analyses reported in Appendix Exhibits A-5 and A-6, estimates of impacts on L&D completion and college enrollment for the three sites vary but generally are positive. Due to small samples, the cross-site differences mostly are not statistically significant.

Coaches working with participants in the Improvement Strategies Group during cycle 2 reported greater awareness of academic challenges among their coaches than did coaches working with the Usual Strategies Group (Maynard et al., 2018). Improvement Strategies Group coaches also reported devoting more time in coaching sessions to academic performance and supports and less time to other issues than did Usual Strategies Group coaches.

Participants in the two groups reported taking similar numbers of courses and spending the same amount of time on schoolwork per week. Participants in the two groups also reported similar views about the level of difficulty of their courses and the adverse effects of working a job on academic performance.

With a few exceptions, participants in both groups reported similar access to PTC program supports and similar overall levels of satisfaction with the program. Participants in the Improvement Strategies Group rated the quality of the supports from Year Up staff significantly higher than did their counterparts in the Usual Strategies Group.

2.2.5 Initial Recommendations

In late spring 2018, the study team presented findings and recommendations from Mini-Study #1 in a series of webinars to Year Up national and local staff. The webinars encouraged staff to react to findings and reflect on experiences and directions ahead.

- **Recommendation 1.** The central recommendation was to modify the program's approach to coaching during the L&D phase to include a deliberate focus on academic goals, achievements, and challenges. Coaches who worked with the Improvement Strategies Group said that they found it very useful to begin each coaching session with a discussion of students' academic progress—what specifically was going well and what was not. They found the *Weekly Academic Coaching Notes Sheet* helpful in engaging participants in these conversations. It also provided them a structure for jointly reviewing each participant's academic record in the college's LMS. They also cited several other tools, which the study team ultimately compiled into *The Academic Coaching Binder* (Baelen et al., 2020), as helpful in identifying and addressing challenges.
- **Recommendation 2.** A second recommendation was to offer formal staff training on academic coaching strategies. The emphasis would be on improving early identification of academic challenges and devising timely strategies to help participants address the challenges. The training could draw on the myriad resources in *The Academic Coaching Binder*, which includes examples of their application. It also would include professional development around team problem-solving on academic challenges and factors that trigger or exacerbate performance issues.
- **Recommendation 3** was for program staff to be on the alert for additional ways of identifying academic challenges that would complement asking participants directly. These might include, for example, designating a staff person to gather and share with coaches information from college instructors on participants' performance; creating a shared worksheet containing instructor feedback on performance and academic challenges of

specific participants; or encouraging conversations about academic challenges during coaching team meetings.

- **Recommendation 4** was for Year Up national staff to consider other applications of the evaluation-based improvement process used in this study. This process began with Year Up national staff identifying and prioritizing their improvement needs. They then engaged with local program staff and the evaluation partners to specify the general parameters of the improvement efforts and their evaluation. Next the local program staff, in partnership with the study team, took steps to implement the improvement strategies through successive rounds of testing and refinement.

Three features of Mini-Study #1's design were central to its success. The first is engaging stakeholders in selecting improvement goals. The second is working closely with the local program staff in designing the evaluation to ensure it produced credible impact estimates with minimal disruption of operations. The third is using low-stakes, low-burden approaches to monitor the experiences of participants assigned to the Improvement Strategies and Usual Strategies Groups.

2.2.6 Year Up's Response

Year Up staff who participated in a May 2018 briefings on Mini-Study #1 reacted favorably to the findings and recommendations. Program leads reported that their relatively high engagement in the research design fostered ownership in the findings. They were pleased that rigorous evidence supported their strategies and hoped to institutionalize the improvement strategies that had been effective. Year Up's national staff planned to share the findings with other PTC programs and were upbeat about the potential to learn from rapid turnaround tests of other program improvements.

One year later (May-June 2019), the study team re-interviewed national and local staff leads to document any further steps to build on improvement strategies identified in the mini-study. Staff in all three study sites reported that they were still using the coaching practices developed for the study. They reported that coaching sessions now routinely begin with a discussion of participants' academic progress and challenges. Such discussions often involve staff and participants looking together at recent activity recorded in the college LMS. Coaches reported that routinized monitoring helps identify problems and their root causes early enough to support timely intervention. Participants reportedly appreciate the extra attention from coaches to their academic challenges.

PTC program leads also reported that they had stepped up efforts to solicit feedback from college instructors. For example, one site extended its college liaison position to facilitate information sharing with instructors. This liaison created a master schedule for the academic calendar that helped students and coaches identify strategic time points for checking on academic progress.

Local staff reported that coaches had not expanded their efforts to provide additional tutoring through the PTC programs due to the costs and difficulty of providing such services. Instead, they stepped up their efforts to connect struggling students with existing college tutoring resources.

Year Up national staff encouraged staff in other local PTC programs to adopt strategies emerging from the mini-study in two online webinars. In the first session, the program manager at one of the study sites shared her experiences doing more academically focused coaching and the resulting benefits. In the second session, a Year Up national staff member presented mini-study findings, previewed a revised version of *The Academic Coaching Binder*, and facilitated a discussion of how other sites could adopt coaching practices like those developed and tested in the mini-study. Year Up national staff had not surveyed the extent to which local PTC programs made improvements as a result of the webinars, but they cited anecdotal evidence of sites later strengthening academic monitoring and supports.

This first mini-study helped Year Up staff recognize and better appreciate the challenges their college partners face in serving students such as Year Up's co-enrolled participants. It also highlighted ways that the PTC partnership can benefit the colleges. For example, community colleges typically have far higher student-to-advisor ratios than do the PTC programs. Colleges rely heavily on part-time, adjunct instructors, who have more limited opportunities that PTC coaches to observe and/or support Year Up students who face academic challenges. The study findings suggest that even modest efforts to improve information flows can improve the capacity of PTC programs to support participants' success.

Finally, both Year Up national and local PTC staff cited aspects of the collaborative development and testing of program improvement strategies as rewarding and worth applying to other challenges. They liked having their challenges and improvement options framed in a wider research context. They believed the emphasis on brainstorming and local expertise led to solutions well suited to local situations. And they appreciated the collegial, nonjudgmental discussion about the mini-study methods and findings.

2.3 Mini-Study #2: Setting Up Successful Internships

Positive internship experiences are critical to Year Up's success for two reasons. First, for participants, well-designed and supervised internships provide valuable opportunities to apply technical skills learned in college courses in real work settings, build strong resumes, and meet potential employers. Second, successful internships foster repeat business from Year Up's employer partners. This repeat business is important for generating the revenue necessary for programs to achieve financial sustainability.

During the study team's early outreach, interest in promoting consistently high quality internships emerged as a priority issue. There was a sense that employers might welcome more guidance on the design and supervision of internships, assuming such guidance could be provided without undue burden.

Year Up national staff and the study team accordingly agreed to focus Mini-Study #2 on identifying ways to strengthen support to employers in setting up internships. As background, the study team scanned the literature for practices that seemed to be effective in other settings. The team visited several PTC sites to understand current processes for working with employers to establish internships and how employers were running internships.

The overarching recommendations from this mini-study were for Year Up to:

- Provide employers with more support in developing and delivering high-quality internships.
- Create communities of practice among employers to foster networking, brainstorming, and sharing of best practices.

Such support might include tailored trainings and a living archive of techniques and examples of best practices drawn from experience with various Year Up employer partners. This archive could be complemented by guidance materials on how to go about setting up strong internships. Such materials would cover topics such as onboarding, preparing six-month activity plans, and ensuring interns receive constructive feedback regularly and social supports as needed. The recommendation also included suggestions for ways Year Up might adjust its internship development processes to provide more opportunities for employers to work with program staff and other internship providers in designing their internships for PTC participants.

2.3.1 Study Design

For this mini-study, the study team drew on best practices cited in the literature and on findings from a series of interviews and focus groups with Year Up's key stakeholders. Specifically, in summer 2017, the team visited four local PTC programs to interview staff and employers and (in three programs) conduct focus groups with interns. Each focus group included about 10 interns and ran about 90 minutes.

The team drew also from material gathered in previous interviews for this project and a companion study of Year Up's core program (Fein & Hamadyk, 2018).[12] This information was supplemented with a selection of program data and documents, including information from Year Up pre-internship surveys of participants, program guidance documents (e.g., Year Up orientation presentations for new internship supervisors, guidance for PTC staff on the process for matching interns with employers), and administrative statistics (e.g., number and tenure of employer partners, internship completion rates, rates of conversion from internships to full-time employment with internship sponsors).

2.3.2 Background Literature

A brief review of the literature on workplace learning—covering internships, apprenticeships, and new employee training—highlighted several characteristics of successful workplace learning experiences.

One is having clear objectives for the workplace learning. Ideally, internships should prepare interns with key requirements and a range of experiences typical of the work a company does (Fox, 2014; Van Noy et al., 2016). Employer input in designing objectives is critical for developing meaningful simulations of workplace job assignments, which are helpful in preparing participants for seamless transitions from classrooms to internships to regular employment

[12] Employer interviews included a mix of internship supervisors and corporate managers responsible for the Year Up partnership. Generally, internships are similar for participants in Year Up's core and PTC programs. Some companies host interns from both.

(Goldberger, 1994; Rogers-Chapman & Darling-Hammond, 2013). To the extent possible, the internship's learning objectives should align with interns' career interests and prior coursework.

A second characteristic of successful workplace learning experiences is that they provide rich opportunities to acquire transferable skills needed to succeed in regular employment in the target field (Darche et al., 2009; Rogers-Chapman & Darling-Hammond, 2013). This goal is likely to be furthered by having college instructors and workplace supervisors collaborate in designing skill development activities (Organisation for Economic Development, 2010).

Third, successful internships often provide opportunities for rotation through different worksite placements that offer exposure to varying jobs at the company. Relatedly, it is important to minimize downtime during and between rotations to maintain interns' interest and maximize learning opportunities (Gruber et al., 2008; Hamilton & Hamilton, 1997; Organisation for Economic Development, 2010).

Other ingredients in strong internships mentioned in the literature include consistent, constructive monitoring and capstone projects that build on skills learned in the classroom and onsite (Alfeld et al., 2013; Goldberger, 1994; Organisation for Economic Development, 2010; Rogers-Chapman & Darling-Hammond, 2013).

2.3.3 Current Practices

Year Up has established practices for identifying employer partners, matching participants to the employer partners and internship supervisors, and equipping participants with requisite workplace skills. Although these practices generally function well, intern reports suggest that the quality of their experiences is inconsistent. At the most general level, most stakeholders interviewed said it could be helpful to do more upfront work with employers defining the nature and expectations for specific internship positions, particularly the associated learning goals.

From employers' perspective, successful internships align interns' skills with available work opportunities and needs of the company. From interns' perspective, a successful internship is one that is interesting, supportive, and good for resumes and job prospects.

Year Up's internship development team seeks to secure employer partners that offer internship positions ("seats") aligned with the vocational tracks offered by local PTC programs and the technical skills program that participants are expected to have after completing L&D. Internship sponsors include a wide range of companies and organizations. Many are large, national corporations, but they also include a mix of smaller for-profit and non-profit organizations. Employers that have more recently partnered with Year Up tend to have fewer employees and sign on for fewer internship seats (often a single seat) than do employers with longer-standing relationships with Year Up.

Employers' motivations for supporting internships vary, especially regarding the extent to which they view their sponsorship as contributing to a talent pipeline. However, they tend to share the view that interns should have job skills that allow them to add value to the workplace from day one. Some employers noted that they look to interns both for specific contributions to tasks at hand and to bring fresh energy and ideas.

Before the start of each internship phase, PTC program staff work to match prospective interns with employers. They consider qualities of both the intern and sponsoring employer that might affect the success of the match. Matching interns' interests and technical skills with job requirements is the paramount consideration. Other factors include the distance from the intern's home to the worksite, the nature and breadth of learning opportunities employers offer, and how much support an intern is likely to need and find at various worksites. Program staff typically work with incomplete information at both ends (i.e., participant and worksite attributes) and optimizing the overall match for a given set of participants and available internship positions is reportedly often challenging.

Most local PTC programs offer some form of orientation for new internship managers. Participation is voluntary, and the length and approach to orientation are reportedly quite variable. A look at approaches in several sites suggests that orientation sessions typically spend the most time introducing employers to Year Up's mission, describing general attributes of PTC program participants, and reviewing administrative processes (e.g., reporting and communicating with Year Up). Often there is a brief discussion of what a well-designed and run internship entails.

In interviews with interns and employers, most seemed satisfied with their experiences overall. Asked how internships could be improved, some interns said they would have liked to know more at the outset about the skills needed to do well in particular internships. Interns also suggested a general need for more explicitly planned learning and networking opportunities on-site. Based on interns' and employers' descriptions of their internships, such opportunities seemed to be more common at larger firms with more established internship programs. The latter are most likely to have formal structures in place to support interns and their managers.

One of the most common impediments to quality internships noted by employers and interns is a mismatch between interns' interests and skills and the skills that the internship requires. Another common impediment is excessive downtime during internships, when the intern has little to do.

Interns, employers, and PTC program staff offered a variety of constructive responses to such issues. Suggestions for minimizing skill mismatch included providing clearer descriptions of each position's requirements and allowing longer lead time to work on skills needed to do well in particular internship assignments. Current practices generate a substantial flow of feedback to PTC staff about what particular employers are looking for, though recordkeeping practices are inconsistent and the quality of this information is typically weaker for newer than for longstanding employer partners.

Staff aim to have all program participants matched to internship positions several weeks before L&D ends. In practice, new internship slots often are not secured until close to the target start date. In these cases, detailed descriptions of positions are generally not available to aid the matching process. Staff recommended building a strong base of long-term employer partners to minimize the need to rely on new slots late in the matching process.

The team heard many good ideas for how to combat downtime during internships. A general suggestion for employers was to work with PTC staff and participants to fashion specific six-month activity plans for each intern at the outset. These plans could include provisions for self-study/independent learning, for a flexible list of tasks providing additional opportunities as needed, and for rotating supervision when an assigned supervisor got too busy. PTC staff also could work with participants well in advance to develop plans for alternative growth activities during downtime. These plans could include activities such as studying for occupational certification exams, homework for online or evening college classes, and meetings with a variety of staff at the company to learn more about the varying occupational possibilities there.

As these examples attest, there is no shortage of promising practices across the gamut of PTC employer partners. The problem is that these practices have not been inventoried and made widely accessible. Stakeholders agreed that a sharable, living repository of examples and tools could be useful to new and longstanding employer partners alike.

2.3.4 Initial Recommendations

The mini-study produced two overarching recommendations for improving the consistency and overall quality of internships. The first is for Year Up to provide additional support to its employer partners in planning, creating, and delivering internships. The cornerstone of this effort could be a living archive of guidance and tools on best practices in setting up and managing internships. This archive would build on materials already in use across Year Up.

A second recommendation is to create communities of practice that involve Year Up's employer partners in networking, brainstorming, and sharing. Such communities might involve employers within local markets or draw from Year Up's wider national networks to emphasize particular industry or occupational sectors.

The mini-study also generated four somewhat narrower recommended practices to local staff for setting up strong internships:

1. **Create detailed specifications for each internship position well in advance of the internship**. Such descriptions would identify the needed technical skills, key work activities or tasks, skills to be developed, and related employment opportunities at and beyond the firm. Year Up could create a template and maintain a library of position descriptions. These specifications could help PTC programs and college partners better tailor curricula to employers' needs, improve matching of interns with employers, and help participants to prepare for particular internships. More detailed position descriptions would help internship supervisors and interns to better plan and manage work assignments.

2. **Strengthen training and planning with employers around the kinds of activities and supports they would provide—potentially specifying these as part of written agreements**. The agreements would include provisions to address downtime, social and networking interests, and other typical internship challenges. Year Up might create a prototype guide and provide resources on developing plans for individual internships. Plans would be designed to help interns adjust quickly to the workplace, reduce related

anxieties, and maximize the value of the internship experience. Plans also could help to ease challenges for supervisors who otherwise might need to spend more time figuring out how to help interns acclimate to the firm.

3. **Provide technical assistance to employers and participants in developing individualized six-month learning plans for internships.** Study informants suggested developing six-month plans specifying individualized goals and activities for each intern. Year Up could facilitate such a step by providing a template, sample plans, and training to interested internship supervisors.

4. **Help employers develop and institute monitoring and feedback protocols for internship supervisors and mentors**. Worksite supervisors' monitoring and feedback should be aligned with individualized internship plans and include helping interns prepare for jobs after they complete the PTC program. PTC staff could offer prototype monitoring forms, samples of positive feedback, and coaching in best practices for interested supervisors.

2.3.5 Year Up's Response

The study team briefed members of Year Up's national staff on the above findings and recommendations in a March 2018 webinar. Follow-up discussions in summer 2019 explored changes over the ensuring year, including responses to study recommendations.

National staff reported that the recommendations generally had resonated with staff and seemed actionable. Staff saw good potential for leveraging existing infrastructure and processes to support the proposed improvements. Their main concern was to ensure that doing so did not add too much burden for employers or local PTC staff.

Year Up's main focus in this arena in 2018-2019 was solidifying working relationships with new and longstanding employer partners. Related efforts focused on improving existing processes critical to the basic functioning of employer partnerships, processes related to securing internship positions and payments, matching students to positions, familiarizing employers with Year Up, and setting up monitoring protocols (e.g., attendance reporting and periodic online assessments by supervisors).

National staff noted several steps to improve internship setup and monitoring along the lines recommended. For example, Year Up created a repository of templates describing the work that typical internships involve. The goal is to facilitate communication with employers and participants about how particular internship experiences and future job opportunities might align. It also developed training videos for new internship managers that, among other things, identify more and less productive practices in running internships.[13]

Staff also described ongoing efforts to improve orientation of new internship managers. Year Up national staff created a slide deck and accompanying facilitator's guide for highlighting the ingredients for successful internships. The new training were piloted with two large employer

[13] See materials at https://gradsoflife.org/opportunity-manager-training/.

partners in Year Up's Dallas market with the goal of rolling out the training to all markets with the following cohort of interns.[14] At the time of the conversations, Year Up national staff were creating a new web portal to allow internship supervisors to connect with one another within and across employer partner sites.

As noted above, Year Up's main priority has been to strengthen basic mechanics of the internship relationship and processes. In the longer term, leads anticipate revising templates for employer agreements to encourage greater specificity about the objectives and skills required for each internship position. They also would like to move ahead with templates for individualized six-month internship plans, as recommended above.

2.4 Mini-Study #3: Fostering College Persistence

In the short term, Year Up aims to equip participants in all of its programs with enough training and work experience to secure entry-level jobs in growing fields following program graduation. Strong relationships with employers are critical to the program's theory of change and financing. The organization also recognizes that ongoing skill development is crucial for longer-term career advancement. For these reasons, Year Up also seeks to promote college persistence among its program graduates.

In the Year Up core program, students received college credit for Year Up training through cooperative agreements with local college partners.[15] But the core program's main emphasis, reflected in post-program performance goals, is on full-time employment, not college persistence. Consistent with this emphasis, impact findings for Year Up's core program show earnings gains for participants but no increase in their college enrollment rates after the one-year program (Fein & Hamadyk, 2018).

The PTC program puts greater emphasis on college persistence than does the core program. The local PTC programs operate in college settings where the primary orientation is towards classroom learning, credit accumulation, and credential completion. Indeed, PTC's potential contributions to increased college enrollment, persistence, and completion explain a good deal of college partners' interest in the model.

