Evaluation of Bridges to Career Opportunities: Final Report

April 23, 2021

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Message from Local Initiatives Support Corporation (LISC)

To support and empower people who have been living on low incomes, helping them stabilize finances and take on good, family-sustaining jobs, is an evolving, and critical, science. At LISC, we developed our Financial Opportunity Centers® (FOCs) as part of that evolution, and research has shown that FOCs' multi-pronged approach—offering employment services, financial coaching and access to income supports (like Supplemental Nutrition Assistance Program, rental assistance and child care subsidies) is good science. FOCs have supported 25,000 people each year in stabilizing their finances and joining the mainstream economy.

But our experience has also shown us that FOC support, on its own, is not enough in all cases. We learned that many clients' potential for long-term financial stability and wealth-building was stymied by the low-wage jobs available to them and by gaps in their education or the basic skills needed to succeed in the kinds of occupational training that can ultimately lead to a sustaining career.

So we developed an additional strategy—Bridges to Career Opportunities (BCO)—which builds on our FOC model and which we began piloting seven years ago in six cities. In addition to the bundled services provided by FOCs, BCO clients receive instruction in basic skills using curricula tailored to occupations in each region's growth industries—often with the partnership of local employers looking to fill jobs in those occupations. This foundational training, which includes soft skills instruction, is a doorway to more advanced training and certification that in turn leads to an occupational pathway with potential for upward mobility. The initial success of the BCO model inspired funders to support scaling the work, and we now have BCO programming through our FOCs in 40 locations across the country.

Which brings us to this evaluation report. In 2017, Abt Associates began a study of the job and financial stability outcomes for BCO participants (involving some 1,100 clients) with follow-up assessment over the course of an additional 14 months, comparing their successes with those of people enrolled in FOC programming alone. The results were very positive, once again demonstrating that this common sense model for supporting people to prepare for and advance in 21st-century jobs is good science. The study found that:

- BCO program participants had high completion rates (86%) and high credential attainment rates (80% of people who completed the program received credentials).
- BCO participants showed a gain of one grade level in reading on the Test for Adult Basic Education (TABE®).
- When it came to employment, BCO participants were more likely to have found or advanced in a job than their FOC counterparts – there was a difference of 19% between the two (56% vs 37%).

The study also found that that certain financial outcomes, including credit score and net worth, were better for FOC participants than for BCO participants. This is likely due to the additional time FOC participants had when compared to BCO participants who spent more than three to six months in training. Nevertheless, credit outcomes were good for *both* BCO and FOC participants—80% of FOC comparison clients and 68% of BCO participants increased their credit score. We expect that over time, we would see similar outcomes for both cohorts.

As encouraging as these outcomes are, this study, like all gauges of economic well-being in the country, were upended by the onset of the COVID-19 pandemic, and the staggering unemployment of upwards of

30 million people last year. On top of the sweeping loss of jobs, one in three Americans took a cut in pay or hours. And it has been widely reported that unemployment and other indicators of the financial fallout from the pandemic have disproportionately devastated Black and Brown communities—the very communities that are home to the majority of FOC and BCO clients.

It will take some time to fully grasp and quantify the pandemic's impact on our FOC and BOC clients. Nevertheless, we can see, as noted in this report, that our strategies work and that the Bridges to Career Opportunities model provides imperative skills and training without which people simply cannot access quality jobs—and that will still be true in a post-pandemic work. As we continue to hone and test the very human science of promoting greater financial well-being for people who have lived in privation and instability, we will need these important results to guide us, and the people and communities we serve, along the way.

About This Report

This report provides findings from Abt Associates' (Abt) evaluation of the Local Initiatives Support Corporation's (LISC) Bridges to Career Opportunities program. The evaluation was funded by the Corporation for National and Community Service's Social Innovation Fund and supported by LISC.

Acknowledgements

The authors of this report extend sincere thanks to the many individuals who contributed to the Bridges to Career Opportunities (BCO) evaluation. We thank Laura D'Alessandro, Seung Kim, and Carolina Rendon from LISC who have supported our work in carrying out the evaluation, transferring BCO participant data, and preparing this report. Their guidance was instrumental in enabling us to conduct the evaluation. We also acknowledge the assistance of David Greenberg, who reviewed this report, and former LISC staff, Christopher Walker and Sarah Rankin, who were involved in the design of the evaluation.

We are particularly grateful to the BCO staff from the seven evaluation sites who hosted our site visits, participated in interviews and class observations, worked with us in clarifying data, and provided information on an ongoing basis. Their cooperation and willingness to participate in the evaluation has been invaluable. We also thank the staff from the six Financial Opportunity Centers® who were part of the evaluation for their time in participating in telephone interviews and working with us in clarifying data. Their assistance was very much appreciated.

In addition to the report's authors, several Abt staff participated in the evaluation: Brian Freeman, Peiyi Zhang, and Nayara Mowry assisted with the data analysis; Sarah Costelloe conducted site visits; Daniel Litwok, Cristofer Price, and former Abt staff member Katherine Gan, participated in the design of the evaluation; Allan Porowski served as a reviewer of the final report; Bry Pollack provided editing support for the final report; and Katheleen Linton and Missy Robinson provided production support for the final report.

The views expressed in this report do not necessarily reflect the views or policies of the Corporation for National and Community Service or the views of the Local Initiatives Support Corporation.

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Introduction

This report presents the findings from Abt Associates' (Abt) implementation study and impact study of the Bridges to Career Opportunities (BCO) model. BCO is a multi-component intervention that assists adults who are underemployed or unemployed in advancing in a career and obtaining a living wage. Created by the Local Initiatives Support Corporation (LISC), BCO has four components of services. The bridge component provides contextualized basic skills education, career planning, and occupational skills training. The other three components of BCO services compose LISC's Financial Opportunity Center® (FOC) model, which bundles financial coaching and education, income support services, and employment services. The integrated bridge and FOC services—the BCO model—is intended to assist adults with low incomes or low skills earn industry-recognized credentials that can enable them to obtain jobs in career pathways leading to financial stability and economic well-being.

With funding from the Corporation for National and Community Services (CNCS)'s Social Innovation Fund (SIF) in 2016, LISC implemented the BCO model in 32 community-based organizations in 11 metropolitan areas. As part of the SIF project, LISC contracted with Abt to conduct an evaluation of the BCO model from 2016 to 2020. The evaluation consisted of an implementation study and a quasi-experimental impact study. The implementation study assessed the extent to which a purposeful sample of seven of the BCO treatment group sites carried out the services that compose the BCO model, and the factors that facilitated and posed challenges to delivering BCO services. The quasi-experimental impact study investigated the effects of BCO services in those seven sites on participants' employment and financial well-being outcomes compared to those of a comparison group of similar clients who enrolled in only FOC only services in six comparison sites.

The evaluation's treatment and comparison groups included 1,133 BCO participants and 1,217 FOC participants, respectively, who enrolled in those services during the period April 1, 2017 through December 31, 2018. The evaluation targeted a moderate level of evidence and followed the overall procedures that Abt submitted in its BCO SIF evaluation plan (Gan, Alamprese, Litwok, & Price, 2016).

Context for the Evaluation and Related Research

Families with low incomes face significant barriers to achieving financial security and upward mobility. Workers in low-wage occupations, particularly workers with a secondary education or less, tend to remain in these occupations (e.g., Gabe, Abel, &Florida, 2018; Andersson, Holzer, & Lane, 2005).

To aid families in mitigating those barriers, LISC developed the Financial Opportunities Centers®. Based on the Annie E. Casey Foundation's Center for Working Families model, the FOCs assist adults in working toward financial stability by advancing their employment and subsequently their financial well-being. LISC provides non-profit, community-based organizations with financial support and technical assistance to offer FOC bundled services in three areas: employment services; financial coaching and education; and linkages to income support services (e.g., Supplemental Nutrition Assistance Program, rental assistance, childcare subsidies). LISC's goal is to increase the positive net income and, ultimately, financial stability for adults with low incomes through their participation in FOC services.

Research on FOC clients has informed LISC's ongoing approach to services. Early evidence from a study of FOC clients indicated that the combination of financial coaching and employment services increased FOC clients' placement in jobs and job retention, as well as their net income. Financial coaching and

assistance in accessing relevant income support streams enabled FOC clients to stabilize their finances in preparing for and attaining placement in a job. However, FOC clients' potential for long-term financial advancement was found to be limited by the low wage rates of jobs available to them and by their gaps in the basic skills needed to succeed in sector-based occupational training (Rankin, 2015).

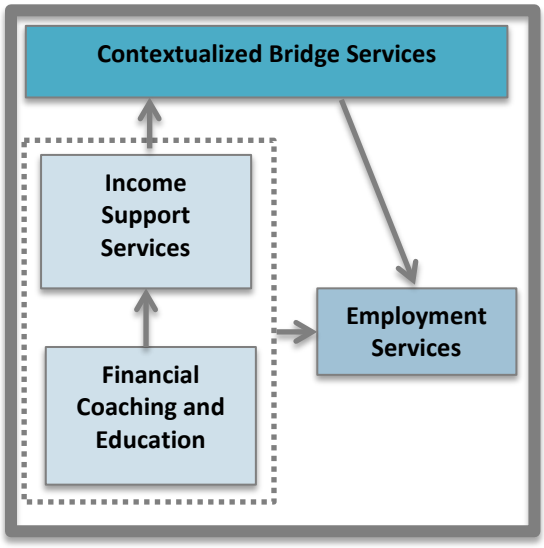
A quasi-experimental study of FOC client outcomes conducted by the Economic Mobility Corporation found that a key barrier to study participants' financial stability is their ability to acquire "good" jobs—jobs that meet their expenses, have stable schedules, and have opportunities for long-term career growth (Roder, 2016). Though occupational training programs for in-demand jobs are available through the publicly funded workforce system, community colleges, and private organizations, many FOC clients have gaps in their basic skills, lack educational credentials, or have financial constraints that preclude their enrollment or success in those programs.

To address challenges faced by adults with low skills and low incomes in obtaining family-sustaining jobs in career pathways, LISC considered the additional services that could strengthen adults' basic and technical skills and attainment of credentials. In 2015 LISC launched Bridges to Career Opportunities, which was built on the FOC model and integrates bridge education and training services.

BCO Model

A key assumption underlying BCO is that the model's components of services are necessary to enable adults to develop a career and earn a family-sustaining wage, and that those components are most effective when they work together (Exhibit 1).