The key question for this mini-study was whether and how the PTC programs could do more to improve college persistence and degree attainment among program graduates without compromising post-program employment outcomes. Impact findings for the core program suggest that it can be challenging to foster increases in both work and school simultaneously (Fein & Hamadyk, 2018). Year Up's national staff continue to see successful transition to career-track employment as the paramount goal for PTC participants and do not want to encourage college persistence at its expense. This third mini-study sought to identify ways the PTC programs can address college partners' interest in having PTC participants continue in

[14] The website is at https://yusupervisorhub.com/.

[15] Year Up recently revised its approach to securing credit for core program courses. Students now earn college credit through the American Council on Education's Credit Recommendation Service, rather through agreements with local colleges.

college after completing their internships without compromising on Year Up's priority on post-program employment.

The central recommendation from this mini-study was for Year Up to:

- Introduce a systematic approach to career planning that would balance and further both the college persistence and career-track employment goals.

The recommendations envision local PTC programs working with participants to develop personalized career plans including specific steps for both employment and continuing education. Ideally, these plans would be developed in concert with PTC program staff, college advisors, and worksite supervisors and, subsequently, reviewed and revised periodically as participants gain more experience and exposure to work environments. The plans would identify sequences and combinations of work and school experiences that are consistent with each participant's goals. Progress of participants would be monitored against their individual plans, rather than common expectations regarding goals for work and school. Year Up would use the plans to monitor local programs against specified targets for percentages of graduates who are on track with their individual career plans and engaged at least full-time in plan-specified activities.

2.4.1 Study Design

This mini-study drew on several types of information, including a brief literature review, analyses of Year Up administrative data, and interviews and focus groups with PTC program stakeholders. Statistical analyses also used college records from the National Student Clearinghouse (NSC). The analyses determined rates of college persistence by former Year Up program graduates and explored factors associated with persistence.[16] The analysis focused primarily on former participants in PTC programs but also included comparisons with former participants in Year Up's core programs.

The study relied primarily on NSC data on college enrollment for the 1,029 PTC participants who enrolled prior to July 2015, including 667 graduates with four or more months of post-program NSC follow-up data. Of this sample, 529 participants enrolled prior to July 2014 and thus had 18 months of follow-up data. To put PTC's greater emphasis on college persistence in perspective, the study also used comparable NSC data for 7,288 young adults who enrolled in Year Up's core program prior to July 2015 (5,418 of whom graduated).

[16] This work also examined the quality of data on college enrollments captured at Year Up's four-month post-graduation follow-up, including comparing program data with college records in the NSC. Examination of data from staff reports and NSC records showed that the program data tended to overstate and the college data to understate post-PTC enrollment levels. Of the two sources, the team judged the NSC's data collection processes the more reliable. NSC's chief source of bias—failure to match some participants to NSC records due to discrepancies with Year Up IDs—might be addressed to a small extent by repeated matching on Social Security number and then name and date of birth. Since NSC included college records during the program for only 89 percent of a sample of PTC graduates (all of whom were enrolled in theory during the period), 11 percent may be a reasonable estimate of under-coverage. Thus, multiplying observed enrollment rates by 1.12 (100/89) provides a rough correction for false non-matches.

The mini-study also draws on interviews and focus groups conducted in 2018 that explored approaches to college persistence and other subjects. The study team visited three local PTC programs to interview program and college staff and conduct focus groups (each involving around 10 participants currently in internships). This study also draws on interviews with employers conducted for the overall PTC study (six interviews) and for the parallel PACE study of Year Up's core program (12 interviews).

2.4.2 Background Literature

The literature on returns to college credentials reports that, increasingly, a college degree is required to obtain professional jobs providing good pay and benefits. Although economic returns are largest for bachelor's and graduate degrees, there also are appreciable returns for associate's degrees and certificates—particularly in technical fields (Belfield & Bailey, 2017; Binder & Bound, 2019; Carnevale et al., 2010, 2013; Dadgar & Weiss, 2012; Fuller et al., 2017; National Research Council, 2014).

Unfortunately, degree and certificate completion rates are low at public two-year community colleges, which are most accessible for low-income students. Only half of first-time, degree-seeking students at such schools have earned a credential or are still enrolled after six years (National Student Clearinghouse Research Center, 2019). One reason is that low-income youth are more likely than others to attend college part-time while working full-time. Moreover, those who enroll in college part-time are less likely to earn a credential, and for those who do earn a credential, the average time-to-degree is longer (Attewell & Monaghan, 2016; Bound et al., 2012; Jepsen et al., 2010; National Research Council, 2014; Stinebrickner & Stinebrickner, 2003).

In response, some colleges have worked with researchers and non-profit organizations to test approaches for supporting full-time college enrollment—for example, through intrusive guidance, additional financial assistance, and other supports. Rigorous evaluations have found that such programs can increase college persistence and completion (Gupta, 2017; Roder & Elliott, 2019; Rolston et al., 2017). To date only one of these studies (Roder & Elliott, 2019) measured impacts on earnings. That program (Project QUEST) produced substantial earnings gains persisting at least nine years.

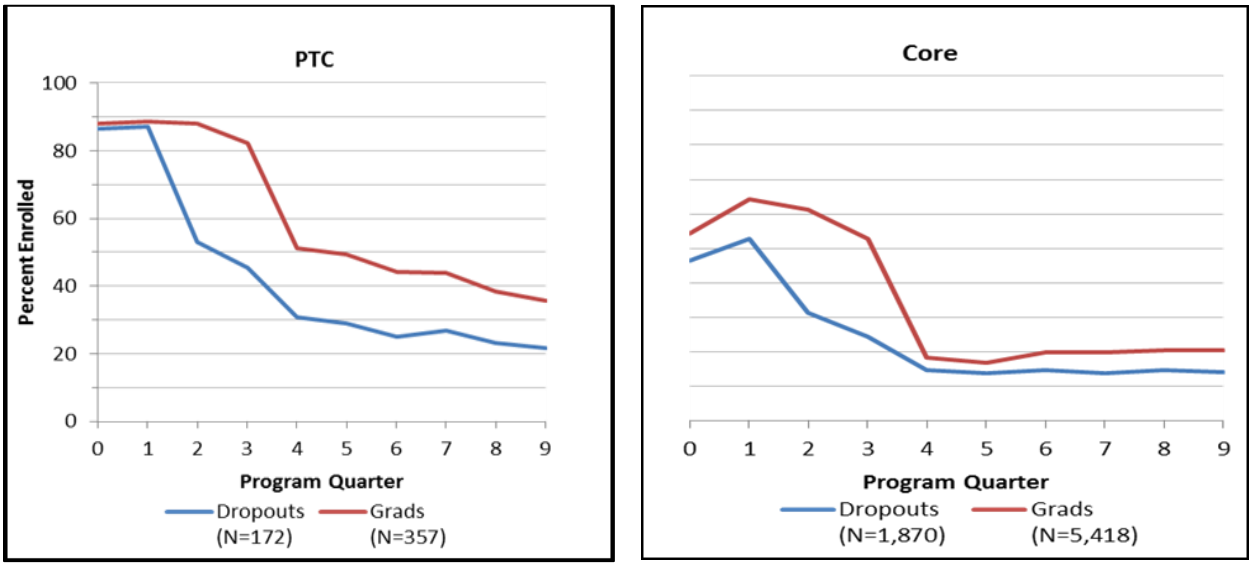
The literature does not provide much guidance on how to support longer-term skill acquisition when full-time college enrollment is not possible—as is the case for most of the disadvantaged young adults Year Up targets, who must work full-time to make ends meet. The options include ongoing supports for part-time enrollment in existing college programs and alternative forms of training that may be a better complement to work. The latter include progressive increments of accelerated training (similar to what Year Up provides to participants during the first six months), apprenticeships, and other work-based approaches.

The evidence on these alternative approaches is limited. Findings on Year Up and other intensive, occupation-specific programs (often referred to as "sectoral" training approaches) are encouraging. But few studies of these programs have examined the persistence and magnitude of benefits over the long term. And there has been little testing of approaches that entail multiple increments of intensive training separated by spells of full-time work.

2.4.3 Descriptive Analyses of College Persistence

On average, 62 percent of PTC program participants enrolled by July 2015 graduated from the program, and about half of them continued in college after graduating the program.[17] Examining the subset of participants who graduated from the earliest PTC enrollment cohorts (*N* = 357) affords a look at persistence over a longer time horizon. Of them, most who were enrolled four months after finishing PTC were still enrolled a year later (Exhibit 2-3, PTC panel, red line).

Exhibit 2-3: Mini-Study #3 – Percentage of Participants Enrolled in College During the Nine Quarters after Enrolling in Year Up's PTC and Core Programs, by Program Completion Status



Source: Year Up administrative data and data from the National Student Clearinghouse.

Notes: The sample includes program enrollees through July 2015. Quarter 0 is the enrollment quarter. The actual date of enrollment within the calendar quarter varies across programs and over time within programs. The learning and development phase of the program corresponds to the six months after enrollment; the internship phase corresponds to the second six months after enrollment; the post-program period begins sometime during quarter 8, depending on the program enrollment date.

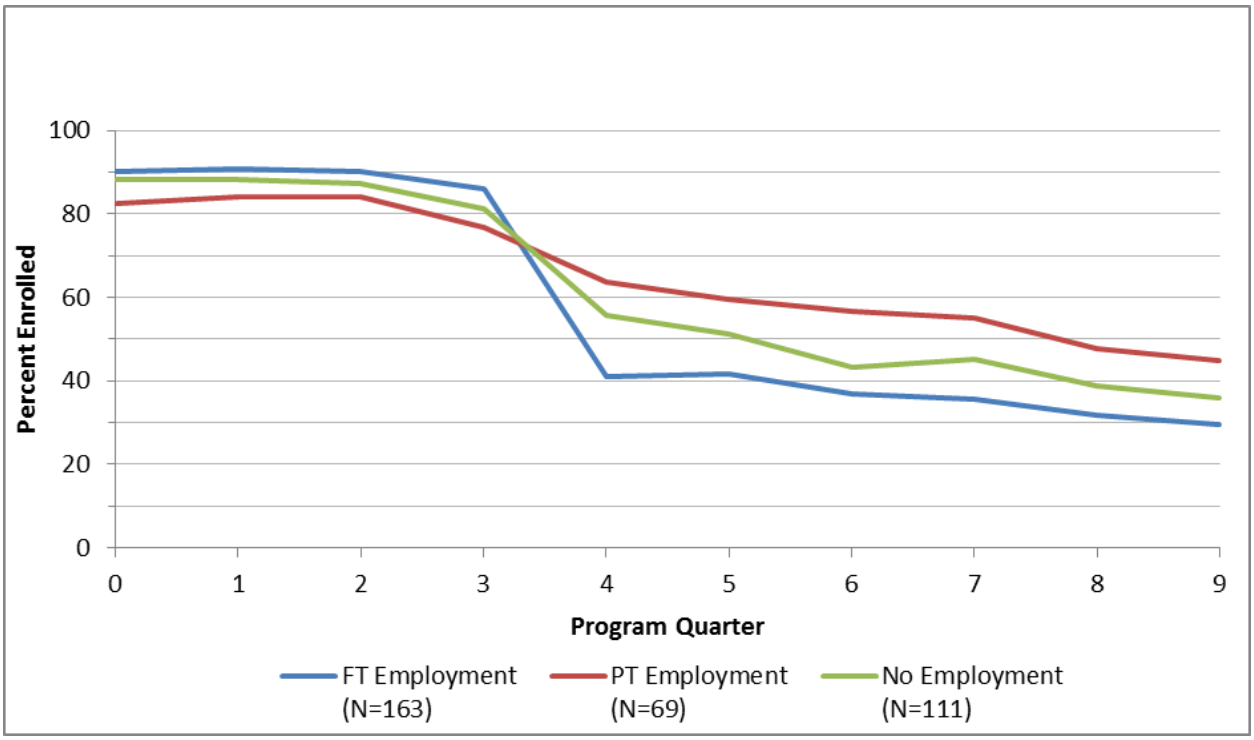
Young adults from the same PTC cohorts who did not finish the program were about 20 percentage points less likely to remain in college (blue line). The reasons the latter left college are likely to be closely linked to factors that often impede success in PTC generally, such as the academic challenges addressed in Mini-Study #1 and other personal and family issues.

Year Up's core program encourages graduates to enroll at local partner colleges. However, compared with participants in the PTC programs, college enrollment rates among participants in local core programs are substantially lower during and after the program for both graduates (Exhibit 2-3, Core panel, red line) and dropouts (blue line).

[17] College persistence estimates are based on NSC college enrollment records. Direct estimates show that of 667 PTC graduates, 45 percent were enrolled in college four months after graduating. A more accurate estimate, adjusting for false non-matches (see footnote 16), is 51 percent.

The team also analyzed the characteristics of PTC participants that are related to post-program college persistence. Employment status as of Year Up's four-month post-program follow-up was one of the strongest predictors. As shown in Exhibit 2-4, PTC program graduates who were working part-time immediately after the program were more likely to remain enrolled in college than those who were either working full-time or not working. Several other subgroups of PTC graduates also had higher college persistence rates (not shown in exhibits)—notably those in the youngest age group (<20) and those with some college experience before entering PTC.

Exhibit 2-4: Mini-Study #3 – Percentage of PTC Program Graduates Enrolled in College During Each of the First Nine Quarters After Enrolling in PTC, by Employment Status in the Quarter Following Graduation



Source: Year Up administrative data, data from the National Student Clearinghouse, and data from the National Directory of New Hires.

Note: The sample includes all program participants enrolled between January 2011 and July 2015. Quarter 0 is the enrollment quarter. The actual date of enrollment within the calendar quarter varies across programs and over time within programs. The learning and development phase of the program corresponds to the six months after enrollment (roughly Q0-Q1); the internship phase corresponds to the second six months after enrollment (roughly Q2-Q3); and the post-program period begins sometime during Q3-Q4, depending on the program enrollment date.

PTC graduates whose internship sponsors offered them jobs also were more likely to continue in college than were their counterparts who did not get a job with their internship sponsor. It is unclear why persistence should be higher for young adults whose internships directly led to job offers. One possibility is that they have relatively high career aspirations and fewer life challenges, rendering them better able to combine work and school. Such participants also may have more time to focus on school given less need for time-intensive job hunting after completing PTC. Employers who hire interns may be more able and willing than other employers to support continuing education of their employees.

College persistence varied substantially across local PTC programs, even after controlling for participant characteristics. This variation raises the possibility that the philosophies and practices of college partners and Year Up programs may influence college persistence rates. For example, views of the value of continuing in college after leaving the PTC program may vary across programs, and college partners may differ in the degree to which they actively support ongoing college enrollment among PTC graduates.

2.4.4 Stakeholder Perspectives

As fieldwork for this mini-study evolved, it became clear that, in order to understand post-program outcomes, it was necessary to explore how college goals and supports were portrayed to participants. Thus, the interviews and focus groups inquired about both goals and supports for college enrollment from recruitment through internships and into the post-program period. We explored stakeholders' views on how each phase of the PTC program operated and how it might be possible to strengthen expectations and supports for continued enrollment in college through internships and beyond.

During recruitment, many PTC programs focused their marketing efforts on the general community. Although there were some instances of joint recruitment with the college partners, college partners generally did not play a substantial role in program outreach and recruitment. PTC program and college staff cited Year Up's expertise in engaging underserved young adults and limited college recruitment resources as main reasons for leaving recruitment primarily to Year Up.

In focus groups, PTC participants reported hearing and responding to pitches for the program in varied ways. Although nearly all aspired to earn college credentials eventually (typically at least an Associate's degree), for some, the main appeal of the PTC program was its promise of a well-paying professional job after graduation. Other PTC participants—including many who had previously struggled in college—said that the program's offer of a supportive start towards a longer-term college certificate or degree was the most persuasive factor.

Most PTC participants in the focus groups said they did not have well-defined career plans when they entered the program. Some said that initially they also did not have a strong interest in Year Up's occupational tracks. In interviews, program staff reported that weak or uncertain career interests often made it difficult to assign enrollees to suitable PTC occupation tracks and college courses, and later to internship positions.

The L&D phase of the program offers important opportunities for participants to shape their career plans, acquire knowledge and skills needed for college success, and earn credits towards a longer-term college credential. In addition, success in college courses during the PTC program is likely to engender skills, motivation, and college credit supporting continuation in college after graduation.

The mini-study identified a variety of challenges in supporting college success during the PTC program. One theme cited by some program staff and participants was a need to improve the fit between participants' interests, the occupational tracks to which they were assigned, and the college courses they enrolled in. Both program staff and participants believed that tightening

these connections would increase motivation and persistence during the program and generate more credits applicable to desired longer-term credentials.

A second theme, explored in depth in Mini-Study #1, is the importance of coordination between PTC program staff and college instructors to identify and address students' academic difficulties in a timely manner. On the curriculum front, PTC program staff believed that mechanisms to ensure that feedback from employers was used to improve college curricula and instruction could be strengthened.

A third theme was a sense of missed opportunities for teaming with college advisors and worksite supervisors to foster career planning, including longer-term education plans. Program participants reported that college advising services mostly followed the traditional model of infrequent, student-initiated sessions focused on near-term course selection decisions. There was reportedly some, but not extensive, engagement in career planning with college advisors assigned to PTC participants. Communication between program staff and employers focused primarily on securing internship slots and troubleshooting difficulties during internships, with little discussion about interns' interests and career plans.

Program staff mentioned other underexploited opportunities to support college persistence during the internship phase. For example, staff routinely encouraged participants to take college courses (night or online courses) during internships, but programming that might help structure course planning and support completion was mostly undeveloped. Similarly, Wednesday afternoon workshops back at the PTC program office during the internship phase spent some time on career exploration and goal-setting. Such sessions reportedly concentrated on employment—with limited, if any, attention to next steps in college and with minimal participation by college advisors. There were exceptions. For example, at one site, the college's designated advisor took active steps to encourage interns to continue at her college.

In focus groups, interns said it could be hard to find a good career coach. They found that, although college advisors were knowledgeable about follow-on programs at their colleges, they did not know so much about employment opportunities and pathways in particular occupations. PTC program staff had strong knowledge of Year Up's target occupations, but they had limited command of the requirements and steps for obtaining the college credentials needed to advance in them.

Participants in one focus group reported they had received mixed messages from their internship supervisors about continuing in school. Some interns said that their supervisors strongly encouraged them to finish college after the program. Others said supervisors talked about co-workers who achieved success through experience and industry certifications, which left interns uncertain of the value of continuing in college.

Regardless of influences before and during internships, most PTC participants in focus groups aspired to earn a college degree. About half planned to attend college part-time while working full-time after they graduated from the program. The rest were roughly divided between those planning full-time school and those who whose plans were uncertain.

Some employers reported that they regularly encouraged interns to finish college after PTC. Several cited company-provided tuition and other supports that had helped former PTC program graduates earn degrees while working. Other employers said that because their companies required degrees for entry-level jobs, they encouraged program graduates to first finish their degrees and then apply for employment.

Year Up provides program participants with up to a year of employment-focused monitoring and supports following graduation. Historically, these services have not proactively supported college persistence. For most of the period covered by this research project (2015 to mid-2019), Year Up encouraged local offices to meet a 75-percent college persistence target for PTC program graduates. Local office leads were aware of the target but characterized their efforts to meet it as limited. In July 2019, national leaders dropped this performance standard in favor of a planning approach emphasizing more individualized education and training goals.

2.4.5 Initial Recommendations

The study team discussed its recommendations for increasing college persistence with Year Up national staff in a November 2017 briefing. The central recommendation was to undertake improvements such that every young adult completing the PTC program would have a clear and actionable career plan. The plan should be developed with substantial involvement of college advisors and, where appropriate, internship supervisors. Each plan should specify next steps for both education and employment, with steps depending on the participant's preferences, abilities, and selected career path.

Further, because steps would vary, program performance monitoring should not specify uniform levels of employment or education. Rather, the recommendations suggested that measures of career progress focus on the percentages of graduates who were "on track" with their career plans and engaged full-time in work or education or both consistent with the plans.

The recommendations suggested roles for Year Up and its college and employer partners in collaborating on a "guided career pathways" approach that identifies both the educational and employment steps critical to pursuing desired careers. Such an approach involves identifying and mapping each participants' career interests to one of a limited set of "pathways to success" at each site. Each pathway identifies a specific bundle of college courses and aligned internship positions. Each pathway also targets particular jobs and career ladders in specific occupations.

The study team recommended reworking templates for memoranda of understanding (MOUs) between Year Up and its college partners to specify joint recruitment activities that include accessing college applicant pipelines. The MOUs and accompanying materials would articulate the benefits of PTC program enrollment for *existing* college students (e.g., improved retention, completion, and employment success) as well as the PTC program's expected contributions to recruiting *new* students. The revised MOU template also would specify expectations for communication and coordination between the PTC program and college staff in developing and monitoring career plans, participating in the PTC program learning communities, and advising participants during and after the program.

The study team identified a series of steps to make career planning a more central, ongoing process throughout the PTC program experience. The most explicit activities would occur in the Career Development and Internship Readiness course during L&D and in internship workshops. These activities would engage participants, PTC program staff, college advisors, and worksite supervisors in career planning. Upon graduation, each program participant would have a detailed career plan and a connection with a dedicated career coach—ideally a college advisor or worksite supervisor—to support follow-through. Year Up staff would continue to actively monitor each participant's progress, update plans as needed, and ensure that the participant has an engaged career coach.

The study team encouraged Year Up to pilot more intensive versions of a guided career pathways model in selected programs throughout its network. In addition to strengthened activities during the program, such pilots could test expanded supports for education and training after a participant graduated. For example, employers might be encouraged to extend existing supports for education and training through simple policy changes such as eliminating the waiting period before new hires qualify for tuition support. Pilots also might experiment with supports that encourage employers to maintain relationships with former interns they do not hire upon graduation, but who are working towards college degrees. External funding for pilots could be used to cover these enhanced services and related evaluation costs.

2.4.6 Year Up's Response

At the November 2017 webinar, meeting participants responded favorably to the central recommendation. National staff also liked the idea of making "being on track with career plans" a key performance benchmark, rather than Year Up's current practice of gauging program performance against a common post-program college enrollment rate target. However, they were wary of revising performance requirements pertaining to employment, as the employment emphasis is central to Year Up's mission and theory of change.

The study team interviewed key national staff in May to June 2019 to ascertain what changes Year Up had made in response to the Mini-Study #3's recommendations. Informants reported substantial progress in implementing the study's central recommendation—to develop and implement an overarching career planning approach that ensures each PTC participant has a clear and actionable plan for next education and employment steps upon completing Year Up.

At the center of the new approach—now operating in all PTC and core programs—is a new short course in career planning taught over two weeks during the Wednesday Internship Seminar. These classes are highly interactive and activity based. Participants start with group activities focused on planning for hypothetical young adults and then complete a series of worksheets and essays that culminate in their own plans. To prepare their plans, participants research occupations of interest, interview professionals in these occupations, and reflect on and discuss goals with Year Up coaches and classmates.

The cornerstone of each plan is a worksheet in which the participant identifies short-term, mid-term, and longer-term goals for employment, education and training, exam-based certifications, and other important areas of life. Participants enter plan highlights in Year Up's Salesforce®

database, establishing the basis for future monitoring of their career progress (discussed below).

Instructors and PTC program coaches encourage participants to include meaningful education and training goals. Participants decide whether and what their goals should be. Year Up has developed materials to train its own staff coaches in how to guide participants in developing their plans. Local PTC programs have not yet made concerted efforts to engage college advisors or worksite supervisors and mentors in plan development, as was recommended.

A new program performance goal stipulates that 100 percent of participants should have completed plans entered into Salesforce® as of graduation. Soon a related performance goal will specify a standard for the proportion of a program's participants who are "on track" with their plans 12 months later.

Year Up had neither determined how this second outcome will be measured nor specified the target achievement rate as of our mid-2019 interviews. The organization will continue to monitor education enrollment rates post-graduation. As mentioned earlier, though, it no longer will hold local offices to the 75 percent college enrollment standard.

This guided pathways approach to career planning raises important questions for future research:

- How much, and what kinds of, education will participants commit to in their plans? Without explicit standards for levels and intensities of planned education, will many participants opt to pass on more effortful forms of education and training?
- What level of guidance and support will participants receive? Year Up has taken important steps to train its staff to help participants develop, monitor, and update their plans. It is important to assess the quality and results of the practice.
- To date, there have been only limited efforts to engage college advisors and worksite supervisors as potential career coaches for program graduates. Efforts to expand employer supports for ongoing education post-program also have been limited, though national staff are working on a pilot involving front-ending tuition remission programs offered by several employers. Research on innovative approaches to such collaborations could be useful.

A guided career pathway model ideally would begin career planning during program recruitment and enrollment and strengthen alignment between Year Up's occupational tracks, specific internship positions, and follow-on education and training programs. National staff cited several efforts under way to strengthen such alignment. For example, efforts in launching newer sites have involved more extensive work with college partners to create certificates for completing PTC that directly connect to specified Associate's degrees. In addition to longer-term benefits for participants, such credentials are helpful to colleges because they count towards the colleges' overall completion rates.

3. Assessing Implementation Fidelity

This chapter assesses the degree to which the Professional Training Corps (PTC) program was operating as intended by the end of the four-year study period. As seen in earlier chapters, implementing PTC required Year Up to adapt an intensive, multi-faceted stand-alone program to operate in college settings. The aim was for PTC to meet the same participant outcome goals set for Year Up's "core" program but at a substantially lower cost.

Year Up routinely measures many aspects of its local programs' performance against specified quantitative targets. For other dimensions of performance, standards for successful implementation are strongly implied by the program design but neither defined nor routinely measured. This chapter covers both types of requirements. For the latter, we offer a preliminary formulation of what high fidelity entails and, where possible, provide pertinent statistics.

The study focuses on data through 2018 to early 2019. Where available, we provide comparable statistics for Year Up's core program. Such comparisons help to see where PTC is in relation to its goal of matching the core program's performance. The findings reported in this chapter are based on two data sources—administrative statistics from Year Up's management information system and an online survey completed by all 15 PTC local program leads and the college partner liaisons for these programs. The survey—fielded in mid-2019—included questions designed to assess aspects of implementation operations for which data were otherwise unavailable.

To preview the chapter's main findings, by mid-2019 PTC had achieved high fidelity on a number of key standards while performance gaps remained for others. Areas of high performance include lowering per-participant costs relative to those for the core programs, operating with a lean staff, recruiting youth fitting the target profile, collecting full revenue for internships, and having high proportions of graduates in either well-paying jobs or school. Recruitment and retention were the main areas where performance gaps remained.

The study examined four broad sets of fidelity indicators. The first set concerns several cross-cutting implementation requirements: financial operations, staffing, and college partnerships (Section 3.1). The second set pertains to recruitment and admissions (Section 3.2). The third set involves implementation of key services during the L&D and internship phases (Section 3.3). The fourth set concerns post-program outcomes (Section 3.4). The chapter concludes with a brief summary of findings (Section 3.5).

3.1 Cross-Cutting Dimensions

High-fidelity operation of the PTC model requires strong performance on three dimensions that cut across all aspects of the program. First, local PTC programs need to **break even financially**, which means operating at costs that can be covered by internship revenue from employer partners—a level that is about half the operating costs of Year Up's core programs. Second, programs need to **operate as well as the core program with a leaner staff**, which requires that they delegate some and share other responsibilities with their college partners. Third, programs need to establish **high-quality college partnerships** that can create and

sustain high-quality admissions processes, develop and deliver strong curricula and instruction, and secure suitable office space.

3.1.1 Reaching Financial Break-Even

At high fidelity, local PTC programs would run at an average cost per participant that did not exceed the average revenue received from employer internship payments. Year Up's financial model specifies the cost and revenue figures that programs need to achieve break-even.

On the cost side, programs are expected to reduce spending to no more than $20,000 per participant once they grow their program enrollment to 160 participants or more per year. Spending projections start somewhat higher than this when programs begin, but per-participant costs are expected to fall as program enrollment grows. On the revenue side, Year Up's financial model assumes that, in order to generate $20,000 per participant from internship revenue, the programs will retain at least 83 percent of participants through the L&D phase and place them in internships. It also assumes that employer sponsors pay the full sponsorship rate of $26,000 per intern for 90 percent of internships.

In fiscal year 2018, the average per participant cost was $22,247 across all 15 PTC programs and $19,388 for the four programs with enrollments at or above the threshold of 160 participants. For comparison, the average cost per core program participant was $34,534 in the same year. Both the absolute and comparative costs for the PTC programs indicate that, overall, the programs achieved high fidelity to the PTC financial model.

Average revenue was $14,049 per participant for all PTC programs and $13,433 for programs serving 160 or participants a year. These amounts cover 63 and 69 percent of costs, respectively—substantially less than the 100 percent goal. The chief reason is that the PTC programs did not retain a sufficient fraction of participants to the revenue-generating internship phase of the program (see further discussion in Sections 3.3 and 3.4). In comparison, the core programs achieved higher retention and generated $19,944 in average revenue per participant—covering 58 percent of its average per participant cost of $35,434.[18]

3.1.2 Operating Well With a Leaner Staff

A major source of anticipated lower per-participant costs of the PTC programs compared with the core programs is the former's lower staff sizes. According to Year Up staff rosters, as of the end of 2018, the average staff size was 15.5 across the 15 PTC programs (Exhibit 3-1, middle panel).[19] This figure is very close to the 16.3 average implied by Year Up standards, given the number of learning communities PTC programs were serving in 2018.

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[18] This cost per student for the core program represents an increase over the $28,290 reported for 2013-2014 in PACE. Nonetheless, revenue from employers covered virtually the same portion of costs (58 percent, compared to 59 percent in PACE), indicating that Year Up was able to increase internship revenue at a rate that costs increased.

[19] In 2018, standards were 13, 19, and 26 full-time staff equivalents for stand-alone PTC offices with one, two, and three learning communities, respectively. (The standard learning community size is 40 participants.) Standards for PTC differed slightly in so-called "dual channel" cities – that is, cities where Year Up operated both PTC and core programs.

Exhibit 3-1: Fidelity of the PTC Programs on Cross-Cutting Dimensions of Implementation

High Fidelity Standard	Measure	Performance Level: PTC Programs	Performance Level: Core Programs
Financial Goals			
Costs substantially below core program	Average per-participant cost FY 2018 ($)		
	All offices	22,247	34,534
	PTC programs with 2+ learning communities	19,388	NA
Cover cost through internship revenue	Internship revenue per participant in FY 2018 ($)		
	All offices		
	Amount ($)	14,049	19,944
	% of average total cost	63.2	57.8
	PTC programs w/2+ learning communities		
	Amount ($)	13,433	NA
	% of average total cost	69.3	NA
Staffing Goals			
Staffing close to Year Up standard (16.3 staff per office at 2018 enrollment)	Average number of staff per office as of December 2018	15.5	NA
Local PTC leads deem staffing sufficient	Availability of staff type cited as creating challenges never/only occasionally (%)		
	Local leadership	66.7	NA
	Recruitment/admissions	66.6	NA
	Program operations	80.0	NA
	Employer-focused	93.3	NA
PTC-College Partnership Goals			
Leaders assess partnership as high quality	PTC program leads' assessment of partnership quality (%)		
	Above average	16.7	NA
	Average	54.4	NA
	Below average	28.9	NA
	College leads' assessment of partnership quality (%)		
	Above average	42.9	NA
	Average	40.5	NA
	Below average	16.7	NA

Sources: Administrative statistics provided by Year Up, mid-2019 survey of PTC program leads and college liaisons.

The current standards represent an increase in staffing levels since the beginning of the study period, largely in the admissions and student services categories.[20] Whether current levels will be sufficient to address persisting recruitment and retention challenges is unclear. Findings from Mini-Study #1 (see Chapter 2) provide grounds for optimism. That test of staff-designed strategies for improving academic monitoring and supports showed that it is possible to substantially boost L&D retention without adding staff.

[20] See Chapter 5 for discussion of recruitment challenges facing admissions staff. Year Up initially planned to refer participants with social service needs to college services, but found that college offerings often were not sufficient.

In a spring 2019 survey administered by the study team, PTC program leads reported that staffing levels were generally sufficient. However, judgments varied on needs for particular types of staff. For example, program leads were least likely to report reported that they had sufficient leadership and recruitment/admissions staff (67 percent in both instances), more likely to report that general operations staffing was sufficient (80 percent), and highly likely to report that employer-focused staffing was sufficient (93 percent).

3.1.3 Forging High-Quality College Partnerships

This study did not collect objective measures of college partnership functioning. The spring 2019 survey of PTC program leads and local college counterparts did ask respondents to rate the quality of their Year Up–college partnership, however.

The survey asked PTC program leads to compare their site to other PTC program sites, and it asked college liaisons to compare their PTC partnership with other partnerships they have with other external organizations. Relatively few PTC program leads (17 percent) rated their college partnership as above average, and most (54 percent) rated their site as average (Exhibit 3-1 above). In comparison, 43 percent of college leads rated their partnership with the PTC program as above average, and 41 percent rated it average.

These numbers hint at lower satisfaction among PTC program leadership than among their college counterparts. But differences in question wording and willingness to be critical also may be at work. It would be useful to gather more direct measures of partnership functioning in the future.

3.2 Recruitment and Admissions

For each enrollment cohort, Year Up establishes recruitment targets it judges to be realistic for each PTC program while aiming for as much overall growth as is feasible. The study team was unable to locate an official statement of growth targets at the beginning of the four-year study period as a basis for assessing performance. In interviews, however, Year Up national staff and local PTC program leads told the team that meeting recruitment goals has been one of the program's greatest challenges.

PTC program enrollment increased fourfold between 2015 and 2018 (Exhibit 3-2, top panel). As discussed in Chapter 1, much of this growth arose from the addition of new programs rather than from increased enrollments within programs. By 2018, only four PTC programs were operating two or more learning communities.[21] As planned, total enrollment across the eight core programs held steady at around 2,000.

Although Year Up does not specify quotas for participants with particular characteristics, it aspires to serve a diverse population of young adults from low-income backgrounds who are motivated and in a position to benefit from the program experience. Year Up's national leaders

[21] At about 40 participants per learning community and two recruitment cycles per year, two learning communities implies about 160 participants per year—the target for reaching break-even in the PTC financial model.

Exhibit 3.2: Fidelity of the PTC Programs on Recruitment and Admissions Dimensions of Implementation

High Fidelity Standard	Measure	Performance Level	
		PTC Programs	Core Programs
Enrollment Growth			
Steady growth in PTC enrollment	Enrollment (calendar year)		
	2015	500	2,001
	2016	867	2,034
	2017	1,501	2,028
	2018	1,926	2,072
Participant Profile			
Target young adults with manageable life challenges	Number of risk factors (%)		
	<2 risks	29.3	24.0
	2-4 risks	46.2	55.7
	5+ risks	24.4	20.4
Reach underserved minorities	Race-ethnicity (%)		
	African American	53.2	42.6
	Hispanic	26.9	32.9
	Asian/Pacific Island	7.5	12.2
	White	5.3	4.4
	Other/multiple race-ethnicities	7.0	7.9
Serve both genders	Gender = Female (%)	41.0	38.6
Serve mixed age groups	Age below/above 20 (%)		
	Age 20+	58.7	79.5
Mix of college experience	Prior college (%)		
	Some prior college	51.4	49.2
Compatible goals for recruitment sources	Targets for recruitment from college pipeline vs. community		
	College partner's goals:		
	College pipeline (%)	26.8	NA
	General community (%)	73.2	NA
	PTC leaders' goals:		
	College pipeline (%)	34.5	NA
	General community (%)	65.5	NA
	Actual share from general community (estimated by PTC Program Lead) (%)	72.9	NA

Sources: Demographic statistics are based on Year Up administrative data. Goals for recruitment by source represent averages across percentages cited as ideal by respondents to mid-2019 survey of PTC program leads and college liaisons.

have emphasized that the PTC programs should recruit young adults whose characteristics are generally similar to those of their core program counterparts.

PTC program admissions staff use a standardized rubric on a five-point scale to determine whether applicants have life challenges that are manageable with the type and level of supports

the PTC programs can provide. Year Up's guidelines encourage programs to target applicants with a moderate level of risk—defined as having an average risk score of 2-4 points identified through an interview-based assessment that looks for 14 conditions that pose risks (each ranked 0-4 in seriousness). However, the guidelines do not stipulate specific performance targets.

Slightly less than half (46 percent) of PTC program participants had moderate risks (two to four risk factors)—a level somewhat lower than the 56 percent of core program participants with two to four risk factors (Exhibit 3-2, panel bottom). Roughly similar fractions of the PTC and core participants had fewer than two and more than four risk factors (29 and 24 percent, respectively).

Available demographic indicators show evidence of reasonably high levels of diversity among both PTC and core program participants. The majority of participants in both programs are from racial or ethnic minority groups. A higher proportion of participants in the PTC programs than in the core programs are African Americans (53 versus 43 percent). The PTC and core programs serve nearly identical mixes of men and women and of participants with and without previous college experience. The PTC programs have a markedly younger age profile than the core programs, reflecting that PTC programs recruit more heavily from high school pipelines than do the core programs.

In struggling to meet challenging recruitment targets, it might seem natural for PTC program staff to work with their college partners to identify good candidates among college applicants. However, to date the college partnerships have been premised on the expectation that the PTC programs would be an important source of *new* recruits for their partner colleges, tapping young adults who otherwise would be unlikely to apply to college (see further discussion in Chapter 5).

PTC program staff and partner college leads agreed that most recruits should come from the community (an average of 65 and 73 percent, respectively) rather than from college pipelines (Exhibit 3-2, bottom rows). The average PTC program lead estimated that 73 percent of actual recruits were from the general community.

3.3 The Learning and Development (L&D) and Internship Phases

Providing basic services during the L&D and internship phases of the program with high fidelity to the PTC design requires that program staff set performance expectations high and provide high levels of support to many participants. Year Up monitors L&D retention against its 83 percent completion standard. It also expects local offices to consistently enforce Year Up behavior contracts.

Slightly more than three-quarters (76 percent) of participants who enrolled in the PTC program during 2018 completed L&D—a retention rate somewhat below the 83 percent retention rate for core program participants (Exhibit 3-3). Nearly all participants in both the PTC and core programs were cited for at least one behavior infraction (97 and 99 percent, respectively). However, the PTC participants were less likely than their counterparts in core programs to receive 10 or more infractions (56 versus 72 percent).