Exhibit 1. Integration of BCO Model's Components



The bridge component increases career awareness and provides instruction in basic skills using occupationally contextualized curricula that can prepare adults to succeed in training for an occupational pathway. Its contextualized basic skills can be delivered as a first step to prepare BCO clients for occupational training or can be integrated into the occupational training. The development of clients' basic skills within the context of work enables them to earn credentials and enter jobs with a potential for upward mobility.

BCO clients' enrollment in public benefits can provide support for daily expenses and reduce barriers to training and employment. Financial coaching and education are expected to help clients reduce expenses, access credit under better terms, increase savings, and build assets. The assumption is that when clients are financially stable, they are more likely to engage in and remain in training.

Finally, employment services ensure that clients are prepared for the job search and application processes, and that they are connected to opportunities for jobs with family-sustaining wages.

Implementation Study

Implementation Study Research Question

The BCO implementation study addressed the following question:

To what extent did the study sites implement the following four components of the BCO program with fidelity: (1) contextualized bridge program services, (2) financial coaching and education services, (3) income supports, and (4) employment services?

Exhibit 2 lists the implementation study research question for each BCO component and associated activities.

Implementation Study Design, Measures, and Data Collection

Abt used a mixed methods design to assess the extent to which treatment sites' delivery of the BCO model adhered to the characteristics of the model as defined by LISC. This approach involved having a well-defined set of BCO components of services and associated activities that include features of the structure and processes used in delivering the intervention and collecting data about the fidelity of implementation using multiple methods.

The measures for BCO treatment sites' fidelity of implementation of the BCO model are the activities in Exhibit 2 that are associated with each of the four BCO components—contextualized bridge services, financial coaching and education, income supports, and employment services.

Data to address the overarching implementation study question *To what extent did the treatment sites implement the BCO program with fidelity?* were collected from the treatment sites using three methods: (1) interviews with evaluation sites' staff as part of two rounds of site visits that Abt conducted; (2) observations of services delivered in the BCO treatment sites during the site visits; and (3) conduct of bi-annual interim telephone conferences during the two-year period of sites' implementation of BCO services.

Implementation Study Sites

Abt selected seven BCO programs as treatment sites. These sites had strong capacity to deliver BCO services and sufficient projected baseline enrollment to meet the evaluation's requirements. The sites were:

- Brighton Center, Inc., Greater Cincinnati and Northern Kentucky;
- Chinese Community Center, Inc., Houston, TX;
- District 1199C Training and Upgrading Fund, Philadelphia, PA;
- Instituto del Progreso Latina, Chicago, IL;
- International Institute of Minnesota, St. Paul, MN;

- Project for Pride in Living, Inc., Minneapolis, MN; and
- Wesley Community Center, Inc., Houston, TX.

Exhibit 2. Implementation Study Research Questions for BCO Model Components

Bridge Services Component: To what extent did BCO treatment sites implement bridge services and their associated activities?

1. Instruction
a. Addresses career pathway in growth sector or industry;
b. Includes an academic pathway;
c. Teaches basic skills that are contextualized to a specific career path;
d. Is based on industry-specific curriculum;
e. Enables clients to attain industry-recognized credentials; and
f. Has measurable endpoint or clearly defined completion criteria.

2. Assessment
a. Uses criterion levels to determine client participation; and
b. Asses pre- and post-test skills.

3. Career Coaching
a. Provides ongoing career coaching; and
b. Connects academic and career pathways.

Financial Coaching and Education Component: To what extent did the BCO treatment sites implement financial coaching and education services and their associated activities?

a. Assesses clients' financial health, combining a financial profile, budget, balance, and credit information (Combined Financial Assessment);
b. Provides regular one-on-one interactions concerning clients' financial status;
c. Reviews clients' credit reports every six months; and
d. Uses financial products during coaching.

Income Support Services Component: To what extent did the BCO treatment sites implement income support services and their associated activities?

a. Screens for public benefits eligibility;
b. Identifies income supports to enable participants to remain in training; and
c. Reassesses clients' needs as their situations change.

Employment Services Component: To what extent did the BCO treatment sites implement employment services and their associated activities?

a. Assists clients in preparing job search materials and conducting job search;
b. Provides clients with coaching about job search, placement, retention, and advancement; and
c. Supports clients in exploring careers.

Data Analysis

The data collected through the site visits (interviews, observations) and the interim telephone conferences were analyzed to assess the overall fidelity of delivery of the BCO model. A content analysis was performed to understand the types of activities that the treatment sites conducted for each of the BCO components.

The results from the content analysis of each treatment site's BCO activities were rated to determine how closely a treatment site had adhered to the BCO model, defined as whether the four components of the BCO model were delivered as intended. Abt developed a three-point scale to rate the degree to which each of the activities for each component was implemented as specified in the BCO list of components.

Findings on Fidelity of BCO Implementation

The seven treatment sites demonstrated high fidelity in implementing the BCO model's four components of activities "as intended;" that is, the sites carried out the activities associated with each of the BCO components as they have been defined by LISC. Overall, the treatment sites implemented 94 percent of the activities across the four components "as intended," with little variation in the percentages of adherence for each component. The component with the highest percentage of adherence was employment services (95.1%), followed by financial coaching and education services, along with income support services (94.1%), and bridge services (93.6%). Those results indicate that BCO sites participating in the evaluation were able to follow the guidance and assistance that LISC provided in offering bundled services to support adults with low incomes.

The treatment sites were able to achieve a high degree of adherence to the BCO model while using a range of approaches in carrying out the activities associated with each of the BCO components. This variation reflected the resources of the organizations implementing BCO and their prior experience as Financial Opportunity Centers®, which provided a foundation for their approach to BCO services. Another factor influencing the BCO sites' services were the types of partnerships with external organizations that staff formed to enable them to provide comprehensive services to clients with low incomes or low skills. Those partnerships were important in enabling BCO sites to leverage their services to meet the varying needs of their clients. The background and experience of staff affected the treatment sites' approaches to bridge, financial coaching, and education services since those services require specialized knowledge and skills to be able to work effectively with clients. The variation in approaches points to the flexibility within the BCO model and how the model is used by different types of organizations.

Impact Study

The impact study examined whether the BCO model, which integrates bridge services with FOC services, better prepares participants with low incomes to increase their employment prospects and financial stability than do FOC services alone. The study addressed research questions on employment and financial well-being using a quasi-experimental design and compared the outcomes of BCO participants (the treatment group) with a matched group of FOC participants (the comparison group).

Impact Study Questions

The confirmatory research questions for the impact study were:

- Were BCO participants more likely to obtain or advance in a job after program entry relative to a comparison group who received only FOC services? (Employment)

- Were BCO participants more likely to have obtained or increased their credit scores after program entry relative to a comparison group who received only FOC services? (Financial Well-Being)

Sample

Seven BCO programs were purposively selected as treatment sites, as described above, and six FOC programs were purposively selected as comparison sites. Those FOC sites did not provide educational services for clients; were in cities with similar labor markets as the treatment sites and served FOC clients with similar demographic characteristics as the BCO treatment sites; and collected the evaluation's required data for FOC participants and delivered FOC services according to the FOC model.

Across the BCO treatment programs and the FOC comparison programs, eligible BCO participants were exactly matched to one or more eligible FOC participant on gender, age, race/ethnicity, highest level of education completed, employment status, and credit score at intake using a coarsened exact matching (CEM) process.

Impact Study Data Sources

The data sources were extant administrative data that LISC maintains on BCO and FOC clients' demographic and background information, service receipt, and outcome data. BCO and FOC sites collect and submit those data to LISC using standardized procedures. The data are stored in LISC's database that uses a Salesforce platform.

The data to address the impact study's confirmatory research question concerning BCO and FOC-only participants' job advancement were drawn from participants' intake, employment, and advancement records in Salesforce. The data for the confirmatory research question concerning study participants' credit score increase were drawn from the credit score record in Salesforce.

Analytic Approach

Participant outcomes were analyzed in a linear regression model that tested the effect of BCO on job advancement and credit score increase.

Impact Study Results for Confirmatory Research Questions

Abt's quasi-experimental impact study addressed confirmatory research questions concerning impacts on study participants' employment and financial well-being.

Employment Impacts

The evaluation's confirmatory employment question was: Were BCO participants more likely to have a job improvement after program entry relative to a comparison group who received only FOC services? To address this question, Abt analyzed treatment and comparison group participants' job improvement[1] during the 14 months after their enrollment in a BCO program or an FOC. The analyses indicated that study participants enrolled in BCO programs were 19 percentage points more likely to have a "job improvement" than were participants in FOC programs (56 percent versus 37 percent). This difference was statistically significant at the .001 level.

[1] Participant (a) enrolled in the program unemployed and starts a new job in the 1-14 months after enrollment or (b) was employed at enrollment and has one of the following outcomes in the 1-14 months after enrollment: (1) obtains a new job and the new wage is greater than the wage at enrollment; or (2) has an increase in wages or obtains a promotion.

The BCO model includes activities that support program participants' selection of a career pathway and reinforce participants' advancement in a pathway, which might have contributed to the positive impacts on the treatment group participants' job advancement. The BCO bridge services include an ongoing review of participants' career goals and selection of pathways that align with their skills, interests, and abilities. When BCO participants earn an initial credential, they are encouraged to consider the steps they will take to obtain an advanced credential that will enable them to move forward in a career pathway. As participants work with an employment coaches in job search and job placement activities, coaches discuss strategies for retaining and advancing in a job. The BCO model is designed to provide program participants with ongoing support and encouragement during a sustained period that can prepare them for success in the workplace.

Financial Well-Being Impacts

The evaluation's confirmatory financial well-being question was: *Were BCO participants more likely to have obtained or increased their credit scores after program entry relative to a comparison group who received only FOC services?* To address this question, Abt analyzed treatment and comparison group participants' maximum credit score at follow-up during the 14 months after their enrollment in a BCO program or an FOC. The analyses indicated that 68 percent of participants in the BCO program and approximately 80 percent of participants in the FOC program had an increase in their credit score after program entry. This negative impact of 18 percentage points was not statistically significant.

One condition that might explain the credit score findings is the difference in timeline between BCO participants' and FOC participants' job search and placement. BCO participants are enrolled in bridge services involving concurrent or sequential occupational training for two to seven months after program enrollment and search for jobs in their area of occupational training after completing training. In contrast, FOC participants generally are placed in jobs as soon as possible after program entry. The earlier job placement for FOC participants could result in better credit scores for them during the 14 months after their enrollment in an FOC, because they will have begun working sooner after enrollment than BCO participants.