Exhibit 3-3: Fidelity of the PTC Programs on Dimensions of the Learning and Development and Internship Services Provided

High Fidelity Standard	Measure	Performance Level	
		PTC Programs	Core Programs
High Expectations			
83% of Participants complete L&D	Participants completing L&D (%)	76.1	83.0
Stringent contract enforcement	Infractions recorded (%)		
	Any infractions	97.1	98.7
	10+ infractions	56.3	72.2
90%+ of internship sponsors pay full rate	Employers pay full rate (%)	91.8	NA
90%+ of interns complete internships	Interns graduating (%)	85.7	90.2
45%+ of internships convert to jobs	Internships converting to jobs (%)	44.2	47.8
75%+ of participants graduate	Graduation rate for all enrollees (%)	66.3	75.5
High Support			
Strong exposure to Year Up learning community	Hours/week students spend with PTC program participants (avg.)	22.2	NA
Supportive Year Up staff	PTC program leads rate staffing sufficient (%)		
	For academic issues	46.7	NA
	For non-academic issues	73.3	NA
	College leads rate staffing sufficient (%)		
	For academic issues	78.5	NA
	For non-academic issues	92.9	NA
Supportive college staff	PTC program leads rate college staff sufficient (%)		
	For academic issues	36.7	NA
	For non-academic issues	20.0	NA
	College leads rate college staff sufficient (%)		
	For academic issues	64.3	NA
	For non-academic issues	57.1	NA

Sources: Administrative statistics provided by Year Up, mid-2019 survey of PTC program leads and college liaisons.

One possible reason for fewer infractions among PTC program participants is that PTC staff spend less time with participants in a typical week than do their counterparts in the core programs. Local PTC program leads estimated that students spend 22 hours a week with other participants and staff as a learning community. In contrast, the core program involves full-time attendance at stand-alone programs. As a result, core participants spend close to 35 hours a week with program staff, and staff thus have more opportunities to observe participants' behavior.

On the "high support" front, PTC program leads were more likely to assess Year Up supports as sufficient for resolving non-academic challenges than for addressing academic issues (73 versus 47 percent).[22] Fewer PTC than college leads rated college supports as sufficient for either issue type.[23] College liaisons were generally more likely to rate supports as sufficient. They tended to rate PTC program supports more highly than college supports—even when it came to addressing academic issues.

Year Up aims to collect its full payment rate for internships for 90 percent of internships in both its PTC and core programs. The PTC programs have consistently met that standard—the average collection rate in 2018 was 92 percent (Exhibit 3-3, top panel). High expectations for the internship phase also include achieving a 90 percent completion rate and, for those completing internships, having at least 45 percent of internships convert to jobs with the employer that sponsored the internship. The PTC programs came close to meeting these targets in 2018, with an 86 percent L&D completion rate and a 44 percent conversion rate. The core program scored only slightly higher on these metrics (90 and 46 percent, respectively).

Year Up maintains a 75 percent standard for overall PTC program graduation—the same as for the core program. Overall, PTC programs have fallen about 10 percentage points below this standard. Graduation rates for PTC and the core program were 65 and 76 percent, respectively, in 2018 (Exhibit 3-3, top panel, bottom row).[24]

[22] Based on the study team's summer 2019 survey, these statistics summarize responses to items asking local PTC program leads and their counterparts at the partner colleges to gauge the adequacy of supports provided by the PTC programs and by the college over the course of the program. Year Up also monitors satisfaction through regular surveys of participants and, during the internship phase, of employers. Although shifts in customer satisfaction can be helpful in identifying problems requiring attention, the survey did not probe such issues; the study team judged that the survey responses would likely not be sufficiently reliable and valid to support analyses of implementation fidelity.

[23] As noted earlier, insufficient college support services prompted Year Up to rethink and increase levels of PTC social services staffing.

[24] Completion rates for both programs changed little during the four-year study period (not shown in Exhibit 3-4). For the PTC programs, rates were 62, 67, 65, and 65 percent for the years 2015-2018, respectively. The corresponding figures for the core programs were 77, 76, 76, and 75 percent.

3.4 Post-Program Outcomes

Year Up standards include a series of targets for desired outcomes for program graduates measured at four and 12 months after program graduation (Exhibit 3-4). Standards for most outcomes were the same for the PTC and core programs: (1) an average wage among employed graduates of at least $16; (2) at least 85 percent of graduates employed or in school; and (3) at least 70 percent of graduates employed in a full-time, Year Up–related job.

Exhibit 3-4: Outcomes for 2018 Graduates of the Year Up's PTC and Core Programs

High Fidelity Standard	Measure	Performance Level	
		PTC Programs	Core Programs
Outcomes at 4 months post-program			
$16+ average starting wage	Starting hourly wage ($/hr)	18.70	20.90
85%+ employed/in school	Graduates employed/in school (%)	86.1	87.8
70%+ employed in full-time, YU-related jobs	Graduates employed in full-time, YU-related jobs (%)	62.4	76.3
75% in school (PTC programs only)	Graduates enrolled in school (%)	34.7	10.9
	Total graduates (N)	973	1,543
Outcomes at 12 months post-program			
70%+ contacted at the 12- month follow-up	Graduates contacted (%)	70.6	71.2
$16+ average starting wage	Average starting wage ($/hr)	19.10	21.90
85%+ either employed/in school	Graduates employed/in school (%)	90.0	85.6
70%+ employed in full-time, YU-related jobs	Graduates employed in full-time, YU-related jobs (%)	66.5	71.1
PTC only: 75% in school or received credential	Graduates enrolled in school (%)	47.9	24.9
	Graduates contacted (N)	687	1,099

Sources: Administrative statistics provided by Year Up.

To reinforce the importance of extended follow-up, standards also included achieving at least a 70 percent contact rate with program completers 12 months after graduation.

Reflecting the PTC program's focus on college, beginning with the cohort scheduled to graduate from the program in July 2016, Year Up applied additional standards to PTC programs. These standards are that (1) four months after program graduation, at least 75 percent of PTC graduates should be enrolled in school; and (2) 12 months after graduation, 75 percent should be enrolled in college or have earned a credential.

The study team measured performance on these metrics for 2018 graduates of Year Up's PTC and core programs (Exhibit 3-4). Average starting wages post-program for both groups of graduates were well above the $16 standard at both the four-month follow-up ($18.70 and

$20.90 for the PTC and core program graduates, respectively) and 12-month follow-up ($19.10 and $21.90 for the PTC and core program graduates, respectively).[25]

PTC program graduates were markedly less likely than core program counterparts to be working in full-time, Year Up–related jobs four months after graduating from the program (62 and 76 percent, respectively). However, by the 12-month follow-up, the gap between graduates of the two programs had narrowed considerably (67 and 71 percent, respectively).

At both time points, PTC program graduates were much more likely than core program graduates to be enrolled in school (35 versus 11 percent at the four-month follow-up, and 48 versus 25 percent at the 12-month follow-up). Neither program came close to meeting Year Up's standard for PTC that 75 percent of graduates should be enrolled in school (Exhibit 3-4).

As discussed in Chapter 2, effective July 2019, Year Up dropped the 75 percent school enrollment target for PTC graduates. In its place, it introduced a two new standards. First, at graduation, 100 percent of PTC and core program graduates should have prepared an actionable career plan specifying near- and longer-term education goals and planned actions to achieve them. Second, at the 12-month post-graduation follow-up, a majority of graduates should be "on track" with their plans. As of mid-2019, Year Up had not decided how it will measure performance relative to the latter standard.

3.5 Summary

Evidence in this chapter shows that Year Up has made substantial progress in implementing the PTC program but also that performance gaps remain. The program has achieved high fidelity on standards for key design elements such as lowering per-participant costs relative to those for the core programs, operating with a leaner staff, recruiting youth fitting the target profile, collecting full revenue for internships, and having high proportions of graduates in either well-paying jobs or school. In most instances, where the PTC program has fallen short of performance targets, the gaps seem surmountable. For example, Mini-Study #1 showed that a 10 percentage point increase in retention to the internship phase should be feasible at current staffing levels if local PTC programs adopt strategies similar to the ones tested in this project.

It is important to recognize that Year Up has set the bar unusually high, in holding PTC programs to the outcome standards of its core program while expecting them to operate at substantially lower costs. Compared to other workforce programs, a year of full-time training, support services, and internships is very intensive. Most workforce and college programs would be happy to achieve a 65 percent completion rate and cover more than three-fifths of their costs through revenue provided by employers.

[25] Year Up National staff noted that differences in local wage rates in core and PTC markets are a likely contributor to these differences in average wages.

4. Early Impacts on Education and Employment

This chapter presents initial results from a small randomized controlled trial (RCT) designed to measure the overall impacts of several Professional Training Corps (PTC) programs. Over a two-year period beginning in July 2017, staff at three PTC programs enrolled four cohorts of program applicants (554 young adults) in the study. Sample members randomly assigned to the treatment group were encouraged to enroll in PTC, whereas those assigned to the control group were not allowed to enroll but could receive training and services otherwise available in the community.

This chapter presents initial evidence for program impacts on college enrollment, employment, and earnings. Analyses draw on administrative data on college and employment outcomes and cover the program and immediate post-program periods (four calendar quarters in the program, one following it). Subsequent reports will analyze impacts over a longer follow-up period.[26]

The study's early findings mirror expectations based on the Year Up program logic model and the pattern of results from a large-scale RCT of Year Up's core program (Fein & Hamadyk, 2018). The current study finds that PTC treatment group members had significantly higher rates of college enrollment during the program year. The gains were especially large during the initial six-month Learning & Development (L&D) phase of the program, when all participants are required to enroll full-time in courses at partner colleges.

PTC programs require full-time participation during both the L&D and internship phases. Consistent with this requirement, the treatment group had significantly lower employment and earnings than the control group during the first four quarters following enrollment. Similar to the findings for the study of Year Up's core programs, earnings reductions were larger during the L&D phase (Q1-Q2) than during the internship phase (Q3-Q4). By the start of the post-program period (Q5) they had disappeared.

The chapter begins with a description of the research questions guiding the study (Section 4.1). It then discusses site selection, sample design and enrollment procedures, characteristics of the sample, and analyses (Section 4.2). Section 4.3 presents the findings, and Section 4.4 provides a summary discussion.

4.1 Hypothesized Early Impacts

This study's hypotheses flow from three key steps of the PTC program model: (1) During L&D, the model seeks to boost English skills, technical skills in an occupation, and professional skills needed in the workforce. (2) The program provides workplace-based learning opportunities. Participants hone technical skills and build career awareness and professional networks during full-time, six-month internships (often while taking additional college courses). (3) The program provides job search and related career supports to help graduates make successful transitions to work and continuing education. As discussed in Chapter 2, the local PTC programs place

[26] Future planned reports are being funded under a separate grant from Arnold Ventures.

greater emphasis on full-time employment immediately after the program than on continuing education.

RCT findings for the core program are helpful in anticipating the expected short-term impacts of the PTC programs. Because the core and PTC programs follow the same basic logic (see Chapter 1), a finding of similar early impacts may signal that the PTC programs are on track for longer-term success. The core program substantially *increased* college enrollment rates during the program—that is, the L&D and internship phases—largely through co-enrollment at local partner colleges, and it reduced the rates in the year following the program. The core program had the opposite effect on employment and earnings, substantially *reducing* them during the program and increasing them starting in the first post-program quarter (Fein & Hamadyk, 2018, Exhibits 6-2 and 6-6).

The impacts of the PTC programs should follow similar patterns during the first (program) year. Accordingly, this chapter tests the hypotheses that during the first year following enrollment the PTC program will (1) increase the probability of college enrollment and cumulative months of full-time college enrollment and (2) reduce the likelihood of employment and average earnings. The PTC program model clearly aims to increase participants' earnings following the end of the program, but post-program expectations for college enrollment are somewhat more ambiguous.

To test these hypotheses, the early analyses reported here use outcome data for the first five calendar quarters of follow-up after random assignment. To put follow-up time in context of PTC program time, Quarter 1 is the first quarter in which young adults assigned to the treatment group are in L&D. Quarter 2 is a period during which they finish L&D and transition to internships. Quarter 3 is a period when they are in internships. Quarter 4 is the period when treatment group members complete their internships and leave the program. Finally, Quarter 5 is the only exclusively post-program quarter with data available at the time of these analyses.

4.2 Evaluation Design and Analysis Plan

The study used an experimental design that involved randomly assigning conditionally eligible PTC program applicants to either a treatment or control group. The former had the opportunity to enroll in the PTC program, whereas the latter were not allowed to enroll but could pursue similar education and training and receive similar services from other providers in the community (including the partner college). Randomization helps to ensure that estimated impacts (differences in outcomes between the groups) reflect true causal effects of the program rather than differences in the characteristics of treatment versus control group members.

4.2.1 Site Selection, Sample Recruitment, and Random Assignment

The study team worked closely with Year Up national staff to identify three PTC programs to participate in the study and to develop procedures for sample recruitment and randomization.

Site selection. In selecting sites, we sought programs that had the capacity to over-recruit by at least 50 percent in order to generate a control group, were operationally mature, and had good performance histories (see Appendix Exhibit B-1). Characteristics of young adults in the three selected sites were very similar to those of all participants in PTC programs (Appendix Exhibit

B-2). Slightly more than half of all PTC participants are male and aged 20 or older. Most identified as black/African American or Hispanic, and roughly half had at least some prior college experience.

The three programs' statistics for key program performance outcomes are also very similar to PTC programs overall. For example, 79 percent of PTC program participants in the study sites and in the non-study sites completed L&D, and 67 percent graduated from the program.

Within the study sample, there were some differences across the three participating programs.[27] For example, the percentage of participants in the study sites who identified as black or African American ranged from 27 to 85 percent; the percentage who were female ranged from 31 to 56 percent; and the percentage with zero or one risk factor ranged from 27 to 69 percent (Appendix Exhibit B-2). L&D completion rates in the study sites ranged from 77 to 89 percent, and overall graduation rates ranged from 57 to 85 percent.

Recruitment. Local PTC offices recruit on an ongoing basis throughout the year, but they enroll new cohorts only twice a year. Recruitment and enrollment in the study extended from mid-2017 to mid-2019. Over this period, the study enrolled four cohorts of conditionally eligible program participants.[28]

As part of the application process, PTC program staff provided information about the study to applicants who were identified as conditionally eligible for the program.[29] This information explained that admission to the PTC program would be through a lottery of those eligible applicants who gave informed consent to participate in the study.[30]

Random assignment. The study randomized conditionally eligible applicants within specified groups, or "blocks." Blocking helped to ensure that each program office received enough treatment group members to fill slots allocated to particular training tracks. Local program staff used a web-based lottery tool to assign eligible applicants to the treatment or control group. This allowed the study team to flexibly adjust probabilities of assignment to the treatment group as circumstances warranted. Over this enrollment period, the resulting probability of being assigned to the treatment group varied from 50 to 85 percent.[31]

In total, 552 conditionally eligible youth enrolled in the study sample—389 in the treatment group and 163 in the control group (Exhibit 4-1). Seventy-four (74) percent of those assigned to

[27] As in other chapters, the analysis identifies offices by number to protect anonymity.

[28] Site 1 enrolled sample in the first and second enrollment cohorts, Site 2 enrolled sample in the second through fourth cohorts, and Site 3 enrolled sample in the third and fourth cohorts.

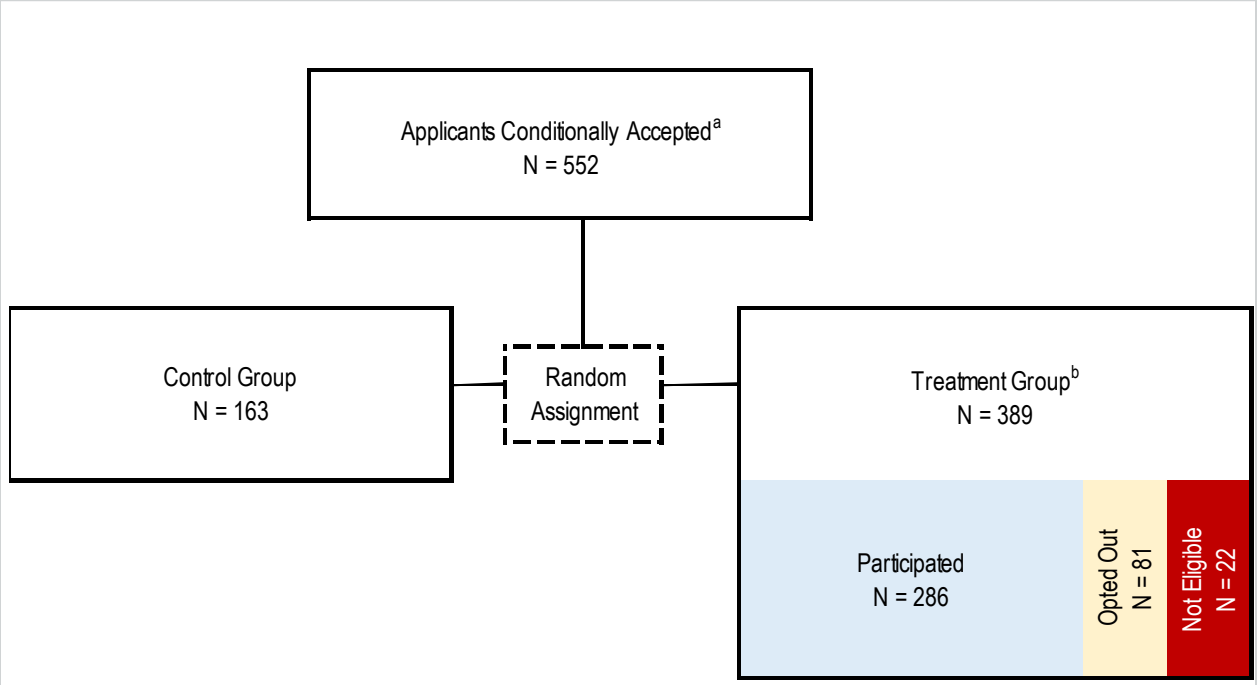
[29] Conditional eligibility was based on information available at the time of application. Programs sometimes uncovered information during the PTC enrollment and college registration process that showed the applicants to be ineligible.

[30] This information included an advisory that applicants assigned to the control group by lottery would be embargoed to enroll in the PTC program for three years.

[31] See Exhibit B-3 for details on the assignment blocks and assignment probabilities by site and Exhibit B-4 for further details on the recruitment and randomization process.

the treatment group enrolled in the PTC program, 21 percent opted (dropped) out prior to enrollment, and 6 percent were found to be ineligible after randomization.

Exhibit 4-1: Random Assignment and Enrollment in the Study Sample



Source: Authors' tabulations of Year Up administrative data.

[a] Conditional acceptances were withdrawn most often for academic issues, such as determining applicants did not have basic skills required by the college, failure of applicants to take a required academic placement test, or being placed on academic probation (when the applicant was already enrolled in the college prior to applying to the PTC program). It was not possible to defer randomization until applicants finalized their college registration, as that would have disrupted intake procedures of both the PTC programs and the colleges.

[b] Seven (7) treatment group members retained in the sample initially opted out of the program but subsequently enrolled in a later cohort.

4.2.2 Data Sources and Alignment with Program Time

The impact analysis draws on data from three sources. Year Up administrative data provide measures for pre-random assignment ("baseline") characteristics that were used as covariates in regression models to estimate impacts (see Section 4.2.4 below). The National Student Clearinghouse (NSC) provides data on college enrollment outcomes. The National Directory of New Hires (NDNH) provides data on employment and earning outcomes.