Another factor that might have affected the credit score analysis is the small sample of matched BCO participants (181) and FOC participants (79) who had baseline and follow-up credit scores. Although the BCO and FOC programs are strongly encouraged to retrieve program participants' credit scores every six months during their engagement in services, there was a high percentage of missing credit score data, particularly for FOC participants. The FOC participants' missing data might reflect their shorter length of time receiving services compared with BCO participants.

Since the BCO model is one of the few career pathways programs that includes a financial well-being intervention and data collection activities, we are not able to examine the financial well-being results of this study relative to the results from other studies.

Descriptive Analyses of Treatment Group's Education Outcomes

Abt conducted descriptive analyses of the BCO treatment group participants' education outcomes to understand participants' progress in developing their foundational skills while enrolled in BCO, in completing the BCO program, and their progress in earning educational credentials. The evaluation's confirmatory education question could not be addressed due to lack of data and is discussed below in the section on "Changes to SEP."

BCO Participants' Foundational Literacy Skills

As part of BCO's bridge services, BCO treatment sites were to provide contextualized instruction to increase the foundational literacy skills of BCO participants who had low basic skills. To examine the effects of BCO on literacy skills, we compared the pre- and post-test scores on the Test for Adult Basic Education (TABE®) Reading test for all BCO participants in the evaluation, not for just those with low basic skills at entry.

At BCO program intake, BCO treatment group participants' TABE® Reading pre-test scale score was 532, equivalent to about the 6.6 grade level. At the post-test, BCO participants had increased their reading scores by about 9 points or by about one grade-level to the 7.4 grade-level equivalent (CTB McGraw-Hill, 2004). This increase was statistically significant at $p < .001$ level.

BCO Participants Program Completion and Credential Attainment

Abt's evaluation examined the treatment group participants' rates of completion of a BCO program and attainment of educational credentials. The majority (86%) of the treatment group participants completed the BCO education or training program in which they enrolled. Of treatment group participants who completed a training program, approximately 80% percent earned at least one credential, primarily an occupational certificate. Over half (57%) of those credentials were in healthcare occupations, which was the occupational focus of over half of the education and training programs offered by BCO treatment sites.

BCO treatment group participants' rates of program completion and credential attainment by month 14 after enrollment compare favorably with the results from education and training programs funded by the U.S. Department of Health and Human Services Health Professional Opportunity Grants (HPOG). HPOG grants are intended to assist adults with low incomes earn healthcare credentials and obtain family-sustaining jobs in a pathway. The HPOG data provide a context for considering the BCO treatment sites' outcomes in training program completion and credential attainment. An evaluation of Pima Community College's Pathways to Healthcare Program, which includes basic skills bridge programs, found that by month 18 after program enrollment, 59 percent of participants had completed any education or training and 29 percent had received a credential (Gardiner, Rolston, Fein, & Cho, 2017). An evaluation of San Diego County Bridge to Employment in the Healthcare Industry Program found that 64 percent of the treatment group members earned a credential (Farrell & Martinson, 2017).

Changes to SEP

Abt made changes to the SEP primarily because of the lack of availability of evaluation participants' administrative data. The changes to the SEP are described below.

Education Research Questions

The *confirmatory research question in education,* "Are BCO participants more likely to have attained an occupational certificate or postsecondary credential 12 months after program entry relative to a comparison group who receive only FOC services?" could not be addressed due to lack of reliable comparison group data. Abt's analysis of educational outcomes revealed than only four comparison participants had data concerning attainment of occupational certificates or postsecondary credentials at follow-up. The response rate might have been due to the structure of the Degree, Certificate, License record in LISC's Salesforce database, in which program staff enter data in this record only if participants have attained a credential. There is no variable in the record concerning non-attainment of a credential, which meant we could not determine whether the response rate of four participants was accurate.

The *exploratory research question in education* for only treatment group members "Are BCO participants likely to increase their math skills (as measured by a standardized test) after participating in the BCO program?" could not be addressed because most treatment programs did not collect math post-test data from participants at the end of bridge services. Rather, the programs collected post-test data on participants' reading skills since most instruction addressed the reading skills participants needed to succeed in their occupational training.

The *exploratory research question in education* "Are BCO participants likely to complete their BCO program?" was added to the evaluation since it addressed an important hypothesized outcome from participation in BCO bridge services as indicated in the BCO logic model.

Employment Research Questions

Approach to Research Questions. Abt's intended approach to address employment outcomes was to compare the treatment and comparison groups' outcomes at 12 months after participants' enrollment in BCO services (treatment group) and FOC services (comparison group). The timeline assumed that program staff would conduct follow-up data collection 12 months after participants enrolled in their respective programs. However, because the BCO model allows for client-driven interactions, only a portion of the follow-up data collection occurred at 12 months after enrollment. Because the BCO and FOC program services dictate that clients reach out to staff as needed, this interaction does not follow a specific schedule. As a result, it was difficult to gather point-in-time data according to a 12-month follow-up schedule. Rather, follow-up data were defined as any data collected after baseline, beginning in month 1 after enrollment and continuing throughout the 14-month period in which the evaluation tracked clients' participation in BCO or FOC services. BCO and FOC staff also reported that part of the variation in the timeline for follow-up data collection was due to sites' difficulty in reaching clients after they ended their participation in BCO or FOC services. Thus the 12-month timeframe for the employment research questions was changed to the timeframe of month 1 through month 14.

Addition of Employment Confirmatory Question. Prior to data analysis, Abt added the confirmatory research question "Were BCO participants more likely to obtain or advance in a job after program entry relative to a comparison group who received only FOC services?" based on our re-examination of the BCO logic model concerning participants' outcomes from employment services.

Exploratory Employment Questions Not Addressed. Abt could not address the following two employment exploratory questions due to the difficulty in gathering the point-in-time information noted above: (1) Are BCO participants more likely to retain the same job (for 180 days) relative to a comparison group who receive only FOC services? and (2) Are BCO participants likely to have been employed more quickly relative to a comparison group who receive only FOC services?

Financial Well-Being Research Questions

Approach to Research Questions. The intended approach and change in timeframe described for employment questions also applies to the financial well-being questions.

Addition of Financial Well-Being Confirmatory Question. Prior to data analysis, Abt added the confirmatory research question "Were BCO participants more likely to have obtained or increased their credit scores after program entry relative to a comparison group who received only FOC services? based on our re-examination of the BCO logic model concerning participants' outcomes from financial services.

Addition of Financial Well-Being Exploratory Question. The following exploratory research question was added because of the emphasis on net-worth in financial coaching services: Were BCO participants

more likely to have increased their net worth after program entry relative to a comparison group who received only FOC services?

Exploratory Financial Well-Being Questions Not Addressed. Abt could not address the following exploratory financial well-being question due to a lack of data on on-time account payments: Are BCO participants more likely to have a greater percentage of on-time account payments 12 months after program entry relative to a comparison group who receive only FOC services?

Other Changes

The SEP specified that two site visits would be conducted to each of the treatment programs as part of the implementation study. Abt conducted two site visits to six of the seven programs. Due to a scheduling difficulty, Abt could not conduct a site visit to the seventh program but conducted telephone interviews with program staff to gather the same information that was to be collected during the second site visit.

The SEP specified that the evaluation would use a Propensity Score Analysis (PSA), a matching technique wherein participants in a program are matched to non-participants based on their participation propensity score. PSA is useful for selecting comparison members on a large number (20 or more) of characteristics. Given the small number of variables that were appropriate to use for matching in the BCO evaluation, Abt used the CEM approach instead of a PSA matching approach. Because all matching variables are combined into a summary score, PSA does not guarantee close or exact matches on variables of interest. However, CEM ensures exact matches on variables of interest (because treatment and comparison matches within the same block have identical values on coarsened matching variables).

The SEP specified that the timeline for data collection for the impact study would be January 2017 through December 2018. The beginning of the data collection period was changed from January 2017 to April 2017 because LISC's training of programs' implementation of their new Salesforce data system was still underway at the beginning of 2017. The change to April 2017 ensured that all BCO and FOC programs would be able to enter baseline client data into Salesforce at the beginning of the evaluation's data collection period.

Conclusions

The evaluation found that the BCO model, with well-defined services and training and technical assistance support, can be implemented by community-based organizations with strong adherence to the model. The evaluation also indicated that BCO's goal to facilitate clients' attainment of educational credentials and employment on their path to economic well-being can be attained through the delivery of the multi-component services that define the BCO model. Although BCO evaluation participants were not able to make significant advances in their economic status during the 14 months after they enrolled in the BCO program, they were able to earn credentials and advance in their jobs. Those outcomes are thought to be steps toward economic well-being. The process of increasing individuals' economic status is complex and affected by many factors. Although this evaluation provided preliminary insights about near-term changes in participants' economic status, more robust investigations with larger samples of participants are needed to understand adults' attainment of economic well-being.

Fidelity of BCO Implementation

The seven treatment sites implemented the BCO model's four components of activities with a high degree of fidelity. Many factors contributed to this result including the ongoing training and technical assistance that LISC staff provided to its grantees and the organizational resources of the seven programs that participated as treatment sites. Another factor is that the BCO model is specified with sufficient detail to

guide programs' main activities in each of the four BCO components but is not so prescriptive that programs cannot adjust services as they encounter challenges. This model design enabled the treatment programs to respond to the needs of their client populations while delivering the range of services that compose the BCO model.

Education Outcomes

The majority of BCO treatment participants completed the BCO program (86%) and most of those completers earned at least one credential, which was primarily an occupational certificate (80%). The treatment sites' approaches to recruitment and orientation helped clients understand the requirements and commitment needed to succeed in the BCO program. The BCO bridge design also provided clients with an opportunity to master skills in the bridge component that could contribute to their success in the occupational training. The ongoing support provided by BCO coaches and instructors helped clients to persevere and keep on track as they worked to earn an educational credential.

Employment Outcomes

The evaluation results indicated that BCO treatment participants were significantly more likely to obtain or advance in a job after enrollment than FOC comparison participants. Factors contributing to this outcome were the comprehensive job readiness and job placement services that the BCO sites provided. As the BCO implementation study indicated, the treatment sites' employment services were the most highly aligned of the four BCO components of services such that BCO sites provided many similar services. Another factor likely contributing to the BCO participants' job placement and advancement was the partnerships that BCO sites formed with local employers. BCO staff reported that those partnerships not only facilitated participants' job attainment but also help support participants as they moved along in their employment.

Financial Well-Being Outcomes

The evaluation found that FOC comparison group participants were more likely to increase their credit scores than BCO treatment group participants. Comparison group participants also were more likely than treatment participants to decrease their debt, increase their net worth, and have a higher amount of debt decrease. Comparison group participants' earlier participation in the workforce after program enrollment may have enabled those participants to engage in financial activities helped to increase their financial well-being.

Lessons Learned and Limitations

One lesson from the evaluation concerns processes to mitigate the loss of administrative data. Although LISC and Abt encouraged sites throughout the evaluation to follow established protocols for entering client data, more frequent monitoring of the BCO and FOC data in Salesforce might have resulted in less loss of data.

Because of the evaluation's quasi-experimental design, the BCO treatment programs participating in the evaluation were not selected to represent the full set of BCO programs but were purposively selected because of their planned services, client population, stability of BCO program implementation, and projected number of participants. The FOC comparison programs were purposively selected for the evaluation because their clients who entered services during the evaluation's enrollment period had similar background characteristics as the BCO clients in the treatment group. The BCO and FOC programs were also in cities with similar labor markets. For those reasons, the evaluation's results may not be applicable to clients with background characteristics different from the backgrounds of evaluation participants or because of possible differences in BCO program services.

The goal of using coarsened exact matching (CEM) in the evaluation was to create treatment and comparison groups that were similar, before the start of clients' participation in the BCO and FOC programs, on *observed* characteristics likely to be related to the education, employment, and financial outcomes of interest. Therefore, any differences in education, employment, and financial outcomes observed can be attributed to the BCO program (or unobserved differences) rather than to initial differences between the groups. The treatment and comparison groups' analytic samples were shown to be equivalent at baseline on observed characteristics, even after the loss of sample due to missing outcome data. However, a limitation of the study design is that differences observed may be due to unobserved characteristics of participants or the BCO program. Further, because the missing data led to small sample sizes for the financial outcome, the evaluation may not be powered to detect small differences between the groups.

Introduction

This report presents the findings from Abt Associates' (Abt) implementation study and impact study of the Bridges to Career Opportunities (BCO) model. BCO is a multi-component intervention that assists adults who are underemployed or unemployed adults in advancing in a career and obtaining a living wage. Created by the Local Initiatives Support Corporation (LISC), BCO has four components of services. The bridge component provides contextualized basic skills education, career planning, and occupational skills training. The other three components of BCO services compose LISC's Financial Opportunity Center® (FOC) model, which bundles financial coaching and education, income support services, and employment services. The integrated bridge and FOC services—the BCO model—is intended to assist adults with low incomes or low skills earn industry-recognized credentials that can enable them to obtain jobs in career pathways leading to financial stability and economic well-being.

With funding from the Corporation for National and Community Services (CNCS)'s Social Innovation Fund (SIF) in 2016, LISC implemented the BCO model in 32 community-based organizations in 11 metropolitan areas. As part of the SIF project, LISC contracted with Abt to conduct an evaluation of the BCO model from 2016 to 2020. The evaluation consisted of an implementation study and a quasi-experimental impact study. The implementation study assessed the extent to which a purposeful sample of seven of the BCO treatment group sites carried out the core services that compose the BCO model, and the factors that facilitated and posed challenges to delivering BCO services. The quasi-experimental impact study investigated the effects of BCO core services in those seven sites on participants' employment and financial well-being outcomes compared to those of a comparison group of similar clients who enrolled in only FOC services in six comparison sites.

The evaluation's treatment and comparison groups included 1,133 BCO participants and 1,217 FOC participants, respectively, who enrolled in those services during the period April 1, 2017 through December 31, 2018.[2] The evaluation targeted a moderate level of evidence and followed the overall procedures that Abt submitted in its BCO SIF evaluation plan (Gan, Alamprese, Litwok, & Price, 2016).

Context for the Evaluation and Related Research

Families with low incomes face significant barriers to achieving financial security and upward mobility. Workers in low-wage occupations, particularly workers with a secondary education or less, tend to remain in these occupations (e.g., Gabe, Abel, &Florida, 2018; Andersson, Holzer, & Lane, 2005). Evidence suggests this is partially due to gaps in their technical skills and basic skills. For example, three-quarters of workers with low wages have a high school diploma or equivalent but lack the relevant occupational skills and employer connections required to enter a career pathway (Loprest, Acs, Ratcliffe, & Vinopal, 2009). Upward mobility for those who lack technical skills, high school credentials, or basic skills is even more limited.

To aid families in mitigating these barriers, LISC developed the Financial Opportunities Centers®. Based on the Annie E. Casey Foundation's Center for Working Families model, the FOCs assist adults in

[2] **SEP Change**: The SEP specified that the timeline for data collection for the impact study would be January 2017 through December 2018. The beginning of the data collection period was changed from January 2017 to April 2017 because LISC's training of programs' implementation of their new Salesforce data system was still underway at the beginning of 2017. The change to April 2017 ensured that all BCO and FOC programs would be able to enter baseline client data into Salesforce at the beginning of the evaluation's data collection period.

working toward financial stability by advancing their employment and subsequently their financial well-being. LISC provides non-profit, community-based organizations with financial support and technical assistance to offer FOC bundled services in three areas: employment services; financial coaching and education; and linkages to income support services (e.g., Supplemental Nutrition Assistance Program, rental assistance, childcare subsidies). LISC's goal is to increase the positive net income and, ultimately, financial stability for adults with low incomes through their participation in FOC services.

Research on FOC clients has informed LISC's ongoing approach to services. Early evidence from a study of FOC clients indicated that the combination of financial coaching and employment services increased FOC clients' placement in jobs and job retention, as well as their net income. Financial coaching and assistance in accessing relevant income support streams enabled FOC clients to stabilize their finances in preparing for and attaining placement in a job. However, FOC clients' potential for long-term financial advancement was found to be limited by the low wage rates of jobs available to them and by their gaps in the basic skills needed to succeed in sector-based occupational training (Rankin, 2015).

A quasi-experimental study of FOC client outcomes conducted by the Economic Mobility Corporation found that a key barrier to study participants' financial stability is their ability to acquire "good" jobs—jobs that meet their expenses, have stable schedules, and have opportunities for long-term career growth (Roder, 2016). Though occupational training programs for in-demand jobs are available through the publicly funded workforce system, community colleges, and private organizations, many FOC clients have gaps in their basic skills, lack educational credentials, or have financial constraints that preclude their enrollment or success in these programs.

To address challenges faced by adults with low skills and low incomes in obtaining family-sustaining jobs in career pathways, LISC considered the additional services that could strengthen adults' basic and technical skills and attainment of credentials. In 2015 LISC launched Bridges to Career Opportunities, which was built on the FOC model and integrates bridge education and training services.

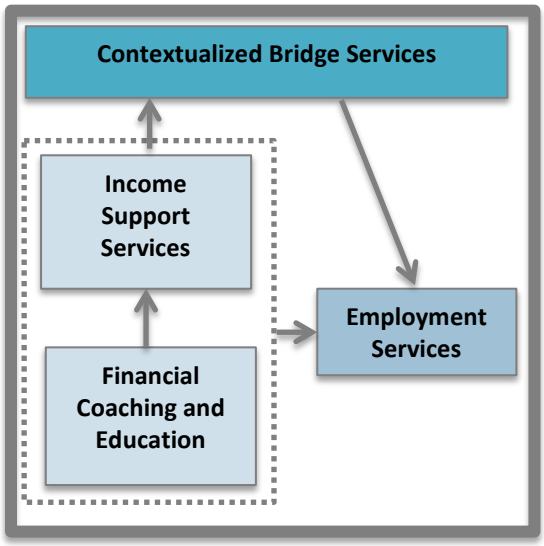
BCO Logic Model

The BCO logic model is presented in Appendix A. The BCO model provides clients with the following:

- Bridge services that include contextualized adult basic education (ABE) or English as a Second Language (ESL) instruction to develop clients' proficiencies in reading, writing, numeracy, and English language to enter and succeed in technical skills training; and connections to occupational training that lead to industry-recognized credentials and career pathways in locally in-demand occupations; and
- Financial coaching and education services, income support services, and employment services that are integrated to help clients manage the financial, navigational, and logistical challenges associated with participation in education and training programs.

A key assumption underlying BCO is that the model's components of services are necessary to enable adults to develop a career and earn a family-sustaining wage, and that those components are most effective when they work together (Exhibit 1).

Exhibit 1. Integration of BCO Model's Components



The bridge component increases career awareness and provides instruction in basic skills using occupationally contextualized curricula that can prepare adults to succeed in training for an occupational pathway. Its contextualized basic skills can be delivered as a first step to prepare BCO clients for occupational training or can be integrated into the occupational training. The development of clients' basic skills within the context of work enables them to enter jobs with a potential for upward mobility.

BCO clients' enrollment in public benefits can provide support for daily expenses and reduce barriers to training and employment. Financial coaching and education are expected to help clients reduce expenses, access credit under better terms, increase savings, and build assets. The assumption is that when clients are financially stable, they are more likely to engage in and remain in training.

Finally, employment services ensure that clients are prepared for the job search and application processes, and they are connected to opportunities for jobs with family-sustaining wages.

Research Questions

Implementation Study Research Questions

The BCO implementation study research question was the following:

To what extent did the study sites implement the following four components of the BCO program with fidelity: (1) contextualized bridge program services, (2) financial coaching and education services, (3) income supports, and (4) employment services?

The research questions for the implementation study are shown in Exhibit 2.

Exhibit 2. Implementation Study Research Questions for BCO Model Components

Bridge Services Component: To what extent did BCO treatment sites implement bridge services and their associated activities as defined by LISC?

1. Instruction
    a. Addresses career pathway in growth sector or industry;
    b. Includes an academic pathway;
    c. Teaches basic skills that are contextualized to a specific career path;
    d. Is based on industry-specific curriculum;
    e. Enables clients to attain industry-recognized credentials; and
    f. Has measurable endpoint or clearly defined completion criteria.

2. Assessment
    a. Uses criterion levels to determine client participation; and
    b. Assesses pre- and post-test skills.

3. Career Coaching
    a. Provides ongoing career coaching; and
    b. Connects academic and career pathways.

Financial Coaching and Education Component: To what extent did the BCO treatment sites implement financial coaching and education services and their associated activities as defined by LISC?

a. Assesses clients' financial health, combining a financial profile, budget, balance, and credit information (Combined Financial Assessment);
b. Provides regular one-on-one interactions concerning clients' financial status;
c. Reviews clients' credit reports every six months; and
d. Uses financial products during coaching.