Each of the three data sources provided high coverage of its focal outcomes. Year Up administrative data are primarily gathered through program applications. Thus, they are available for the full sample and have very low rates of item non-response. NSC and NDNH data are available for 94 to 96 percent of the sample, respectively—with small missing fractions resulting from errors in the identifiers used in matching (generally Social Security number).

The NSC records reflect spells of college enrollment based on information participating colleges provide to the NSC on an ongoing basis. NSC coverage is extremely high for public two- and four-year colleges and for private non-profit four-year colleges. It is somewhat lower for non-

profit two-year colleges and substantially lower for for-profit colleges (National Student Clearinghouse, 2018). NDNH records capture the total earnings in every calendar quarter received by workers at reporting employers. Certain types of employment are not covered.[32]

Analyses are based on July 2019 and February 2020 data extracts from NSC and NDNH, respectively. The difference in timing helps to equalize the duration of available follow-up, given the typical two-quarter lag in employer-provided wage records reaching NDNH. Analyses cover five calendar quarters following enrollment in the study, which is the start of L&D for members of the treatment group. Quarter 5 is the first full post-program calendar quarter.[33]

4.2.3 The Study Sample

Characteristics of RCT sample members closely resembled those of the overall PTC participant populations in the three study offices, as described in Section 4.2.1. Slightly more than half of the sample was male, and nearly one-third identified as black/African American or Hispanic (Exhibit 4-2). Fewer than 20 percent had zero or one assessed risk at intake; 57 percent had four or more risks. Nearly 70 percent had attended college full-time at some point, but fewer than 3 percent had received a college credential. Sixty-three (63) percent were employed three calendar quarters before enrollment, and they earned an average of $2,529 in the calendar quarter prior to random assignment.

Randomization produces treatment and control groups whose baseline characteristics differ only by chance. The two groups in this study look reasonably similar and do not differ statistically for most of the background characteristics examined (Exhibit 4-2). One exception is that treatment group members were somewhat more likely to be African American and somewhat less likely to be white (67 and 14 percent, respectively) than control group members (62 and 22 percent, respectively). Although employment and earnings seem somewhat higher in the treatment than in the control group, the difference was not statistically significant.

Further investigation revealed no defects in the random assignment procedures, suggesting that these differences are likely due to chance. Including race-ethnicity and baseline earnings as covariates in the regression models used to estimate program impacts minimizes any potential bias in the findings due to these chance differences (see Section 4.2.4).

[32] Under the federal Unemployment Insurance Compensation laws governing wage reporting, for example, employment in the informal economy is mostly not covered, and earnings from self-employment and work as an independent contractor or at a gig job is subject to varying requirements in different states.

[33] See more details on the alignment of calendar and program time for the individual study sites and enrollment cohorts in Appendix Exhibits B-6 and B-7.

Exhibit 4-2: Characteristics of the Study Sample Members at Baseline

Characteristic	Total Sample	Random Assignment Status: Treatment Group	Random Assignment Status: Control Group	Group Difference	*p*-Value
Gender Male (%)	53.5	50.5	56.6	-6.1	.2021
Race-ethnicity (%)					.0784*
Black or African American	64.3	61.6	67.1	-5.5	
Hispanic or Latino	17.5	16.0	19.1	-3.1	
White or Another Race	18.1	22.4	13.8	8.6	
Risk Factors (%)[a]					.3482
0-1	17.6	15.5	19.9	-4.4	
2-3	25.1	27.7	22.4	5.3	
4-5	23.7	21.8	25.7	-3.9	
6+	33.6	35.1	32.0	3.0	
Factors of Success (4-item average[b]	0.98	0.98	0.99	0.01	.8933
IT or Software Develop. Interest (%)	51.3	51.7	50.9	0.9	.8582
Prior Full-time College (%)					.7330
None	28.7	31.2	31.3	-0.1	
<1 year	44.9	43.4	40.3	3.1	
1+ years	26.3	25.4	28.4	-3.0	
Some College Credential (%)	2.3	3.2	1.4	1.8	.1724
Employment in the 3rd quarter prior to enrollment (%)[c]	62.6	64.9	57.3	7.6	.1189
Earnings in the 3rd quarter prior to enrollment ($)[c]	2,635	2,636	2,274	361	.2191
Sample Size	552	389	163	552	

Source: Authors' tabulations of administrative data from Year Up, the National Student Clearinghouse, and National Directory of New Hires.

Notes: Data are weighted to adjust for different probabilities of assignment to treatment and control groups across cohort and office. The *p*-values give the probability of observed associations between the characteristic and treatment group status based on chi-squared (for categorical characteristics) and *t* (for metric characteristics) statistics.

Statistical significance: * = .10 level, ** =.05 level, and *** =.001 level on two-tailed tests.

[a] The risk factors are measured using a risk inventory completed at application. A higher risk score indicates more challenges that may impede success in the program, such as financial issues, housing issues, or a history of substance abuse.

[b] The Factors of Success score summarizes staff ratings of each applicant across four items (applicant's critical thinking, persistence, interpersonal awareness, and striving to learn). Its values range from 0 to 1, where 0 represents the most favorable score.

[c] NSC and NDNH only: Quarter 3 prior to enrollment was used as the baseline control measure because it is the latest quarter of pre-enrollment data that would be unaffected by contact with Year Up, This is because Year Up enrolls new cohorts every six months, but it accepts applications continuously.

4.2.4 Analytic Approach

The study team estimated impacts by pooling results across sites and then comparing means for treatment and control group members. Analyses use regression models to control for the baseline characteristics in Exhibit 4-2 and a series of binary indicators for site, cohort, and treatment status.[34] In addition to attenuating any effects of chance differences arising during random assignment, regression adjustment can increase the statistical power of the analysis.

[34] See Appendix Exhibit B-5 for additional details.

The tables in this chapter reporting impact findings (Exhibits 4-3 and 4-4) include several key statistics for each outcome measure and time period: regression-adjusted means for the treatment group, unadjusted means for the control group, the estimated impact (difference in treatment and control group means), and the standard error and *p*-value for the impact estimate.[35]

As noted earlier, only 74 percent of treatment group members participated in the PTC program. The main results in this chapter apply to the full treatment and control groups—i.e., including treatment group members who staff initially identified as conditionally eligible but who later did not enroll. These estimates—referred to in the literature as "Intent to Treat" impacts—will tend to understate impacts sample members who actually did participate in the program. A simple adjustment yields estimated impacts for those young adults who actually participated.[36] Appendix Exhibits B-9 and B-10 report these estimates.

4.3 Findings

The early impact findings presented in this section are broadly consistent with the PTC program logic model and with the findings for Year Up's core program.[37] The following sections describe findings for the program period and the immediate post-program periods, in turn.

4.3.1 Impacts during the Program Period

Exhibit 4-3 shows impact estimates for college enrollment and employment and earnings during the first four quarters following program enrollment. These quarters roughly cover the L&D phase (Q1-Q2) and internship phase (Q3-Q4) of the PTC program.

College enrollment. As expected, the treatment group had significantly higher rates of college enrollment and more months of full-time enrollment during the program period than did the control group (Exhibit 4-3, top panel). The gains were especially large during the L&D phase. For example, in the first quarter following enrollment (Q1), 79 percent of the treatment group was enrolled in college, compared with only 37 percent of the control group—a statistically significant 42 percentage point difference.[38]

College enrollment among the treatment group declined substantially in successive quarters as program participants began transitioning into full-time internships. Only 49 percent of the

[35] The standard error measures the sampling error in the estimate. The *p*-value is the probability that the estimated impact would have been observed by chance even if the program had no actual impact on the outcome.

[36] The so called "no-show adjustment" divides the impact estimated for the full study sample by the participation rate (Bloom, 1984). The resulting estimates are referred to as "treatment-on-the-treated" (TOT) impacts. Given a 74 percent participation rate, TOT impacts will be 30 to 40 percent larger than impacts measured for the full sample. (Impacts for the full sample are called "intent-to-treat, or ITT, impacts.)

[37] See Fein and Hamadyk (2018).

[38] One of the three PTC programs participating in the study recruited applicants largely from its local college partner. As a result, 85 percent of its control group was enrolled at the college during Q1. In comparison, less than a third of control group members in the other two sites were enrolled in college during Q1. With only three sites in the study, the impact estimates are sensitive to this variation.

treatment group was enrolled in college anytime during Q3, compared with about 35 percent of the control group. By Q4, the two groups' enrollment rates were nearly identical (22 versus 23 percent).

Exhibit 4-3: Estimated Impacts During the Program Period (Quarters 1-4)

Outcome	(1) Treatment Group Mean[a]	(2) Control Group Mean[b]	Estimated Mean Program Impact (3) Impact[a] (Col. 1 – Col. 2)		Standard Error	*p*-Value
College Enrollment (Cohorts 1-3 for Q1-3; Cohorts 1-2 for Q4)						
Any College Enrollment (%)						
Quarter 1	79.2	37.0	42.2	***	4.8	<.0001
Quarter 2	61.0	33.9	27.1	***	4.9	<.0001
Quarter 3	49.0	34.8	14.1	***	4.8	0.0032
Quarter 4	21.7	23.0	-1.3		4.9	0.7878
Cumulative Months of Full-Time Enrollment						
Quarter 1	3.4	1.3	2.1	***	0.2	<.0001
Quarter 2	4.5	2.1	2.4	***	0.3	<.0001
Quarter 3	5.0	2.7	2.3	***	0.3	<.0001
Quarter 4	5.0	2.2	2.8	***	0.4	<.0001
Employment & Earnings (Cohorts 1-3 for Q-1-3; Cohorts 1-2 for Q4)						
Any Employment (%)						
Quarter 1	56.8	67.4	-10.6	**	4.9	0.0312
Quarter 2	52.6	77.2	-24.6	***	4.5	<.0001
Quarter 3	54.2	74.2	-20.0	***	4.9	<.0001
Quarter 4	66.1	73.2	-7.2		5.3	0.1756
Total Earnings ($)						
Quarter 1	1,688	3,120	-1432	***	334	<.0001
Quarter 2	1,515	3,135	-1620	***	342	<.0001
Quarter 3	1,766	3,571	-1805	***	359	<.0001
Quarter 4	2,387	3,158	-771	**	436	0.0112
Sample Size (Cohorts 1–3 / Cohorts 1-2)						
College Outcomes	302/229	123/101	425/330			
Employment Outcomes	292/221	119/97	411/318			

Source: College enrollment data from the National Student Clearinghouse. Employment and earnings data from the National Directory of New Hires database.

Notes: Estimation methods are described in Appendix Exhibit B 4-8. Data have been weighted to account for differential probabilities of assignment to the treatment or control group.

Statistical significance: * = .10 level, ** = .05 level, and *** = .001 level on two-tailed tests.

[a] Treatment group means and the estimated impacts of the program are regression adjusted.

[b] Control group means are not regression adjusted.

Much of the decline in college enrollment among PTC participants between Q1 and Q2 was associated with program attrition, whereas the decline between Q2 and Q3 reflects the fact that not all PTC programs required college enrollment during the internship phase.[39]

Over the program period, the treatment group spent more than twice as many months enrolled full-time in college than did the control group (5.0 versus 2.2 months)—a difference that is statistically significant. Two-thirds of this gain accrued by the end of Q1, when participants were enrolled in school full-time as part of their L&D experience.

Employment and earnings. The treatment group had significantly lower employment rates and earnings throughout the first four quarters following program enrollment (Exhibit 4-3, bottom panel). During Q1, when participants were enrolled in college full-time, the employment rate for the treatment group was 11 percentage points lower (statistically significant) than that for the control group. By Q2, the control group had increased its employment rate by 10 percentage point, while the treatment group had decreased its rate by 4 percentage points, creating a 25 percentage point difference (53 versus 77 percent).

This treatment-control employment gap declined slightly in Q3 and considerably more in Q4 as treatment group members began completing the program. By Q4, the impact was not statistically significant. The fraction of treatment group members employed increased by 12 percentage points between Q3 and Q4.

Over the first three quarters following program enrollment, the treatment group's average quarterly earnings were less than half those of the control group. For example, in Q3, when many treatment group members were in full-time internships, treatment group earnings averaged $1,766, compared to $3,571 for the control group. These negative impacts over the first three quarters are somewhat larger than those observed in the evaluation of Year Up's core program (Fein & Hamadyk, 2018, p. 72), an especially notable result given that far fewer PTC than core treatment group members actually participated in the program.[40]

PTC program stipends provided only modest offsets to the treatment group's forgone earnings. For example, in Q1 (the only quarter that overlaps completely with L&D), stipends averaged $345 (compared to a $1,432 earnings drop). In Q3 (the only quarter that overlaps completely with the internship phase), stipends averaged $1,129 (compared to a $1,805 drop in earnings).[41]

In Q4, when participants were transitioning to post-program jobs, the treatment-control earnings gap decreased to −$771, a figure that once adjusted for the fact that 26 percent of the treatment group did not participate in the program, is also somewhat lower than the earnings gap for

[39] Program attrition during L&D was frequently associated with poor performance in college courses. See Chapter 2 for a discussion of Mini-Study, which tested responses to this issue.

[40] Whereas 74 percent of PTC treatment group members participated in the program, fully 96 percent of core treatment group members did so.

[41] These average stipend values treat the stipend as $0 for the approximately 26 percent of the treatment group that did not enroll in the PTC program. Excluding those sample members, the average stipend values in Q1 and Q3, respectively, were approximately $470 and $1,529.

participants in the core program during the fourth quarter following enrollment (-$402, Fein & Hamadyk, 2018).

4.3.2 Impacts Just After the Program Period

Data available in time for this report allow analysis only for outcomes into the first post-program quarter (follow-up Q5) for the first two cohorts enrolled in the study sample. Exhibit 4-4 summarizes the results.

Exhibit 4-4: Estimated Impacts on College Enrollment, Employment, and Earnings Post-Program (Quarter 5)

Outcome (Program Period)	(1) Treatment Group Mean[a]	(2) Control Group Mean[b]	Estimated Mean Program Impact (3) Impact Estimate[a] (Col. 1 – Col. 2)		Standard Error	*p*-Value
College Enrollment Outcomes (Cohorts 1-2)						
Any College Enrollment (%)						
Quarter 5	19.2	23.0	-3.8		5.2	0.4631
Cumulative Full-time Months Enrolled in College						
Quarter 5	5.3	2.6	2.8	***	0.4	<.0001
Employment & Earnings Outcomes (Cohorts 1-2)						
Any Employment (%)						
Quarter 5	77.8	78.2	-0.5		4.9	0.9252
Total Earnings ($)						
Quarter 5	4,677	4,292	385		470	0.4138
Sample Size (Cohorts 1 & 2)						
College Outcomes	229	101	330			
Employment Outcomes	221	97	318			

Source: College enrollment data from the National Student Clearinghouse. Employment and earnings data from the National Directory of New Hires database.

Notes: Estimation methods are described in Appendix Exhibit B 4-8. Data have been weighted to account for differential probabilities of assignment to the treatment or control group.

Statistically significance: * = .10 level, ** = .05 level, and *** = .001 level on two-tailed tests.

[a] Treatment group means and the estimated impacts of the program are regression adjusted.

[b] Control group means not regression adjusted.

College enrollment. By the fifth quarter following enrollment, when treatment group members all typically have completed PTC, college enrollment rates for the treatment and control groups converge.[42] Nineteen (19) percent of the treatment group and 23 percent of the control group were enrolled in college in Q5—a difference that is not statistically significant (Exhibit 4-5, top panel).

Reflecting the build-up of earlier positive impacts, the average cumulative number of full-time-equivalent college enrollment months remained 2.8 months higher for treatment than for control

[42] Only the first and second enrollment cohorts have data for Q5; they include only sites 1 and 2.

group members. By the end of Q5, treatment group members averaged 5.5 months of full-time enrollment, compared to 2.6 months for the control group.

Employment and earnings. A nearly identical fraction of treatment and control group members (78 percent) had some earnings (i.e., were employed) in Q5 (Exhibit 4-4, bottom panel). The impact on average earnings, which had been negative in the prior quarter (−$771), turned positive. Although the estimate (+$385) was heading in the desired direction, it was not statistically significant.

The turnaround occurred because average earnings increased more for treatment than for control group members between Q4 and Q5. Earnings increased 70 percent for the former but only 20 percent for the latter. Time will tell whether earnings differences grow large enough to reach statistical significance over a longer follow-up period.

4.4 Discussion

Year Up's local PTC programs produced moderately large increases in college enrollment during the program's L&D phase and smaller increases during its internship phase. Notwithstanding PTC's more active college partnerships, its enrollment impacts were about the same as those of Year Up's core program.[43]

One reason PTC college enrollment rates were not higher is that control group members enrolled in college at rates higher than they did in the core program study. The difference may reflect PTC programs' location on college campuses where they draw more heavily from young adults interested in attending local colleges. Furthermore, one study site recruited heavily from students already enrolled in the partner college, as noted earlier.

Another possible reason impacts on college enrollment were not larger is that more young adults assigned to the PTC treatment group withdrew prior to the start of classes than withdrew from the core program. Also, Year Up generally did not require PTC participants to maintain college enrollment during the internship phase (though some college partners counted the internship and associated weekly seminar as a credit-bearing college course). Some programs also encouraged interns to enroll in additional online and night classes during internships.

This early analysis of employment and earnings impacts of PTC mirrors the pattern of findings from the evaluation of Year Up's core program. Like the latter, the PTC treatment group had a substantially lower employment rate than the control group during the program (Q1 to Q3). However, by Q4 the negative impact had shrunk considerably, and by Q5 (when none of the treatment group was still in the program) it had disappeared.

For PTC, during the year following program enrollment (Q1-Q4), the treatment group's average earnings was less than half the average earnings of the control group ($5,367 versus $12,984).

[43] See Fein and Hamadyk (2018).

The treatment-control gap of $7,617 is about 40 percent larger than was seen for the core program, after adjusting for different rates of program participation.[44]

As in the core program study, PTC treatment group members' employment and earnings increased substantially as they completed the program. By Q5—when all treatment group participants typically have completed the program—impacts on average earnings turned positive, though not statistically significant. Longer-term follow-up is needed to see whether and by how much impacts grow. Planned longer-term analyses will estimate impacts on college and employment outcomes for up to three years following program enrollment for the full sample.

[44] The estimated average earnings impact for PTC program participants over Q1-Q4 is −$7,617 (summing the quarterly averages; see Appendix Exhibit B-9). The comparable figure for the core program is −$5,440 (Fein & Hamadyk, 2018, p. 72).

5. Perspectives on Implementation Going Forward

This chapter assesses perspectives on implementation of the Professional Training Corps (PTC) program at the end of the study period. Analyses are based on interviews and an online survey with key program stakeholders conducted between April and July of 2019.

The main data source is a set of interviews with Year Up national leaders (nine respondents), local PTC program leads (four respondents), and college and employer partners (two and three respondents, respectively). The interviews covered major goals and experience with implementation to date. The discussion also draws on interviews with an additional nine national and local Year Up staff that focused primarily on issues addressed in the mini-studies (Chapter 2) but that also touched on wider issues, and on results from an online survey described in Chapter 3.[45]

Each of the chapter's eight sections summarizes perspectives on an important implementation challenge. Topics include alignment on PTC's goals (Section 5.1), challenges performing well at a lower cost (Section 5.2), meshing with college missions and operations (Section 5.3), addressing recruitment difficulties (Section 5.4), priorities for improvement (Section 5.5), program components most critical to success (Section 5.6), requirements for scaling up (Section 5.7), and gathering evidence "to improve and to prove" PTC programs' effectiveness (Section 5.8).