Income Support Services Component: To what extent did the BCO treatment sites implement income support services and their associated activities as defined by LISC?

a. Screens for public benefits eligibility;
b. Identifies income supports to enable participants to remain in training; and
c. Reassesses clients' needs as their situations change.

Employment Services Component: To what extent did the BCO treatment sites implement employment services and their associated activities as defined by LISC?

a. Assists clients in preparing job search materials and conducting job search;
b. Provides clients with coaching about job search, placement, retention, and advancement; and
c. Supports clients in exploring careers.

Impact Study Research Questions

The BCO quasi-experimental impact study investigated whether the BCO intervention, which integrates bridge services with FOC services, better prepares adults with low incomes and low skills to increase their employment prospects and financial stability than do FOC services alone. The impact study addressed confirmatory and exploratory research questions concerning study participants' employment and financial well-being outcomes. The impact study also examined exploratory questions concerning BCO treatment group participants' development of reading skills and occupational training completion. The impact study research questions are shown in Exhibit 3.

Exhibit 3. Impact Study Research Questions

Employment

Abt addressed the following confirmatory and exploratory questions related to employment outcomes:

Confirmatory Question:

1. Were BCO participants more likely to obtain or advance in a job after program entry relative to a comparison group who received only FOC services?

Exploratory Questions:

2. Were BCO participants more likely to increase their hourly wages after program entry relative to a comparison group who received only FOC services?
3. Were BCO participants more likely to be placed in jobs with higher wages relative to a comparison group who received only FOC services?
4. Were BCO participants more likely to work more hours per week after program entry relative to a comparison group who received only FOC services?

Financial Well-Being

Abt addressed the following confirmatory and exploratory questions related to financial well-being outcomes:

Confirmatory Question:

1. Were BCO participants more likely to have obtained or increased their credit scores after program entry relative to a comparison group who received only FOC services?

Exploratory Questions:

2. Were BCO participants more likely to have lower overall debt after program entry relative to a comparison group who received only FOC services?
3. Were BCO participants more likely to have increased their net worth after program entry relative to a comparison group who received only FOC services?

Education

Abt addressed descriptive research questions concerning BCO participants' education outcomes:

1. Are BCO participants likely to increase their reading skills (as measured by a standardized test) after participating in the BCO program?
2. Are BCO participants likely to complete their BCO program?
3. Are BCO participants likely to earn credentials after participating in a BCO program?

Changes to SEP Research Questions

Abt made changes to the SEP primarily because of the lack of availability of evaluation participants' administrative data. The changes to the research questions in the SEP are described below.

Education Research Questions

The *confirmatory research question in education,* "Are BCO participants more likely to have attained an occupational certificate or postsecondary credential 12 months after program entry relative to a comparison group who receive only FOC services?" could not be addressed due to lack of reliable comparison group data. Abt's analysis of educational outcomes revealed than only four comparison participants had data concerning attainment of occupational certificates or postsecondary credentials at follow-up. The response rate might have been due to the structure of the Degree, Certificate, License record in LISC's Salesforce database, in which program staff enter data in this record only if participants have attained a credential. There is no variable in the record concerning non-attainment of a credential, which meant we could not determine whether the response rate of four participants was accurate.

The *exploratory research question in education* for only treatment group member "Are BCO participants likely to increase their math skills (as measured by a standardized test) after participating in the BCO program?" could not be addressed because most treatment programs did not collect post-test data from participants at the end of bridge services. Rather, the programs collected post-test data on participants' reading skills since most instruction addressed the reading skills participants needed to succeed in their occupational training.

The *exploratory research question* "Are BCO participants likely to complete their BCO program?" was added to the evaluation since it addressed an important hypothesized outcome from participation in BCO services as indicated in the BCO logic model.

Employment Research Questions

Approach to Research Questions. Abt's intended approach to address employment outcomes was to compare the treatment and comparison groups' outcomes at 12 months after participants' enrollment in BCO services (treatment group) and FOC services (comparison group). The timeline assumed that program staff would conduct follow-up data collection 12 months after participants' enrollment in their respective programs. However, because the BCO model allows for client-driven interactions, only a portion of the follow-up data collection occurred at 12 months after enrollment. Because the BCO and FOC program services dictate that clients reach out to staff as needed, this interaction does not follow a specific schedule. As a result, it was difficult to gather point-in-time data according to a 12-month follow-up schedule. Rather, follow-up data were defined as any data collected after baseline, beginning in month 1 after enrollment and continuing throughout the 14-month period in which the evaluation tracked clients' participation in BCO or FOC services. BCO and FOC staff also reported that part of the variation in the timeline for follow-up data collection was due to sites' difficulty in reaching clients after they ended their participation in BCO or FOC services. Thus the 12-month timeframe for the employment research questions was changed to the timeframe of month 1 through month 14.

Addition of Employment Confirmatory Question. Prior to data analysis, Abt added the confirmatory research question "Were BCO participants more likely to obtain or advance in a job after program entry relative to a comparison group who received only FOC services?" based on our re-examination of the BCO logic model concerning participants' outcomes from employment services.

Exploratory Employment Questions Not Addressed. Abt could not address the following two employment exploratory questions due to the difficulty in gathering point-in-time information noted

above: (1) Are BCO participants more likely to retain the same job (for 180 days) relative to a comparison group who receive only FOC services? and (2) Are BCO participants likely to have been employed more quickly relative to a comparison group who receive only FOC services?

Financial Well-Being Research Questions

Approach to Research Questions. The intended approach and change in timeframe described for employment questions also applies to the financial well-being questions.

Addition of Financial Well-Being Confirmatory Question. Prior to data analysis, Abt added the confirmatory research question "Were BCO participants more likely to have obtained or increased their credit scores after program entry relative to a comparison group who received only FOC services? based on our re-examination of the BCO logic model concerning participants' outcomes from financial services.

Addition of Financial Well-Being Exploratory Question. The following exploratory research question was added because of the emphasis on net-worth in financial coaching services: Were BCO participants more likely to have increased their net worth after program entry relative to a comparison group who received only FOC services?

Exploratory Financial Well-Being Questions Not Addressed. Abt could not address the following exploratory financial well-being question due to a lack of data on on-time account payments: Are BCO participants more likely to have a greater percentage of on-time account payments 12 months after program entry relative to a comparison group who receive only FOC services?

Implementation Study

The BCO implementation study examined the fidelity of the implementation of the BCO logic model (Appendix A, Exhibit A-1). The implementation research questions, shown in Exhibit 2, address the key activities associated with each of the four BCO components: contextualized bridge services, financial coaching and education, income support services, and employment services.

Abt selected seven BCO programs as treatment sites, which are listed in Exhibit 4 (see Appendix B for a detailed description of the site selection process). The implementation study assessed the use of the BCO model in those sites.

Exhibit 4. BCO Implementation Sites

Site	Location	Designation Used in Report
Brighton Center, Inc.	Greater Cincinnati and Northern Kentucky	A
Chinese Community Center, Inc.	Houston, TX	B
District 1199C Training and Upgrading Fund	Philadelphia, PA	C
Instituto del Progreso Latino	Chicago, IL	D
International Institute of Minnesota	St. Paul, MN	E
Project for Pride in Living, Inc.	Minneapolis, MN	F
Wesley Community Center, Inc.	Houston, TX	G

This section of the report describes the design, measures, and data collection for the implementation study and the results from the fidelity study.

Implementation Study Design, Methods, and Analysis

Overview of Design

Abt's approach to the implementation study was to assess the extent to which treatment sites' delivery of the BCO model adhered to the characteristics of the model as defined by LISC, and to understand how the implementation evolved over time depending on challenges that the sites experienced in implementing the model. This approach involved having a well-defined set of BCO components of services and associated activities that include features of the structure and processes used in delivering the intervention (Mowbray, Holter, Teague, & Bybee, 2003; Bond, Williams, Evans, Salyers, Kim, Sharpe, & Leff, 2000), and collecting data about the fidelity of implementation using multiple methods (Century, Rudnick, & Freeman, 2010).

Measures

The measures for BCO treatment sites' fidelity of implementation of the BCO model are activities associated with each of the four BCO components—contextualized bridge services, financial coaching and education, income supports, and employment services (Exhibit 2).

Abt worked with LISC to develop this model of BCO components and associated activities through a multi-step process. Abt staff prepared draft BCO core component activities based on our review of the (1) *LISC/SIF Request for Proposal* (September 14, 2015), (2) LISC staff meeting notes from September 23, 2015, and (3) reporting forms for LISC's Salesforce data system. Abt staff discussed the BCO component activities with LISC evaluation and BCO program staff (May 2016), and BCO program staff provided the *Service Integration Retreat* PowerPoint presentation (March 2016) as additional information for Abt to

use in refining the BCO component activities. Based on the results from discussions with LISC staff and their review of our draft component activities, Abt prepared a final list of BCO component activities (June 2016). These activities are included in the BCO logic model (Appendix A).

Data Collection

Data to address the implementation study question *To what extent did the treatment sites implement the BCO program with fidelity?* were collected from the treatment sites using three methods: (1) interviews with evaluation sites' staff as part of two rounds of site visits that Abt conducted; (2) observations of services delivered in the BCO treatment sites during the site visits; and (3) conduct of interim telephone conferences during the two-year period of sites' implementation of BCO services. Prior to the beginning of data collection Abt sent each treatment site a "letter of participation" that described the data collection activities which Abt would conduct and the site's role in the data collection. The letter discussed the treatment site's role in working with Abt to organize each site visit, including identifying individuals to be interviewed and services to be observed, scheduling the interviews, providing private space for the conduct of the interviews, and arranging for Abt staff's observation of services. The letter also provided information about the purpose of and topics for the telephone conferences.

Site Visits (Interviews, Observations)

The site visits were a mechanism for collecting data about the treatment sites' implementation of the four BCO components. Data points were actual services delivered, staff's perceptions of services and their utility for BCO participants, methods and materials used in the delivery of services, and treatment sites' partners in BCO services. The site visits involved:

- The conduct of face-to-face interviews with BCO staff and partners using a structured interview protocol;
- Observations of delivery of bridge instruction (basic skills instruction and occupational training), and job readiness services held in a group setting; and
- Review of materials used in the delivery of BCO services.

Abt's senior research staff trained in observation and interview methods conducted the site visits, which occurred during year 1 (2017-2018) and year 2 (2018-2019) of the treatment sites' participation in the evaluation. The two site visits enabled Abt's staff to gather information over a sufficient period to identify any implementation issues that sites experienced with the BCO model.

Listed in Exhibit 5 are the implementation study's constructs that were assessed, the topics for questions that defined each construct, and method of data collection. Abt developed an implementation study protocol that had questions for each topic listed under each construct in Exhibit 5. The protocol was used to guide the two site visits and the interim telephone conferences. Abt adapted a class observation form used in its prior adult education studies to document (1) activities that the instructor or site staff member conducted during each observation, (2) clients' participation in the activities, (3) materials used, and (4) other related activities that took place.

Exhibit 5. List of Implementation Study Constructs Assessed, Question Topics Addressed, and Data Collection Methods

Constructs and Topics for Questions Defining Constructs	Method of Data Collection			
	Review of BCO Application, Screening Calls	Interview during Site Visits[3]	Program Observation	Interim Telephone Conference[4]
Goals for BCO Grant				
Goals for number of clients to be served during 2017 and 2018	X	Site Visit 1 only		
Progress in numbers of clients served in training programs		X		X
Target Population for BCO				
Population organization currently serves	X	Site Visit 1 only		
Subpopulation targeted for BCO training programs	X	X		
Partnerships				X
Partnerships formed to support BCO services being delivered	X	X		
How the partnerships work in terms of activities, staff involved		X		
Benefits to partners for participating		X		
Recruitment of Clients				X
How organization's services are advertised		X		
How clients say they find out about BCO program		X		
Within-program recruitment for BCO		X		
Outcomes advertised for clients		X		
Intake and Orientation				X
Activities conducted during intake and format for activities		X		
Orientation activities, length of time, format, and next steps		X		
Financial Services and Financial Coaching				X
Types of services offered, topics, and timing of services	X	X		
Completion of Financial Planning forms, review of credit score		X		
Providers of services and location		X		
Use of financial products, which products, and how used		X		
Financial coaching approach, timing, topics discussed, and staff		X		
Income Supports				X
Types and details of income supportive services offered	X	X		
Method used for public benefits screening		X		
Sequence and timing of services, mode of delivery, role of coach		X		
Employment Services				X
Types and details of job readiness, employment search services	X	X	X	
Sequence of services delivered, format, and length of services		X		

[3] During Site Visit 1, all topics were addressed. During Site Visit 2, program staff were asked to provide updated information on services conducted since Site Visit 1.

[4] The interim telephone discussions addressed the status of data collection in Salesforce and updates in services that occurred since the last communication with Abt.

Constructs and Topics for Questions Defining Constructs	Method of Data Collection			
	Review of BCO Application, Screening Calls	Interview during Site Visits[3]	Program Observation	Interim Telephone Conference[4]
Staff and partners who provide services		X		
Employment coaching approach, timing, topics, and staff		X		
Job placement activities conducted, relationship with employers		X		
Bridge Services: Contextualized Adult Education (AE)				X
Basic skills assessments used, testing schedule, and tester	X	X		
Basic skills assessment criteria for program participation				
Types of AE services offered, service providers, and location		X	X	
Instructional content, approach, delivery modality, and schedule		X		
Approach for integrating occupational information into basic skills		X		
Type of curriculum, contextualization to career, completion point		X		
Bridge Services: Occupational Training				X
Occupational training type and industry/growth	X	X	X	
Occupation training length, delivery mode, location, and provider				
Education and skill requirements for participation		X		
Credentials earned and requirements for credentials		X		
Bridge Services: Career Planning				X
Career planning activities content, format, and timeline				
Relationship between academic activities and career pathways				
Follow-up Services				X
Services provided to clients after they complete Bridge Program		X		
How clients access follow-up services		X		
Data Collection and Entry into Salesforce				X
Process and timelines for data collection and data entry		X		

Prior to each site visit, Abt's team conducted a planning telephone call with each treatment site's BCO program coordinator to discuss the topics that would be addressed during the interviews, types of individuals to interview who could address the topics, the service to observe, and possible dates for the site visit. After the planning call, Abt sent a draft site visit agenda that was scheduled over a two-day period and involved a senior and a mid-level Abt staff member. The BCO site staff prepared a final schedule that included individual, one-hour interviews with the two Abt staff and observation of services if an observation was to be conducted during that visit. The categories of individuals for the interviews, which represent staff and external people involved in the BCO program, were:

- Organization's executive director or senior staff member;
- BCO program coordinator or manager;
- Staff who conduct client recruitment, intake, and orientation activities;
- Bridge service staff including adult education instructor, occupational training instructors or vendors, and career advisor;

- Financial coach and staff involved in delivering or arranging financial education activities;
- Employment coach and staff who conduct job readiness activities and job placement activities;
- Income support services staff;
- BCO program partners and employers; and
- Staff member who works with LISC's Salesforce database.

Abt's site visit team interviewed the individuals listed above during the two site visits except for the program partners, who were interviewed during only one visit for most of the sites.

In preparation for Site Visit 1, Abt's site visit team reviewed each treatment site's BCO application and site screening interview notes to record information in the protocol so that this information could be confirmed or updated during the site visit. All topics in Exhibit 5 were addressed during Site Visit 1. During Site Visit 2, BCO site staff were asked whether BCO activities in each of the four BCO components had changed or whether there were new activities since Site Visit 1. Abt's team conducted at least one observation during at least one site visit. The services observed were career planning activities, basic skills instruction, or occupational training. The timing of the observations depended on the schedule of site activities. The information collected during the site visits was stored in a qualitative database that Abt established for each treatment site. The qualitative database was organized according to the constructs listed in Exhibit 5. Listed in Exhibit 6 is the schedule for the site visits and the number of individuals interviewed during each site visit.

Telephone Conferences

Abt's staff conducted interim telephone calls with the BCO coordinator or other key staff at each treatment site in between the site visits to collect information about implementation of BCO services, modifications to existing services, new services added to the BCO components, difficulties encountered in implementing the BCO model, and status of the sites' participant data entry into Salesforce (See Exhibit 5). The information from these telephone calls was entered into each treatment site's qualitative database.

Exhibit 6. Site Visit Schedule and Number of People Interviewed

Site	Site Visit Number and Schedule	Number of People Interviewed
Brighton Center, Inc.	#1 May 16-17, 2017 #2 November 28-29, 2018	9 9
Chinese Community Center, Inc.	#1 May 10-11, 2017 #2 October 23-24, 2018	7 9
District 1199C Training and Upgrading Fund	#1 May 1-2, 2017 #2 December 4-5, 2018	14 10
Instituto del Progreso Latino	#1 November 28-29, 2017[5]	10

[5] **Change to SEP**. The SEP specified that two site visits would be conducted to each of the treatment programs as part of the implementation study. Abt conducted two site visits to six of the seven programs. Due to a scheduling difficulty, Abt could not conduct a site visit to the Instituto del Progreso Latino program but conducted telephone interviews with program staff to gather the same information that was to be collected during the second site visit.

Site	Site Visit Number and Schedule	Number of People Interviewed
International Institute of Minnesota	#1 September 21-22, 2017 #2 June 5-6, 2019	11 10
Project for Pride in Living, Inc.	#1 July 13-14, 2017 #2 October 29-30, 2018	11 11
Wesley Community Center, Inc.	#1 June 21-22, 2017 #2 February 12-13, 2019	9 9

Data Analysis

The data collected through the site visits (interviews, observations) and interim telephone conferences were analyzed to assess the overall fidelity of delivery of the BCO model. A content analysis was performed to understand the types of activities that the treatment sites conducted for each of the BCO components. The content analysis involved organizing the information from the site visits and telephone conferences that was in each BCO site's qualitative database in a separate analysis matrix for each site. The left column in each site's matrix had a row for each of the BCO components and activities that are shown in Exhibit 2. The top row of the matrix had multiple columns for each of the two site visits and the interim telephone conferences. Abt's site visit team prepared a matrix for each BCO site that listed the activities the site conducted for each BCO component by the data collection period in which the information was collected (i.e., Site Visit 1, Site Visit, telephone conference). The resulting matrix for each site showed all activities that Abt's team had documented for that site during the period of the implementation study.

Fidelity Analysis

The activities listed in each BCO site's matrix were analyzed to determine whether a treatment site had adhered to the BCO model, defined as whether the four components of the BCO model were delivered as intended. Abt developed a three-point scale to rate the degree to which each of the activities for each component was implemented as specified in the BCO list of components (Exhibit 2).

- Rating of 1: implemented as intended; activity carried out as stated in the BCO model;
- Rating of 0.5: partially implemented; part of the activity carried out; and
- Rating of 0: not implemented; activity not carried out.

Abt's senior researcher used the adherence scale to rate the activities listed in each BCO site's matrix in terms of whether the activities in each matrix aligned with the required activities for each BCO component as shown in Exhibit 2. Each site had to have at least one instance of alignment to each activity for each component to receive a rating of "1." If a site implemented only part of the required activity, a rating of "0.5" was made. A second researcher then made an independent rating to validate the scale and the ratings.

Findings from Fidelity Analysis

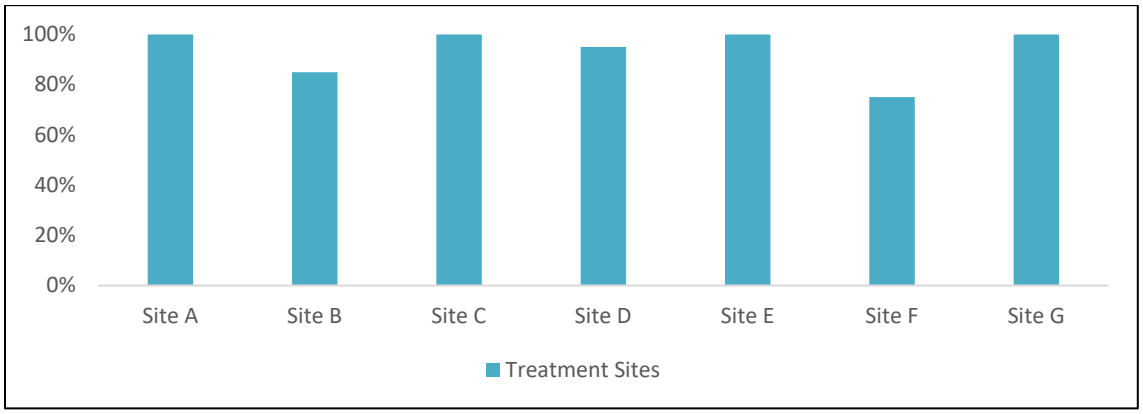
Presented in Exhibit 7 are the ratings for each of the BCO sites for each activity in each BCO component.