5.1 Alignment on PTC's Goals

In any large, multi-site initiative involving diverse stakeholders, goals and performance expectations can vary across sites and categories of stakeholders. Such variation is normal, given differing local conditions and institutional imperatives, and it can be healthy when programs are able to accommodate the multiple goals. This section describes the goals of Year Up national and local leaders for the PTC programs and compares them with the goals of PTC college partners.

When asked about their goals for PTC program operations, Year Up and program leads cited smoothly functioning program activities, close coordination with college operations, and meeting performance targets. One local PTC lead explained that visitors to well-functioning program offices would see participants and staff in place, engaged, passionate about their work, and actively involved in other campus activities. They might see college personnel on site participating in learning community activities. They also might see or hear that PTC staff were working closely with college administrators and instructors on general planning, recruitment and admissions, curriculum and instruction, internships, and career planning.

Year Up had specific numeric goals for PTC program performance. As discussed in Chapter 3, these goals include consistently hitting targets for retention, reducing costs to reach break-even

[45] As described in Chapter 3, the survey obtained responses from the lead staff person in each of the 15 PTC programs and from administrators at college partners in 14 of the 15 program locations.

in three-to-five years, and roughly doubling the total number of young adults served in its PTC programs over the next five years.

Doubling was to be achieved through increases in both the number and size of PTC programs. Year Up national leaders took steps to see that efforts to increase enrollment did not come at the expense of applicant quality. They let local staff know that they should continue to screen out young adults who were either not ready for the program or judged to be able to succeed without it. National staff regularly monitored local program statistics to make sure the characteristics of participants reflected the types of applicants sought.

There was strong agreement between Year Up and college personnel that PTC programs should establish young adults in careers with good potential for upward mobility. In the words of several Year Up staff members, the goal is "a W-2 that grows." This view reflects some repositioning of the goal post for Year Up, which historically has focused mostly on shorter-term post-program job placements. Year Up national leaders noted that partnering with colleges in PTC programs had helped raise awareness of the need and possibilities for doing more to encourage continued education and training after participants leave the program.

Year Up and its college partners had different theories of how best to foster wage growth after the program, however. While acknowledging that full-time school might be best for some, the dominant view at Year Up was that most graduates will do better in the long-term if they initially concentrate on full-time work in Year Up target occupations after graduating from the program. Good earnings and job security help to stabilize living situations and provide access to financial resources needed to afford additional education and training.

Training might not mean college: Year Up leaders cited strong possibilities for advancement through work-based training and industry certification. In contrast, college partners felt that in most cases, continuing in college full-time was the most assured path to credentials needed to progress in career pathways.

The divergence in theories is reflected in the post-program activities local PTC and college administrators cited as preferred in the spring 2019 survey. The survey asked respondents to specify the percentages of graduates that should be working and going to school immediately following program completion in order to foster optimal long-term outcomes. The averages of percentages given by PTC program leads were 73 and 34 percent for full-time work and full-time school, respectively. The corresponding averages for college partner respondents were 40 and 55 percent, respectively.

5.2 Doing as Well with Less

Year Up designed the PTC program model to reduce Year Up's costs while generating revenue on par with its stand-alone core program. It set the program spending target at around $20,000 per participant, compared with $35,000 in the core program. Cost reductions were to come from lower spending on instruction, rent, and participant stipends. College partners, in theory, would recover their costs (for instruction and facilities) by drawing on Pell Grants and other financial aid available to low-income students.

On the revenue side, generating $20,000 per participant from employer payments for interns required local programs to meet two key targets. These targets included retaining at least 83 percent of enrollees through the completion of L&D, transitioning them to revenue-generating internships and collecting Year Up's full specified payment ($26,000) for at least 90 percent of the internships.

As discussed in Chapter 3, most local PTC programs had not met these targets by the end of the study period. Interviews with Year Up national and local leaders provided explored the roadblocks encountered.

One key challenge has been meeting goals for increased recruitment while containing costs. Successful recruitment is key to increasing the number of participants and thereby reducing average cost per participant. Staff cited varying efforts to respond to this challenge, including:

- **Working with college partners to recruit existing and former students who fit PTC program's target profile**. In making the case for strong collaboration on recruitment, informants recommended stressing how collaboration could help the colleges achieve their goal of serving a more diverse population, address their declining enrollments, and boost their completion rates.
- **Exploiting digital advertising and online social networks**. Informants felt that better use of technology could help to reduce the time staff currently spend in community outreach while boosting enrollment.
- **Reducing costs of Year Up's applicant screening process**. Examples here included recommendations to strengthen the ability of applicants to self-screen online and generally reduce the length and number of steps in the screening process.

A second significant challenge in reaching financial break-even is raising retention during the L&D phase of the program. Here, at least two responses seem promising:

- Evidence from the mini-experiment (see Chapter 2) suggests that **well-focused, low-cost academic monitoring and coaching** could substantially close the 10 percentage point gap between current retention through L&D and the 75 percent retention target.
- Informants also recommended **steps to strengthen the PTC learning communities**, by adding study halls, increasing the time and variety of activities in advising sessions, offering more social and cultural opportunities, and providing more inviting gathering spaces for participants and staff.

Finally, several themes emerged related to challenges in *developing internships slots* in PTC and possible responses:

- First, PTC programs are relatively new, and it takes **time to build relationships** with local employers in the community. In principle, this challenge should diminish in each local program over time.
- Second, reduced **time in learning communities** compared to the core program also implies less time for participants in the PTC programs to practice and reinforce professional skills

employers demand. In addition to the strategies for lengthening learning community time mentioned above, recent revisions to Year Up's professional skills curriculum were designed to help strengthen these highly valued professional skills.

- Third, recent steps to **strengthen career planning** throughout the program should improve the fit between employers' requirements and interns' interests and skills. Better aligned internships should strengthen employers' and interns' experiences and help to stimulate increased demand for interns.

5.3 Meshing Missions

Year Up national staff, PTC program leads, and the college partners share a strong interest in maximizing career development during and after the PTC program. Both parties noted benefits from the program partnership in this regard. PTC program leads credited experience with colleges as helping them recognize that follow-on education and training are critical to longer-term career progress and spurring them to take steps to strengthen career planning to this end. College administrators hailed Year Up's approach to work-based learning and expressed strong interest in expanding partnerships with local employers.

As discussed in Section 5.1, differences in institutional culture and theories of change have led to some tension about optimal strategies. For Year Up, the preferred first post-program step is full-time employment. For colleges, it is generally full-time school.

This difference in theories sometimes lead to disagreements about practices. A good example is the not infrequent decision about whether to advance participants who did not pass key college courses during L&D to internships. Local PTC program staff tended to support such advancement, seeing internships as key to their preferred post-program outcome of employment. College staff worried that such promotion would deny participants a critical opportunity to acquire skills and credits critical for longer-term college success.

Another practical situation that reportedly has made it challenging to align PTC and college missions is the location of some PTC programs at satellite campuses removed from the heart of college operations. Local PTC program leads pointed out that such locations make it difficult for staff and participants to connect with college personnel and take courses in programs not offered at remote locations. Increased exposure to wider campus resources also might encourage more participants to continue at the college after they graduate from the PTC program.

More generally, both PTC program staff and college administrators cited a tendency for the PTC programs to be insular and not well integrated with other campus activity. One interviewee described PTC local programs as sometimes operating more like a "real estate deal" than a genuine partnership.

Interviewees cited a number of other promising avenues to improved alignment between the PTC programs and the colleges:

- One recommendation was to formalize processes for goals discussions and planning for each program at the outset, build decisions into memoranda of agreements, and revisit and update agreements at regular intervals thereafter.
- One college partner described a special orientation course they offered to help PTC program participants feel part of the college and familiarize them with college resources.
- Some colleges have worked closely with PTC program staff on recruitment—variously holding joint events and featuring the Year Up's PTC program in college promotional materials.
- College administrators, advisors, and instructors in some locations regularly participate in PTC program activities, and PTC program leads in some offices frequently attend general college staff and faculty meetings.
- Finally, in endorsing Year Up's recently adopted "guided pathways" approach to career planning, one informant urged that PTC programs engage college advisors in an authentically collaborative manner.

As these examples indicate, a number of PTC programs have shown initiative and creativity in building bridges. Steps to more fully inventory and disseminate best practices in this arena could be beneficial.

5.4 Recruiting Participants

In setting recruitment targets for the PTC programs, Year Up seeks to balance its goal of increasing enrollment—demonstrating the program's appeal and scalability—with its commitment to maintaining service quality and achieving other target outcomes. In addition to showing the program's appeal to young adults, increased enrollment is key to reducing average per participant costs and to helping college partners increase the size and diversity of their student bodies. On the other hand, overly ambitious recruitment targets may create pressures to admit less suitable young adults who need more support than the programs are prepared to provide. With PTC program retention rates already below target levels, Year Up national leaders do not wish to encourage growth that cannot be supported.

As noted in Chapter 3, difficulties with recruitment and retention during the study period led Year Up national staff to maintain lower enrollment targets than they had originally envisioned. Most local programs still struggled to meet the targets, with the result being slower growth than originally envisioned.

The spring 2019 interviews explored views of the reasons and possible responses to recruitment difficulties. Respondents cited broader challenges facing public colleges, as well factors specific to the PTC programs.

Broader challenges included declining numbers of 18- to 24-year-olds nationally and a strong economy which improved job opportunities and dampened interest in college. Meanwhile, public

colleges have faced steadily increasing competition for students from for-profit schools and burgeoning distance learning options, particularly online options.

Year Up leaders noted that, compared to public colleges, for-profit schools invest substantial resources in marketing and recruitment. Overly rosy promises by some reportedly have sown deep suspicion within low-income communities that see young adults accumulate debt without earning degrees or finding good jobs. PTC program leads report that, as a result, the PTC offer—of free college, supports, and an internship—also can seem "too good to be true" at first. It often takes repeated contacts over multiple recruitment cycles to build trust and convince young adults that the PTC program offer is legitimate.

Regular college programs also seem to young adults to be an easier route to a career. Such programs do not require weekly meetings with coaches and peers, professional skills classes, or compliance with behavior contracts. Parents and high school counselors reportedly discourage some young adults from enrolling in PTC programs in favor of four-year institutions, arguing that the latter provide more valuable degrees and better social opportunities. From Year Up's perspective, the problem with such advice is that many young adults are not ready to handle such traditional college programs and the limited supports they have available.

In cities that operate Year Up's core program as well as a PTC program, recruiters sometimes encounter the opposite problem. Some young adults who have had bad experiences in college reportedly prefer the less college-like, more professional environments typical of stand-alone programs like Year Up's core program.

College partners might seem to be natural allies in recruiting for the PTC program, given the shared interest in boosting college enrollments. However, to date, there has not been much collaboration on outreach and recruitment. One reason cited is that public community colleges typically do not recruit very actively and have limited expertise and resources for recruitment. Another reason is that, in wooing college partners, Year Up often has stressed its ability to help increase enrollment at little additional cost to colleges.

Administrative challenges stemming from lengthy college financial aid processes also have created recruitment difficulties. Tight college staffing and late aid program determination cycles often mean that financial aid decisions are finalized very close to or after the beginning of academic terms. Uncertainties prior to that point reportedly lead to significant attrition of otherwise well-suited applicants.

Year Up and college staff identified a variety of promising responses to these recruitment challenges, including:

- **Hiring a more diverse recruitment staff**, including individuals who have good connections with and understanding of the target communities;
- **Building on and formalizing efforts to increase contact frequency and community presence** across recruitment cycles, through improved use of Year Up alumni, social media, and digital marketing campaigns;

- **Striving to maintain applicants' engagement** over the course of the recruitment cycle through multiple touch points and interesting activities and through shortening the time between application and the start of college classes;
- **Strengthening collaboration** with college partners, local high schools, and area firms to develop more robust applicant pipelines. In addition to tapping existing college applicants, informants suggested that colleges might be interested in help from Year Up in mining their data on dropouts and encouraging dropouts to re-enroll in college through the PTC program.[46] One employer suggested engaging corporate partners in outreach to friends and family of current employees.
- **Considering adjustments to PTC** programs that would make them suitable for wider populations of disadvantaged young adults. One suggestion was to add a "pre-Year Up" program to prepare young adults with lower skills levels and personal and family challenges that needed to be resolved. Year Up reportedly also has considered introducing shorter, more flexible programs for young adults whose work, family, and financial situations preclude a full-time one-year commitment.

5.5 Improvement Priorities

In addition to the foregoing specific issues, the interviews also explored stakeholders' general priorities for program improvements. The responses coalesced into three broad categories:

- Ideas for strengthening PTC-college partnerships focused on **increased collaboration and involvement in each other's activities**. For example, PTC program leads felt it would be helpful if college personnel participated in weekly PTC learning community activities such as Friday Feedback. One college partner stressed the value of PTC staff and students regularly attending college graduation ceremonies and other campus events.

  Informants gave a number of examples of other ways coordination could be improved with relatively little effort. To support PTC program recruitment, one respondent suggested that college applications solicit information on interest in occupational tracks aligned with the PTC programs and another recommended highlighting attractive aspects of college campuses in the PTC program marketing materials. A number of local PTC program leads described how their programs bridged the gap between college semesters and the somewhat longer L&D phase of the PTC program by providing boot camps on useful topics not elsewhere covered.
- A second cluster of improvements concerned **staffing and other resource needs**. PTC program leads mentioned admissions staffing as a priority need. College partners noted that frequent turnover sometimes makes it difficult to know who to contact and can impede forging strong relationships. PTC staff acknowledged that turnover can result in a younger and less experienced staff and varied operational challenges. Some PTC staff also identified a need for more ample and centrally located space on campus. Finally, some staff felt that

[46] Such help would have to be approached in a way that did not violate applicable data privacy restrictions, which have been one source of reluctance to share lists.

larger student stipends would help participants to better meet transportation and other needs adversely affect participation.

- The third category included **strengthened supports for longer-term career advancement**. There was strong agreement that continuing skill building and credentialing were crucial. Although, as noted earlier in this chapter, views of the optimal balance and sequencing of school and work varied. Informants identified a number of steps that could be taken during the program to increase college persistence. Generally, these steps involved strengthening alignment among interests, courses of study, and work during internships. Related themes included a need to maintain academic rigor in PTC courses (emphasized by college administrators) and for capacity to quickly revise curricula to address the changing skill needs of employers (emphasized by Year Up staff). Chapter 2 discusses related recommendations for improved career planning.

5.6 What Makes the PTC Programs Work?

When adapting multi-component programs for scaling it is important to have a good handle on which services are critical to preserve and at what strength. In designing PTC program model, Year Up leaders conducted extensive analysis of core program components to decide which were vital to retain in their current form and which could be altered or dropped. The resulting PTC program model reflects the organization's view of the elements that contribute most to program effectiveness.

Components preserved close to their original form included recruitment and screening, professional skills training, weekly learning community activities, coaching, and internships. Year Up national's leadership judged these components to be both necessary for a substantial impact and difficult to transfer to college partners. In contrast, they reasoned that colleges could provide quality instruction in English, math and technical skills. Although Year Up retained participant stipends in its PTC program model, it reduced stipend levels, reasoning that many participants would receive residual cash to help meet living expenses from Pell and other grants (net of tuition). More generally, Year Up's leaders gambled that PTC programs could achieve comparable results to those of core programs with a lower staff-to-participant ratio and fewer program contact hours per week.

The Year Up national staff and PTC program leads we interviewed felt that experience to date has validated many of these bets, while leaving others unproven. For example, swapping in college instruction for English and technical subjects strengthens participants' connections to longer-term credential programs and affords Year Up access to a wider menu of technical fields for training. But relying on college instructors makes it harder for program staff to monitor and address academic difficulties encountered by participants. It also has been more difficult than in the core programs to revise curricula quickly in response to changing employer needs. More generally, both PTC program leads and college administrators acknowledged that aligning cultures and practices has been more difficult than envisioned.

In the views of both Year Up and partner college informants, Year Up's single most important capacity is its ability to engage local employers in providing program participants with valuable work-based learning experiences. In the words of one college staff member: "the

internship…experience is unique. It provides the experience with what the world is, as opposed to anything Year Up can provide in programming or an academic course. I think that's number one."

Finally, employers interviewed also offered their perspectives on critical Year Up services. They emphasized the PTC program's array of services for instilling strong communication skills and work habits and expressed the view that PTC staff were very effective in monitoring and troubleshooting internship experiences.

5.7 Upscaling PTC

Year Up's ultimate goal for the PTC programs is to demonstrate the model's effectiveness and scalability. Reaching this goal requires showing that programs can operate in multiple locations, reach at least a moderate size at each location, and achieve financial break-even (i.e., fully cover costs through internship revenue). Year Up does not plan to develop PTC itself on a large scale. Rather, the goal is to expand just enough to demonstrate the model's promise and encourage wider dissemination by other organizations.

Year Up national staff cited the numeric goal of roughly doubling the total number currently enrolled annually in the PTC and core programs together—which they put at about 4,700—over the next five years, entirely through growth in PTC program. They plan to achieve this growth by expanding to additional locations and by increasing annual enrollments to 160 or more at each program. As discussed earlier, at 160 participants per year, average costs fall to about $20,000 per participant. Assuming that retention and internship revenue are on par with core program levels, the PTC programs should reach financial break-even at this scale.

Evidence gathered for this study indicates strong potential for growing to and beyond the break-even point. There has been progress on many fronts, and promising responses to other challenges are underway. For example:

- Interviewees reported seeing evidence of strong potential for digital advertising, streamlined admissions processes, and effective targeting of college applicant and drop-out pipelines to boost recruitment.
- Evidence from Mini-Study #1 (discussed in Chapter 2) suggests that it should be feasible to boost retention at modest cost through improved monitoring of academic performance of participants and timely provision of supports to those who encounter academic difficulties.
- Longer-term efforts to improve Year Up's capacity to meet large employers' needs for skilled entry-level workers should help create more demand for interns. This so-called "customer solutions" approach involves working with large firms to identify important skill gaps in their workforces and re-engineer PTC programs to reliably meet this demand.

In addition to scaling the current PTC program model, Year Up national leaders described other ideas for scaling under development. One approach involves further adapting direct service models such as PTC and the core program in a manner that preserves basic features but permits substantially shifting administrative responsibility to other agencies. According to one

Year Up national leader, such a model potentially could reduce Year Up's direct costs to $10,000 per participant and be scalable to 100,000 young adults annually.

A second idea is to package and widely disseminate PTC services seen as particularly efficacious. As an example of this approach, Year Up has developed a package of curricula and training materials that would allow other organizations—such as colleges, employers, and workforce agencies—to implement its signature professional training course. This curriculum—called Career Labs—already has been used in several settings.

5.8 "To Improve and to Prove"

In closing, through this and other projects Year Up has demonstrated a strong commitment to generating and using evidence in scaling its core and PTC programs. In one leader's words, this approach involves two key steps—"to improve and to prove."

The present project—involving collaborative formative studies of the PTC programs—exemplifies Year Up's strong commitment to research-informed improvement. Meanwhile, a large, ongoing randomized controlled trial of the core program—which similarly followed years of work to perfect implementation and a small pilot randomized controlled trial—shows the value of the second step in the improve-prove paradigm.

This report has documented substantial progress on PTC program implementation to date and Year Up's clear grasp of the remaining challenges. Although the current grant has ended, there are still many possibilities for valuable mini-studies to help solve these challenges and a wide variety of promising approaches to research collaboration.

Meanwhile, under a separate grant, the current study team will continue to monitor implementation of the PTC programs and measure longer-term impacts from the two small randomized controlled trials begun under this project. Once the PTC program model has been fully implemented, the team will be working with Year Up to assess potential approaches to a large-scale randomized controlled trial to measure its effectiveness.

Appendix A: Supplemental Information for the Mini-Studies

Exhibit A-1: Potential Mini-Study Topics Emerging from Stakeholder Outreach

Recruitment and Admissions

1. Targeting criteria: What is the ideal participant profile for achieving program outcomes and impacts, considering characteristics such as levels of interest/motivation, academic ability, and readiness factors, as well as the demographic composition of the cohort? How should these criteria be weighted and under what circumstances should they vary across time or program sites?
   Pros and cons: Participant recruitment is both a high-cost and highly-influential activity with major consequences for later program operations and outcomes. Existing data on many key characteristics are missing or inconsistent in quality.
2. Targeting efficiency: How might Year Up improve the efficiency and effectiveness of the outreach and recruitment process, for example, through closer synchronization with college partner recruitment pipelines or deepened community partner pipeline relationships? In those locations where Year Up Core and PTC sites are co-located, are there opportunities for cross-channel coordination?
   Pros and cons: An efficient process for targeting individuals likely to be successful in the PTC is essential for creating a pipeline of qualified applicants to support scaling the program. A challenge is that potential pipelines could vary greatly across locations, making it difficult to develop generalizable findings.
3. Assessment: Are there more reliable and valid measures of applicants' basic academic skills and psychosocial competencies (e.g., interest and motivation)? How might existing measures be improved and what additional assessments might be useful?
   Pros and cons: Improved assessment tools could reduce the risk of enrolling youth who are unlikely to succeed with reasonable levels of support services, and they could improve the ability of program staff to more quickly and effectively target support services to those who are enrolled. A challenge will be reaching the right balance between improving on the use of current tools versus acquiring and/or developing and implementing better tools.

Student Supports

4. Services needs and models of support: What is the profile of support service needs across PTC programs and what models of support have programs adopted to address these needs? How successful are the various types of partnerships among PTC sites, colleges, and community partners in meeting the support service needs of students and what types and levels of needs persist?
   Pros and cons: Strong support services are critical to student success, and possibilities for sharing responsibilities with colleges both raise challenges and present opportunities. A solid assessment of models under development by Year Up staff may require more time and resources than available for a mini-study, so it may be necessary to make some compromises. The quality of data on service use and outcomes is likely to be inconsistent across, and possibly within, sites.
5. Financial aid: How can PTC programs maximize students' access to financial aid for degree-applicable credits during and after enrollment in Year Up PTC? How can Year

Up address developmental education needs/courses for students without requiring students to use up their financial aid?
Pros and cons: The financial viability of the PTC program model depends on the ability to cover some program costs through federal and state student financial aid programs, particularly grant programs. Addressing this topic as a mini-study will be tricky given complexities around what program costs federal and state aid might cover and uncertainties about data availability.

6. Learning communities: What are "best practices" for creating strong learning communities in an environment where students in PTC spend substantially less time in on-site program activities and otherwise engaging with staff than do students in the core program? What are the possibilities for increasing contact hours and cohesion through alternative scheduling approaches, changes in use of technology, modifications to required activities, and more collaboration between college instructors and PTC staff? What qualities of learning environments tend to facilitate and what qualities tend to impede success?
Pros and cons: Strengthening learning communities is a promising avenue for achieving outcomes comparable with Year Up's core program and there may be relatively inexpensive ways to do it. A mini-study on this topic will require time from college personnel.

Academics

7. ***Addressing academic difficulties**: What are promising approaches to monitoring student progress to identify and intervene early in cases of poor/declining course performance? What are promising approaches to monitoring performance at the class level to identify mismatches between instructional strategies and student outcomes and provide constructive feedback to instructors?
Pros and cons: Working out effective joint approaches to supporting academic progress is a key requirement for successful outcomes. Challenges for a study in this area include engaging instructors and obtaining data on skills and outcomes needed to support a strong analysis.
8. Aligning skills: Are there ways to improve the alignment between L&D activities and skills required for successful internships and post-program placements, for example, through workshops, boot camps, and existing courses, or new courses? How can the application of input from employers be strengthened? Are there advantages to adjusting the balance of time invested in building technical versus basic skills, depending upon internship and job needs?
Pros and cons: There are potentially very large benefits to finding ways to better align the skills of students coming out of L&D with those needed for success in specific internships, both in terms of employer retention and student success. The issues involved are many and complex, however, so a mini-study would need to be carefully specified.
9. Credits and credentials: What strategies might help minimize time devoted to remediation in the program? Are there ways to integrate some of the basic skills training into the occupational skills training? How can programs maximize degree-applicable credits earned?
Pros and cons: Being able to transform more critical program activities into credit-bearing courses would lower the "after tuition cost" of the program and accelerate progress of students towards credentials and degrees. A potential weakness of this

topic as a mini-study is that related conditions may be specific to local curricula, norms, processes, thus making this better suited to a management-consulting task.

Internships

10. *Quality of internship experience: What strategies are used at the various PTC sites to ensure that all internships provide challenging, career-building work experiences? Are there ways they could be developed to be better aligned with career paths emphasized in the program? Possibilities include revised approaches to developing internships and working with employers.
    Pros and cons: Successful internship experiences are critical for maintaining employer support and, thus, for the growth and sustainability of the PTC program model. Improving and applying findings about what factors are most critical for quality internship experiences could be very valuable. The potential for applying lessons to improve outcomes is uncertain given the number and variety of company relationships involved.
11. Challenging internship sales markets: What is the range of strategies used in internship sales and what are defining qualities and contexts for the more and less successful efforts? What improvements could be made to marketing and sales approaches to respond to challenges in developing internship sales in different local areas?
    Pros and cons: Strong internship sales are crucial to the program's financial viability. It may be a good time to assess initial experience and best practices following "customer solutions" approaches. On the other hand, in a short-duration study, it may be difficult to learn more about practices and issues in local markets than Year Up staff already know.

Alumni Services

12. Capturing post-program career trajectories: How might Year Up strengthen and extend data collection and analysis of post-program data on employment and education outcomes?
    Pros and cons: Solid data and analysis of longer-term outcomes is critical to understanding Year Up's role in employment and post-secondary education and navigating any tensions therein. Although there may be important implications for program goals and strategies, this mini-study would not be as directly focused on program improvements as other topics.
13. *Employers' role in ongoing education: What are some of the promising approaches employers are currently using or might adopt to support graduates' college completion after PTC? How can Year Up increase employers' commitment to support in this area?
    Pros and cons: A study in this area could create pathways allowing interns to earn credits for their work experience during and/or after their internships, thereby accelerating time to certificate and degree completion. The main challenge is that it may be difficult to identify strategies for expanding post-program employer supports for continuing education.

Source: Internal program communication, Institute of Education Sciences (IES) Evaluation: Potential Mini-Study Topics Emerging from Stakeholder Outreach, March 2016.

* Denotes topics that were further developed in one of the three mini-studies described in Chapter 2.

Exhibit A-2: Mini-Study #1 – Sample Sizes, by Study Group, Location, and Testing Cycle

	Cycle 1			Cycle 2			Total Enrolled		
Location	Improvement Strategies Group	Usual Strategies Group	Total	Improvement Strategies Group	Usual Strategies Group	Total	Improvement Strategies Group	Usual Strategies Group	Total
Site 1	27	27	54	26	30	56	53	57	110
Site 2	19	20	39	18	22	40	37	42	79
Site 3	30	28	58	34	36	70	64	64	128
Total	**76**	**75**	**151**	**78**	**88**	**166**	**154**	**163**	**317**

Source: Year Up Salesforce® data.

Note: Accepted applicants who attended orientation were randomized to the Improvement Strategies Group or to the Usual Strategies Group. No participants switched condition during the study.

Exhibit A-3: Mini-Study #1 – Demographic and Background Characteristics of the Study Sample, by Study Group

	Total Sample	Study Group: Improvement Strategies Group	Study Group: Usual Strategies Group	Difference	*p*-Value
Gender = Female	49.5	48.7	50.3	−1.6	.7751
Race-Ethnicity					.2435
Black or African American	71.6	71.4	71.8	−0.4	
Hispanic or Latino	15.2	12.3	17.2	−4.9	
White or Other Race	14.0	16.2	11.0	5.2	
Age					.1620
Under 20	44.4	47.4	41.1	6.3	
20-22	41.1	35.1	45.4	−10.3	
23 or older	15.7	17.5	13.5	4.0	
Number of Risk Factors					.8740
0-1	26.3	24.1	28.3	−4.2	
2-3	36.2	36.9	35.5	1.4	
4-5	16.9	17.0	16.7	0.3	
6+	20.9	22.0	19.6	2.4	
Prior College (Any)					.4903
0 years	41.4	39.6	42.9	−3.3	
<1 years	26.9	25.3	28.2	−2.9	
1+ years	32.2	35.1	28.8	6.3	
Prior College (FTE)					.7962
0 years	41.4	39.6	42.9	−3.3	
<1 years	37.2	37.7	36.8	0.9	
1+ years	21.5	22.7	20.2	2.5	
Sample Size	317	154	163	317	

Source: Year Up administrative data from program applications.

Notes: The study sample consists of opportunity youth who were first enrolled in Year Up with the January 2018 or July 2018 cohort at the three sites. Data on number of risk factors is missing for 12 percent of the study sample.

The statistical significance levels of differences across sample subgroups are denoted by asterisks: * denotes less than 10, ** less than 5, and *** less than 1 level on a two-tailed test.

Exhibit A-4: Mini-Study #1 – Usual Strategies and Improvement Strategies Tested, by Testing Cycle and Site

Strategy	Cycle 1			Cycle 2		
	Site 1	Site 2	Site 3	Site 1	Site 2	Site 3
Communication and information sharing between YU and college/instructors						
Usual Strategy						
All instructors invited to meet with YU Staff for 0rientation; staff conduct periodic classroom observations to monitor attendance, professional dress, etc.						
Improvement Strategies						
--Initial Plan						
Develop & implement prescriptive monitoring protocol to track assignment completion & academic performance indicators; tailor outreach to instructors at beginning of term; host instructor luncheons	✓	✓	✓	✓	✓	✓
--Implementation						
Created shared spreadsheet containing feedback from instructors; share of grades by some instructors	✓	✓		✓	✓	
Tailored outreach to instructors at beginning of term		✓		✓	✓	
Host instructor luncheon		✓			✓	
--Modifications						
Incorporate information from coaching sessions into shared spreadsheets; lower expectation of collecting grades from instructors				✓	✓	✓
Systems & routines for managing participants' academic information						
Usual Strategy						
Limited sharing of information from Year Up administrative data (i.e., information related to the Year Up contract like class attendance & professional dress); no intentional discussion of academic issues in learning community meetings or establishment of academic support plans						
Improvement Strategies						
--Initial Plan						
Site leadership shares academic history information from admissions; coaches & academic coordinator share information from prescriptive monitoring of academics	✓	✓	✓			
--Implementation						
Site managers routinely reach out to instructors to collect academic information & share it with coaches of participants in Improvement Strategies Group		✓			✓	

Strategy	Cycle 1			Cycle 2		
	Site 1	Site 2	Site 3	Site 1	Site 2	Site 3
Academic Coordinator designated to reach out to instructors & others at the college; shares info with coaches of participants in Improvement Strategies Group; flags "students of note" in a spreadsheet	✓			✓		
--Modifications				✓	✓	✓
Academic issues surfaced in coaching are discussed in LC meetings; participants of concern are flagged & academic support plans put in place						
Attention to Academics During Coaching						
Usual Strategies. All coaches provide coaching as usual with focus on YU Topic of the week and professional skill development; participants receive introduction and orientation to L&D portfolio project (no academic focus)						
Improvement Strategies						
--Initial plan						
Increased focus on academics during coaching; participants introduced to expanded portfolio assignment that includes focus on academics (coaches to check in and advise)	✓	✓	✓	✓	✓	✓
--Implementation						
Increased focus on academics during coaching; informal flagging of participants' academic issues		✓	✓			
Use of one-page guide to facilitate academically-focused conversations in coaching		✓	✓			
Participants pull up grades from college LMS during coaching		✓	✓			
Expanded portfolio assignment focusing on academics (coaches check in & advise participants)		✓				
--Modifications				✓	✓	✓
Coach training on Weekly Academic Coaching Notes Sheet & *The Binder*; coaches routinely flag students of concern & have participants pull up grades from college LMS; lower expectation of including academic component in portfolio assignment				✓	✓	✓
Additional Supports						
Usual Strategies Participants encouraged to seek out tutoring should they need it; remind participants of online tutoring options						
Improvement Strategies						
--Initial plan						
Increase referrals to existing college tutoring & support services, as well as online tutoring	✓	✓	✓	✓	✓	✓
Create textbook library		✓			✓	

Strategy	Cycle 1			Cycle 2		
	Site 1	Site 2	Site 3	Site 1	Site 2	Site 3
Hire Academic Coordinator to collect data on participants' academic performance & engagement from college staff to share with coaches	✓			✓		
Order Wi-Fi Hotspots for participants in Improvement Strategies Group to use			✓			✓
--Implementation						
Increased referrals to existing college and on-line tutoring & support services	✓	✓	✓	✓	✓	✓
Created textbook library		✓			✓	
Hired Academic Coordinator	✓			✓		
--Modifications						
Provide additional coaching to encourage use available academic and non-academic supports & develop a compendium of available supports				✓	✓	✓

Exhibit A-5: Mini-Study #1 – Characteristics of Sample Members Randomly Assigned to Improvement and Usual Strategies Groups

	Total Sample	Study Group: Improvement Strategies Group	Study Group: Usual Strategies Group	Difference	p-Value
Gender = Female	49.5	48.7	50.3	-1.6	0.7751
Race-ethnicity					0.2435
Black or African American	71.6	71.4	71.8	-0.4	
Hispanic or Latino	15.2	12.3	17.2	-4.9	
White or Another Race	14.0	16.2	11.0	5.2	
Age					0.1620
Under 20	44.4	47.4	41.1	6.3	
20-22	41.1	35.1	45.4	-10.3	
23 or older	15.7	17.5	13.5	4.0	
Number of Risk Factors					0.8740
0-1	26.3	24.1	28.3	-4.2	
2-3	36.2	36.9	35.5	1.4	
4-5	16.9	17.0	16.7	0.3	
6+	20.9	22.0	19.6	2.4	
Prior College (Any)					0.4903
0 years	41.4	39.6	42.9	-3.3	
<1 year	26.9	25.3	28.2	-2.9	
1+ years	32.2	35.1	28.8	6.3	
Prior College (FTE)					0.7962
0 years	41.4	39.6	42.9	-3.3	
<1 year	37.2	37.7	36.8	0.9	
1+ years	21.5	22.7	20.2	2.5	
Sample Size	317	154	163	317	

Source: Data are from the Year Up administrative data system.

Notes: These data were weighted to account for the blocking of participants prior to randomization. The estimates of the mean difference between the treatment groups are based on regression models that included covariates for participant characteristics at the time of program enrollment. Means for the Usual Strategies Group are unadjusted means.

[a] *p*-Values for tests of differences in impacts by enrollment cohort/cycle and by office are listed above those for the individual impact estimates.

* = statistically significant at the .10 level, ** =.05 level, and *** =.001 level on two-tailed tests.

Exhibit A-6: Estimated Impacts of the Improvement Strategies for Academic Monitoring and Supports on College Enrollment in the Month Following the Scheduled Completion of L&D

	Group Means (%)		Difference in Means			95% Confidence Interval	
	Improvement Strategies	Usual Strategies	%-Point		p-Value [a]	Lower Bound	Upper Bound
Total Sample	67.2	54.0	13.3	**	0.003	6.0	20.5
Testing Cycle					0.089		
1 January 2018	47.2	41.3	5.9		0.334	-4.1	15.8
2 July 2018	84.8	64.8	20.0	**	0.002	9.5	30.5
Program					0.515		
Site 1	42.0	26.3	15.7	**	0.031	3.8	27.6
Site 2	99.6	92.9	6.7		0.196	-1.8	15.3
Site 3	68.4	53.1	15.3	*	0.076	1.2	29.4
Sample Size	154	163	317				

Source: Data on college enrollment are from the National Student Clearinghouse.

Notes: These data were weighted to account for the blocking of participants prior to randomization. The estimates of the mean difference between the treatment groups are based on regression models that included covariates for participant characteristics at the time of program enrollment. Means for the Usual Strategies Group are unadjusted means.

[a] *p*-Values for tests of differences in impacts by enrollment cohort/cycle and by office are listed above those for the individual impact estimates.

* = statistically significant at the .10 level, ** =.05 level, and *** =.001 level on two-tailed tests.

Exhibit A-7: *The Academic Coaching Binder*

Throughout cycle 1 of Mini-Study #1 (see Chapter 2), three study sites implemented staff-developed improvement strategies intended to strengthen academic performance during and retention through the Learning and Development (L&D) phase of the program with a random subset of participants, termed the Improvement Strategies Group. A large portion of the improvements were associated how staff approached their roles as coaches for participants. Program staff followed their usual strategies for monitoring and supporting participants not assigned to the improvement strategies group—the Usual Strategies Group.

Based on experiences with the improvement strategies in cycle 1, program staff at each study site modified the improvement strategies they used with the Improvement Strategies Group but continued to follow their usual strategies with other participants. Staff in each study site used feedback from coaches, program leads, and college partners in cycle 1 to modify the improvement strategies during cycle 2 of testing. The common element in the improvements between cycles 1 and 2 was the adoption of a tool—*The Academic Coaching Binde*r—that Year Up national evaluation staff and the study team assembled based on materials program staff had pulled from existing Year Up resources or created "on the fly" to support their improvement efforts (see Baelen et al., 2020).

The *Binder* was designed as a means of sharing some of the lessons and tools from cycle 1 of the study to help coaches in cycle 2 meet expectations for better monitoring of participants' academic performance and more efficiently support participants found to be encountering difficulties. While most tools in the *Binder* were exact versions of existing tools or slight adaptations (e.g., infusing more of an academic focus, some were newly created based on insights from the experiences of coaches working with the Improvement Strategies Group during cycle 1 of testing.

The primary tool for collecting participant academic information is the *Weekly Academic Coaching Notes Sheet*, which was an updated version of the one-page coaching guide used created by staff for use in cycle 1. With the *Notes Sheet*, coaches working with participants in the Improvement Strategies Group could record critical academic performance and related information during weekly one-on-one sessions (p. 8). This information was most often collected by participants pulling up their grades and course information (e.g., assignments, syllabi) in their college learning management system (LMS). Participants were also encouraged to fill out a "Preparation Sheet" (p. 5-7) prior to coaching to promote greater awareness and reflection about academic issues.

Coaches routinely shared their *Notes Sheets* with their Program Manager and their peer coaches during learning community (LC) meetings. Use and sharing of the *Notes Sheet* led to more frequent discussion of grades during one-on-one and group coaching sessions, as well as enhanced communication among program staff during LC meetings about participants' academic performance and support needs.