Exhibit 7. Fidelity Ratings by Site for Each BCO Component

BCO Components and Associated Activities	BCO Treatment Sites' Fidelity Ratings						
	Site A	Site B	Site C	Site D	Site E	Site F	Site G
1A. Bridge Services Component-Instruction							
Addresses career pathway in growth sector or industry	1	1	1	1	1	1	1
Includes an academic pathway	1	1	1	1	1		1
Teaches basic skills that are contextualized to a specific career path	1	0.5	1	1	1	0	1
Is based on industry-specific curriculum	1	1	1	1	1	1	1
Enables clients to attain industry-recognized credentials	1	1	1	1	1	0.5	1
Has measurable endpoint or clearly defined completion criteria	1	1	1	1	1	1	1
1B. Bridge Service Component-Assessment							
Uses criterion levels to determine client participation	1	1	1	1	1	1	1
Tests pre- and post-test skills	1	1	1	1	1	1	1
1C. Bridge Services Component-Career Coaching							
Provides ongoing career coaching	1	0.5	1	1	1	1	1
Connects academic and career pathways	1	0.5	1	0.5	1	1	1
Total Bridge Services Rating	**100% (10)**	**85% (8.5)**	**100% (10)**	**95% (9.5)**	**100% (10)**	**75% (7.5)**	**100% (10)**
Financial Coaching and Education Component							
Assesses clients' financial health, combining a financial profile, budget, balance, and credit information	1	1	1	1	1	1	1
Provides regular one-on-one interactions concerning clients' financial status	1	1	1	0.5	1	1	1
Reviews clients' credit reports every six months	1	1	1	1	1	1	1
Uses financial products during coaching	1	1	1	1	0.5	1	1
Income Support Services Component							
Screens for public benefits eligibility	1	1	1	1	1	1	1
Identifies income supports to enable participants to remain in training	1	1	1	1	1	1	1
Reassesses clients' needs as their situations change	1	0.5	0.5	0.5	1	1	1
Total Financial Coaching and Income Support Services Rating	**100% (7)**	**92% (6.5)**	**92% (6.5)**	**85% (6)**	**92% (6.5)**	**100% (7)**	**100% (7)**
Employment Services Component							
Assists clients in preparing job search materials and conducting job search	1	1	1	1	1	1	1
Provides clients with coaching about job search, placement, retention, and advancement	1	1	1	1	1	1	1
Supports clients in exploring careers	1	0.5	1	1	1	0.5	1
Total Employment Services Rating	**100% (3)**	**83% (2.5)**	**100% (3)**	**100% (3)**	**100% (3)**	**83% (2.5)**	**100% (3)**

Presented in Exhibits 8, 9, and 10 are the results from the analyses of adherence to the BCO model by each BCO treatment site. Exhibit 8 shows the percentage of sites that adhered to implementing each activity specified for the BCO bridge services. Four of the sites implemented 100 percent of the activities "as intended," one site implemented 95 percent of the activities, one site implemented 85 percent of the activities, and one site implemented 75 percent of the activities.

Exhibit 8. Extent of Treatment Sites' Adherence to BCO Bridge Services Model



The activities that were not implemented in Site F concerned the delivery of basic skills instruction. At intake, that site assessed its BCO treatment group as not needing basic skills enhancement and thus did not provide basic skills instruction.

Exhibit 9 shows the percentage of sites that adhered to implementing each activity specified for the BCO employment services. Five of the sites implemented 100 percent of the activities "as intended." The other two sites partially implemented one of the activities.

Exhibit 9. Extent of Treatment Sites' Adherence to BCO Employment Services Model

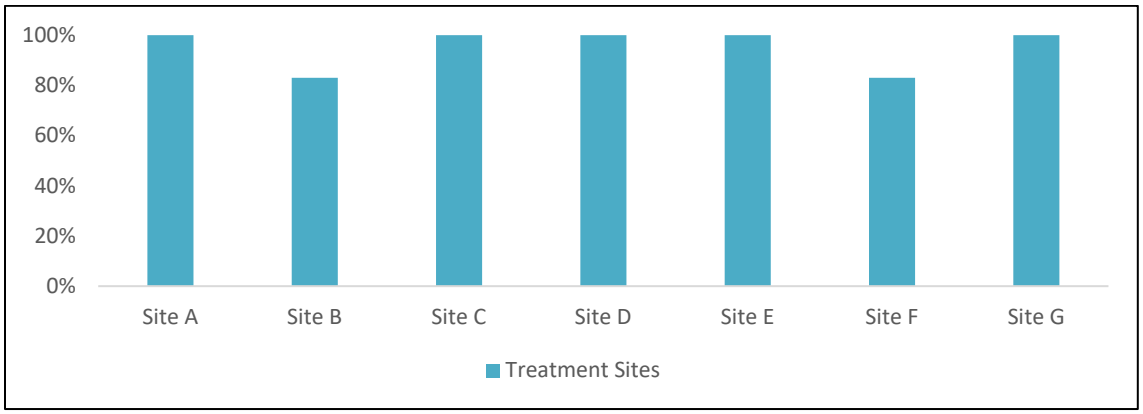
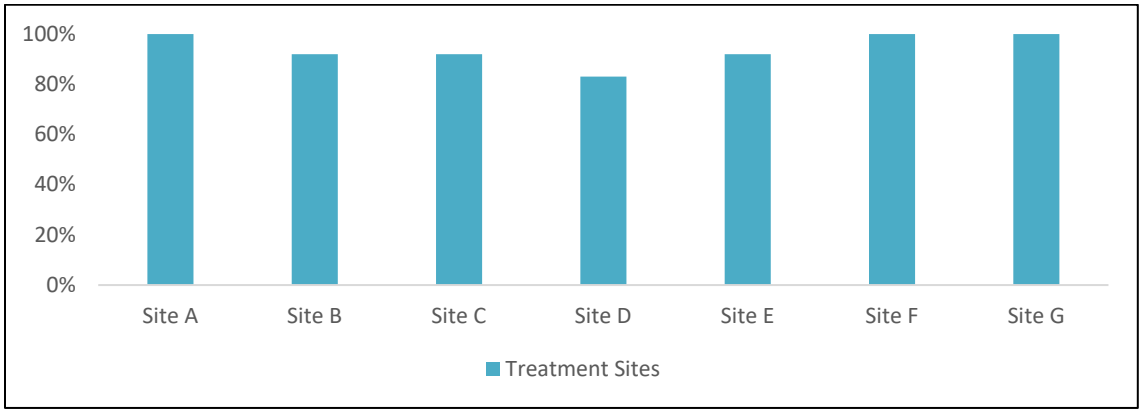


Exhibit 10 shows the percentage of sites that adhered to implementing each activity specified for the BCO financial coaching and education, and income support services. Three of the sites implemented 100 percent of the activities "as intended;" three sites partially implemented one activity; and one site partially implemented two activities.

Exhibit 10. Extent of Treatment Sites' Adherence to BCO Financial Coaching and Education, and Income Support Services Model



Overall, the seven BCO treatment sites demonstrated a high degree of adherence to the BCO model with two of the sites implementing 100 percent of the BCO activities in the four components of services "as intended." Of the four components, the employment coaching services had the highest degree of adherence to the BCO model, with five sites implementing 100 percent of the employment services "as intended."

Impact Study Findings

The impact study examined whether the BCO model, which integrates bridge services with FOC services, better prepares participants with low incomes to increase their employment prospects and financial stability than do FOC services alone. To answer the research questions on employment and financial well-being, the Abt team used a quasi-experimental design and compared the outcomes of BCO participants (the treatment group) with a matched group of FOC participants (the comparison group).

Across seven organizations' BCO programs (Brighton Center, Inc.; Chinese Community Center, Inc.; District 1199C Training and Upgrading Fund; Instituto del Progreso Latino; International Institute of Minnesota; Project for Pride in Living, Inc.; and Wesley Community Center, Inc.) and six organizations' FOC programs (Asociación Puertorriqueños en Marcha, Cara, HumanKind, Prosperity Center for Financial Opportunity, Sacred Heart Community Service, and Urban League of Essex County), eligible BCO participants were exactly matched to one or more eligible FOC participant on gender, age, race/ethnicity, highest level of education completed, employment status, and credit score at intake using a coarsened exact matching (CEM) process[6].

The final analytic sample that examined the confirmatory employment research question included 673 treatment group participants (who received the BCO bridge services) and 566 comparison group participants (who did not receive the BCO bridge services); the sample for the analysis of the confirmatory financial well-being research question included 181 treatment group participants and 79 comparison group participants (Exhibit 11).

A detailed description of this impact evaluation's design, sample recruitment and retention, baseline equivalence, methods, and analysis procedures are in Appendix B.