In addition to the *Notes Sheet*, the *Binder* includes a compendium of resources designed to help coaches working with the Improvement Strategies Group during cycle 2 of testing better monitor academic performance and more quickly and effectively identify causes of and respond to lapses in performance. Examples of these other resources in the binder are tips for engaging with instructors, tips for troubleshooting academic challenges and goal setting templates. The *Binder* also includes several time-management resources (inserted by the study team) In feedback from coaches during cycle 1 noting that time management was an area in which they often struggled.

The *Binder*, particularly the *Notes Sheet*, reportedly were instrumental in equipping coaches working with participants in the Improvement Strategies Group to establish routines in coaching around academics and avail them of tools for soliciting information from participants about their academics and providing needed supports to participants facing academic difficulties. Subsequent to the completion of mini-study 1, which found evidence of substantial improvements in program retention through L&D among those in the Improvement Strategies Group, Year Up has made the *Binder* available to all PTC program staff and trained coaches in its use.

Appendix B: Supplemental Information for the Impact Evaluation

Exhibit B-1: Sites Selected for the Impact Evaluation

Characteristic	Study Site			All PTC Programs
	Site 1	Site 2	Site 3	
Background Characteristics				
Dual-channel- Core and PTC Programs	No	Yes	Yes	NA
Date First Cohort Enrolled	Summer 2010	Summer 2015	Winter 2016	
Cohorts Enrolled in the Impact Evaluation				NA
Summer 2017	✓			
Winter 2018	✓	✓		
Summer 2018		✓	✓	
Winter 2019		✓	✓	
Program Performance Measures				
% Completing Learning & Development (L&D) Phase (Target = is 83%)	77.8	77.5	79.0	75.6
% of L&D Completers Graduating from the PTC Program (Target = 90%)	92.9	76.0	93.8	84.1
% of Enrollees Graduating from the PTC Program	72.3	58.9	74.1	63.6
% of Program Graduates Entering Full-time Employment in Target Occupation (Target = 70%)	55.1	49.3	63.3	59.1

Source: Year Up administrative data.

Note: Performance measures are averaged for the two cohorts enrolling prior to the date that each site began intake for the experiment.

Exhibit B-2: Characteristics of Youth Enrolled in PTC Programs, Calendar Year 2016

	All PTC Programs	Non-Study PTC Programs	PTC Programs in the Impact Evaluation			
			Site 1	Site 2	Site 3	Total
Participant Characteristics						
Gender-Male (%)	56.6	56.8	55.3	64.2	44.4	55.9
Age 20 or Older (%)	55.5	53.3	64.7	67.5	44.4	60.1
Race Ethnicity (%)						
Black/African American	48.4	45.7	84.7	50.8	27.2	54.2
Hispanic or Latino	30.2	35.6	2.4	9.2	49.4	18.5
White or Other	21.4	18.7	12.9	40.0	23.5	27.3
Prior College Enrollment (%)	47.3	46.1	35.3	60.8	49.4	50.0
Risk Factors (%)						
0-1	32.4	28.2	69.4	31.7	27.2	41.6
2-3	27.8	27.7	17.6	25.8	42.0	28.0
5 or More or Not Recorded	39.8	44.1	12.9	42.5	30.9	30.4
Program Performance Metrics						
Completed L&D (%)	79.3	78.7	76.5	77.5	88.9	80.4
Graduated (%)	67.4	66.5	70.6	57.5	85.2	69.2
Number of Youth	907	621	85	120	81	286

Source: Year Up administrative data.

Note: See description of the site selection criteria and the characteristics of the selected sites in Appendix Exhibit B-1.

Exhibit B-3: Summary of Sample Enrollment for the Impact Evaluation

Site	Enrollment Cohort & Block	Scheduled Program Completion	Number Assigned		% Treatment	Randomization Period	
			Treatment Group	Control Group		Earliest	Latest
Site 1	1.1	Jul-2018	94	45	66.7	4/4/2017	8/21/2017
	1.2	Jul-2018	2	2	50.0	7/17/2017	7/17/2017
	2.1	Jan. 2019	80	40	66.7	9/22/2017	1/9/2018
Site 2	2.1	Jan. 2019	53	14	77.8	10/26/2017	3/9/2018
	3.1	Jul-2019	23	8	72.7	5/16/2018	7/25/2018
	4.1	Jan. 2020	38	11	77.8	10/24/2018	2/27/2019
	4.2	Jan. 2020	12	9	57.1	3/6/2019	3/26/2019
Site 3	3.1	Jul-2019	14	6	66.7	5/4/2018	5/18/2018
	3.2	Jul-2019	7	2	80.0	7/6/2018	7/20/2018
	3.3	Jul-2019	9	2	82.9	6/1/2018	7/20/2018
	3.4	Jul-2019	20	4	83.3	6/1/2018	6/29/2018
	4.1	Jan. 2020	31	14	66.7	10/22/2018	12/28/2018
	4.2	Jan. 2020	6	6	50.0	1/11/2019	1/17/2019
Total			389	163	70.5	7/17/2017	3/26/2019

Source: Year Up's administrative data.

Exhibit B-4: Recruitment and Randomization

In designing the PTC impact evaluation, the research team sought to create a large enough study sample to be able to detect meaningful impacts without putting undue burden on program recruitment operations. Under ideal conditions it would be possible to set a ratio of treatment to control groups between 1:1 and 2:1. In practice, that proved to be challenging due to recruitment difficulties.

In response, the team adjusted the random assignment ratios several times in order to balance program needs to meet their enrollment targets versus the need for an adequate research sample. Throughout the four enrollment periods, the team used eight different probabilities of assignment to the treatment group, ranging from 50 percent to 83 percent (see Appendix Exhibit B-3).

In some offices it was necessary to suspend random assignment for a period. During those periods, programs were allowed to admit all new applicants they identified. Over the study period, a total of 166 program-eligible applicants were identified during such periods; they are not included in the study sample.

Exhibit B-5: Data for the Impact Evaluation

Data Sources

There were three main sources of data for the study: Year Up's administrative data, the National Student Clearinghouse (NSC) and the National Directory of New Hires (NDNH).

Year Up's administrative database. Year Up tracks its applicants and enrollees in a Salesforce® customer-relationship management database. Year Up shared with the study team a set of files from this database, created on October 7, 2019, and describing applicants' baseline characteristics (such as age, gender, and race-ethnicity), as well as admissions and program outcomes (such as enrollment and completion of the program). These data are available for the full study sample.

National Student Clearinghouse (NSC). The NSC is a private organization that collects student enrollment and credential records from participating colleges across the nation. College participation rates are high, and according to the Clearinghouse's research arm, the NSC's enrollment records in the fall of 2017 represented 97 percent of all enrollments reported to the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS) at Title IV, degree-granting institutions. Coverage is high among both public and private not-for-profit colleges (99% and 95% of enrollments, respectively), but lower among private for-profit colleges; 71 percent of the 1.1 million students enrolled in private for-profit colleges in fall 2017 were covered in the NSC's records. In August 2019, Year Up obtained enrollment and credential records from the NSC and, with NSC's agreement, shared those data with the study team.

These data are available through June 2019. We have NSC data for this study covering quarters 1 and 2 post enrollment for all of the study sample; data for quarters 1 through 4 for the first three enrollment cohorts; and data for quarters 1 through 5 for the first two enrollment cohorts.

National Directory of New Hires (NDNH). Data on quarterly earnings were drawn from the NDNH, a national database operated by the Office of Child Support Enforcement (OCSE) in the U.S. Department of Health & Human Services. The NDNH collects quarterly wage data on individual employees from state workforce agencies and federal agencies. Generally, these data do not include earnings from self-employment, but some states do require reporting for independent contractors (though none of the three states in which the RCT offices were located required independent contractor reporting). Naturally, the NDNH also does not have data on earnings from unreported, "off-the-books" employment, nor does the NDNH include the stipend PTC participants earn from Year Up.

These data are available through June 2019. As for NSC, the data cover quarters 1 and 2 post enrollment for all of the study sample, quarters 1 through 4 for the first three enrollment cohorts, and quarters 1 through 5 for the first two enrollment cohorts.

(continued)

Alignment of Data with Phases of Program Activity. For analytic purpose we map the outcomes data to reference points in program time. Quarter 0 is defined as the calendar quarter in which, if assigned to the Treatment Group, sample members would have been invited to enroll in the PTC program. Programs enrolled new cohorts roughly every six months. If the program began in August 2017, Quarter 0 would cover July through September of 2017; Quarter 1 would cover October through December of 2017, and each successive quarter would cover the next three months.

Site 1 enrolled the first cohort of students in the study sample in August of 2017. Thus, Quarter 0 (the enrollment quarter) for cohort 1 is the period July thru September 2017. Quarters 1 and 2 (October through December and January through March, respectively) roughly align with the time Treatment group members' enrollment in Quarter 0 would have been in the Learning and Development phase of the PTC program and Quarters 3 and 4 roughly align with time they would have been in their internships. Quarters 5 and beyond are post-program.

Both sites 1 and 2 enrolled youth in second cohort of for study sample. Treatment group members enrolled as part of this recruitment cycle began participating in the PTC programs in January and March, respectively. Thus, the Quarter 0 for this group is January through March 2018, Quarter 1 is the period April through June, and so forth.

Sites 2 and 3 contributed sample for a third cohort. The program period for cohort 3 sample members assigned to the treatment group began in September and August 2018 for individuals in sites 2 and 3, respectively. Then, sites 2 and 3 contributed sample for a fourth cohort in early 2019. For those in Site 2, program activities for the treatment group began in March 2019 and for those in site 3, program activities for the treatment group began in January 2019.

Appendix Exhibit B-6 provides a breakdown of the study sample used for analysis of each of the four outcome measures. This shows the enrollment cohorts and sites with data for periods corresponding to different phases of the program, the sizes of the treatment and control groups with data for those outcomes and time periods, and the corresponding treatment assignment probability. Appendix Exhibit B-7 details the time frame for program and college activities for the four cohorts of youth enrolled in the study sample.

Exhibit B-6: Sample Enrollment for the Impact Evaluation, by Study Group and Duration of Follow-Up

Outcome & Follow-up Quarter	Cohorts	Sites	Number Assigned to: Treatment Group	Control Group	Total Sample	% Assigned to Treatment
College Enrollment Outcomes						
Quarters 1 & 2: L&D (All or Some)	1-3	All	302	123	425	71.1
Quarter 3: Internship (All)	1-3	All	302	123	425	71.1
Quarters 4 Internship (All or Some)	1-2	#1,2	229	101	330	69.4
Quarter 5: Post-Program	1-2	#1,2	229	101	330	69.4
Employment Outcomes						
Quarters 1 & 2: L&D (All or Some)	1-3	All	292	119	411	71.0
Quarter 3: Internship (All)	1-3	All	292	119	411	71.0
Quarter 4: Internship (All or Some)	1-2	#1,2	221	97	318	69.4
Quarter 5: Post-Program	1-2	#1,2	221	97	318	69.4

Source: Year Up administrative data.

Note: "All" and "Some" designations in column 1 identify whether the specified follow-up quarters fell within the indicated program phase completely or included some months that preceded or followed the indicated program phase.

Exhibit B-7: Correspondence of RCT Follow-up Quarters[a] to PTC Program and College Calendars

Sample Cohort	PTC Site	Randomization MM/Year; L&D Began	RCT Quarter 0[a]			RCT Quarter 1			RCT Quarter 2			RCT Quarter 3			RCT Quarter 4		
			M1	M2	M3	M1	M2	M3	M1	M2	M3	M1	M2	M3	M1	M2	M3
1	1	8/2017		L&D						Internship							
		College Term→	Summer	Fall -Required					Spring -Optional					Summer-Optional		Fall- Optional	
2	1	1/2018				L&D				Internship							
		College Term→				Spring- Required			Summer			Fall- Optional			Winter- Optional		
	2	3/2018					L&D						Internship				
		College Term→		Winter			Spring- Required			Summer			Fall- Optional			Winter- Optional	
3	2	9/2018					L&D						Internship				
		College Term→		Summer			Fall-Required			Winter- Optional			Spring- Optional			Summer-Optional	
	3	8/2018		L&D						Internship							
		College Term→	Summer				Fall-Required				Spring- Optional			Summer Optional		Fall- Optional	
4	2	3/2019					L&D						Internship				
		College Term→		Winter			Spring- Required			Summer			Fall- Optional			Winter- Optional	
	3	1/2019		L&D						Internship							
		College Term→		Spring Term- Required					Summer			Fall Term-Optional			Winter Term- Optional		

[a] RCT follow-up quarters correspond to calendar quarters indexed in terms of the number of quarters elapsed since random assignment. That is, Quarter 0 is the calendar quarter of random assignment, Quarter 1 is the following quarter, and so on. Note that impact tables in this report exclude Quarter 0 and show results only from Quarter 1 on to reflect quarters in which the full sample had been randomly assigned.

Exhibit B-8: Analysis Approach for Estimating Program Impacts

Random assignment creates treatment and control groups that will differ in their background characteristics only due to chance. With reasonable size samples, low to no sample attrition, consistent assignment probabilities for the entire study sample, and similarly reliable measures for the treatment and control groups, the two groups should have similar characteristics at baseline. All measured differences in baseline characteristics would be due to chance and unbiased estimates of program impacts could be generated by comparing treatment and control group means for the outcomes of interest.

For this study, we varied the probabilities of assignment to the treatment and control groups over time and across sites. This means that, in order to generate unbiased estimates of impacts, we need to weight the sample observations by the inverse of their treatment assignment probabilities in order to come up with unbiased estimates of both baseline differences in sample characteristics and the outcomes of interest. For instance, a treatment group member with a two-thirds probability of assignment to the treatment group would receive a weight of 1.5 (or three divided by two). Conversely, a control group member who had a one-third probability of having been assigned that status would receive a weight of 3 (three divided by one).

To improve the precision of these estimates and adjust for differences between the two groups that arose despite randomization, the study team followed the common practice of fitting a regression model. For each outcome reported in this chapter, the study team estimated the following linear model, using the weighted least squares (OLS) method. The basic form of the models can be expressed as:

$$Y_i = X_i\beta + \delta T_i + e_i$$

where

Y_i = the outcome for the i^{th} participant

T_i = dichotomous variable indicating assignment to the treatment group

X_i = vector of baseline covariates

β = vector of parameters describing the estimated marginal effect of a one-unit change in the corresponding covariate on the outcome measure

δ = estimated effect of having been assigned to the treatment group on the outcome

ℓ_i = error term, which is assumed to have a mean of zero

The models for all outcome measures contained the following common set of covariates:

PTC program (binary indicators)

Cohort (binary indicators)

Occupational training track (binary indicator for in a technology or software development track)

Gender (binary indicator)
Race-ethnicity (binary indicators)

Risk score (continuous measure; measure squared; and binary indicator of "no risk factor")

Factors of success score (continuous measure; average rating on four factors: critical thinking; interpersonal awareness; persistence; and striving to learn)

Missing data indicators (binary indicators for each covariate indicating whether the information was missing)

Models estimating college enrollment outcomes included the following additional covariates:[1]

Years full-time-equivalent college at enrollment (continuous measure)

College credential at enrollment (binary indicator)

Models on earnings outcomes included the following additional covariates:[1]
Earnings in the quarter prior to enrolling in PTC (continuous measure)

Any employment in the quarter prior to enrolling in the PTC program (binary indicator)

When the study sample included individuals enrolled over multiple cohorts, the models also included variables that were the interactions of the Treatment Group indicator and the Cohort Indicator.

All models included weights denoting the inverse of the probability an individual sample member ended up in the treatment status assigned to him/her.

Exhibit B-9: Estimated Treatment on the Treated (TOT) Impacts for the Program Period

Outcome & Program Period	(1) Treatment Group Mean[a]	(2) Control Group Mean[b]	Estimated Mean TOT Impact (3) TOT Impact[a] (Col. 1 – Col. 2)		(4) Standard Error	(5) *p*-Value[e]
College Enrollment (Cohorts 1-3 for Quarters 1-3; Cohorts 1-2 for Quarter 4)						
Any College Enrollment (%)						
Quarter 1	77.5	37.7	39.7	***	4.6	<.0001
Quarter 2	92.7	37.0	55.7	***	4.8	<.0001
Quarter 3	69.7	33.9	35.7	***	4.9	<.0001
Quarter 4	21.3	23.0	-1.7	***	4.8	.0032
Cumulative Months of Full-time Enrollment						
Quarter 1	4.1	1.3	2.8	***	0.2	<.0001
Quarter 2	5.2	2.1	3.1	***	0.3	<.0001
Quarter 3	5.8	2.7	3.0	***	0.3	<.0001
Quarter 4	5.7	2.2	3.6	***	0.4	<.0001
Employment & Earnings (Cohorts 1-3 for Quarters 1-3; Cohorts 1-2 for Quarter 4)						
Any Employment (%)						
Quarter 1	53.1	67.4	-14.3	**	4.9	.0312
Quarter 2	43.9	77.2	-33.3	***	4.5	<.0001
Quarter 3	47.2	74.2	-27.0	**	4.9	<.0001
Quarter 4	63.8	73.2	-9.4		5.3	.1756
Total Earnings ($)						
Quarter 1	1,182	3,120	-1,938	***	334	<.0001
Quarter 2	942	3,135	-2,193	***	342	<.0001
Quarter 3	1,128	3,571	-2,443	***	359	<.0001
Quarter 4	2,115	3,158	-1,043	**	436	.0112
Sample Size (Cohorts 1-3/Cohorts 1-2)						
College Outcomes	302/229	123/101	425/330			
Employment Outcomes	292/221	119/97	411/318			

Source: College enrollment information from the National Student Clearinghouse. Employment and earnings data from the National Directory of New Hires database.

Note: These estimates are adjusted to reflect the fact that not all of the treatment group participated in the program. The estimation methods are described in Exhibit B 4-8.

* = statistically significant at the .10 level, ** =.05 level, and *** =.001 level on two-tailed tests.

[a] Treatment group means and the estimated mean impacts of the program are regression adjusted.

[b] Control group means are not regression adjusted. They are weighted to reflect to account for differential probabilities of assignment to the treatment condition.

Exhibit B-10: Treatment on the Treated (TOT) Impacts for the First Post-Program Quarter

Outcome & Program Period	(1) Treatment Group Mean[a]	(2) Control Group Mean[b]	Estimated Mean TOT Impact (3) Estimated Mean TOT Impact		Standard Error	*p*-Value[e]
College Enrollment Outcomes (Cohorts 1 & 2)						
Any College Enrollment (%)						
Quarter 5	18.1	23.0	-4.9	***	5.2	0.4631
Cumulative Full-time Months Enrolled in College						
Quarter 5	6.1	2.6	3.5		0.4	<.0001
Employment & Earnings Outcomes (Cohorts 1 & 2)						
Any Employment (%)						
Quarter 5	77.6	78.2	-0.6		4.9	0.9252
Total Earnings ($)						
Quarter 5	4,799	4,292	507		470	0.4138
Sample Size						
College Outcomes	229	101	330			
Employment Outcomes	221	97	318			

Source: College enrollment information is from the National Student Clearinghouse and employment and earnings data are from the National Registry of New Hires (NDNH) database.

Note: These estimates are adjusted to reflect the fact that not all of the treatment group participated in the program. The estimation methods are described in Exhibit B 4-8.

* = statistically significant at the .10 level, ** =.05 level, and *** =.001 level on two-tailed tests.

[a] Treatment group means and the estimated mean impacts of the program are regression-adjusted.

[b] Control group means are not regression adjusted. They are weighted to reflect to account for differential probabilities of assignment to the treatment condition.

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