Impact Study Questions, Data Sources, and Analytic Approach

Confirmatory Research Questions

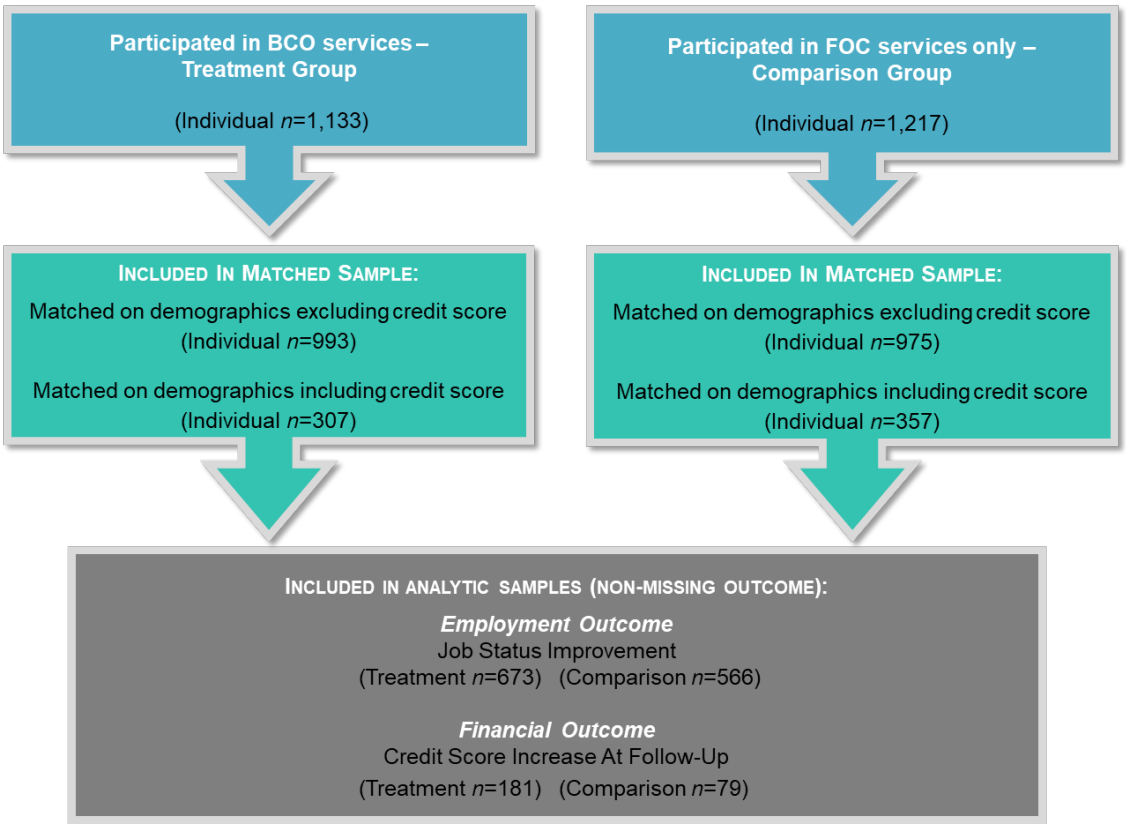
This section of the report is organized by the confirmatory research questions of interest[7]:

- Were BCO participants more likely to obtain or advance in a job after program entry relative to a comparison group who received only FOC services? (Employment)
- Were BCO participants more likely to have obtained or increased their credit scores after program entry relative to a comparison group who received only FOC services? (Financial Well-Being)

6 Iacus, King, & Porro, 2012; Berta, Bossi, & Verzillo, 2017.

7 The study examined the effects of the BCO model on multiple measures of employment and financial well-being, as well as on the pre-post change of an education measure for BCO participants. The confirmatory measures of the study focus on job improvement and credit score increase after program entry. The study also examined exploratory measures of employment (wage increase, hourly wage, and number of hours worked); three exploratory measures of financial well-being (credit score increase, overall debt, and net worth); and one exploratory measure of education (reading skills). Appendix C provides the results of the exploratory measures.

Exhibit 11: Flow from Eligible BOC and FOC Participants to Analytic Study Sample



Impact Study Data Sources

Because study participants were drawn from each site's existing service population, all analyses were based on extant administrative data that the sites submitted to LISC. BCO and FOC site staff collected and stored all client demographic and background information, service receipt, and outcome data in their Salesforce data system using the same procedures. Staff collect baseline data when clients enter a BCO or an FOC-only program, prior to the delivery of an intervention; document the activities in which clients participate as services are provided (within 48 hours of data receipt); and collect follow-up data on clients' employment, financial well-being, and education outcomes (when clients initiative contact with staff or staff contact clients).

The impact study job advancement data, for BCO and FOC-only participants were drawn from Salesforce advancement and employment records and the credit score data were drawn from the Salesforce credit score record.

Analytic Approach

Participant outcomes were analyzed in a linear regression model that tested the effect of BCO on job advancement and credit score increase. To account for the matching block design, we estimated the impact of BCO using models that include indicators for the matching blocks used in the design. Those indicators ensured that the overall estimate of the treatment-comparison group outcome difference was calculated by comparing the BCO and FOC participant outcomes within the matched blocks and calculating a precision-weighted average of the within-block differences to produce the overall estimate. To improve precision and control for possible baseline differences between the groups that might be

related to outcomes, the model also included covariates for participants' gender, age, race/ethnicity and baseline level of education, employment, and credit score.

For the reading test exploratory analysis, learners' raw scores were converted into scale scores. Scores that represent the amount of a participant's skill change from pre- to post-tests were constructed by subtracting each participant's pre-test scale score from their post-test scale scores. The statistical significance of the mean gain was assessed using the paired t-test.

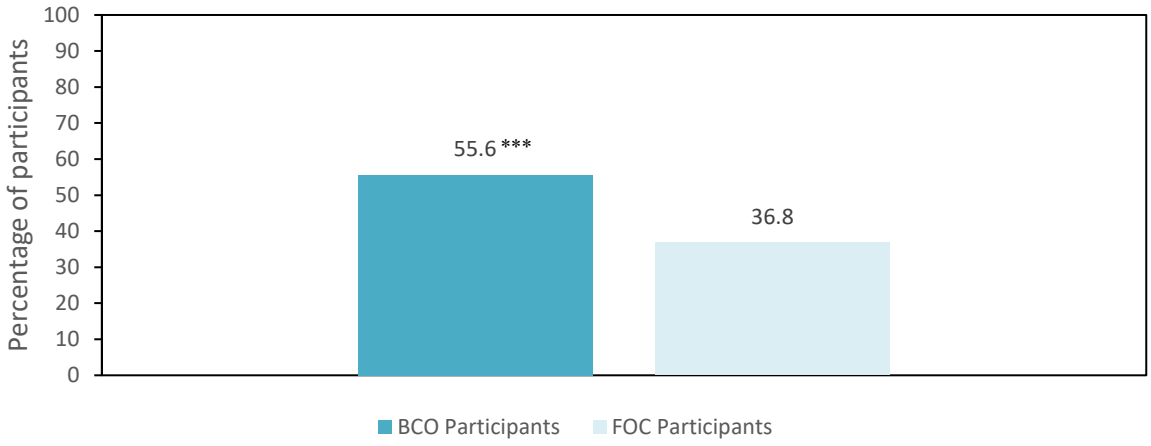
Findings from Impact Analysis

This section presents the results from the analyses of the impact study's confirmatory research questions. Detailed information about the results from the confirmatory analyses are presented in Appendix C in Exhibit C-1 (Impacts on Employment) and Exhibit C-3 (Impacts on Financial Well-Being).

BCO increased the share of participants who had a job improvement.

The BCO model assumes that contextualized bridge services which are integrated with financial coaching and education, income support services, and employment services will benefit adults with lows skills or who have difficulty obtaining employment. BCO services are expected to move adults with low skills and low incomes toward family-sustaining employment by first increasing their basic skills and credentials, which in turn, can enable them to qualify for jobs with family-living wages. Hence, the study examined whether BCO participants were more likely to have a job improvement after program entry relative to a comparison group who received only FOC services. Overall, participants who were in the BCO programs were 19 percentage points more likely to have a *"*job improvement*"*[8] than were participants in FOC-only programs (56 percent versus 37 percent). These results are statistically significant at p<.001 (Exhibit 12).

Exhibit 12. Impact of BCO on Whether Participants had a Job Improvement after Program Enrollment



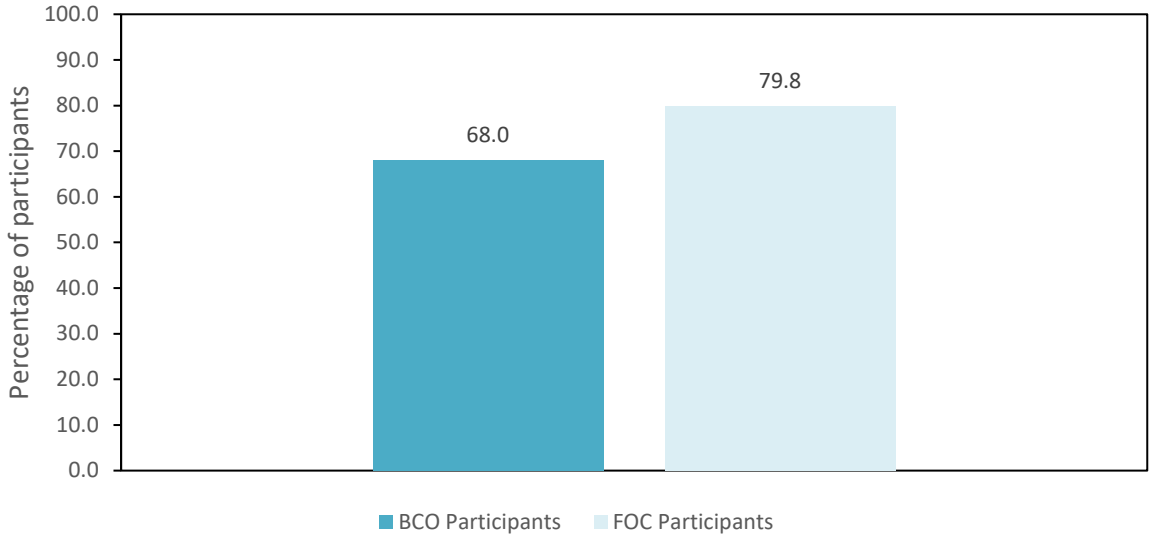
Note: ***Difference is statistically significant at the .001 level. Data include 673 participants in BCO programs and 566 participants in FOC programs. Percentage of participants represents those who had a "job improvement" in 1-14 months after program enrollment.
Source: BCO and FOC administrative data in Salesforce: FFT™ Employment Record/Job Advancement Record.

[8] Job advancement is defined as follows: the participant either (1) enrolls in the program unemployed and starts a new job in the 1-14 months after enrollment **or** (2) enrolls in program employed and has one of the following records in the 1-14 months after enrollment: (a) obtains a new job and the new wage is greater than the wage at enrollment, or (2) has an advancement record for an increase in wages or a promotion.

There was No Significant Effect of BCO on Improving Participants' Credit Score

BCO services are intended to provide clients with financial coaching and education that will enable them, over time, to increase their assets and financial stability. The impact study examined whether BCO participants were more likely to have an increase in their credit score after program entry relative to a comparison group who received only FOC services. About 68 percent of participants in the BCO program and about 80 percent of participants in the FOC-only program had an increase in their credit score after program entry. The results were not statistically significant (Exhibit 13).

Exhibit 13. Impact of BCO on Credit Score Increase after Program Enrollment



Note: Data include 181 participants in BCO programs and 79 participants in FOC-only programs. Percentage of participants represents those whose maximum credit score after program enrollment was higher than their credit score at intake.
Source: BCO and FOC administrative data in Salesforce: FFT™ Credit Score Record.

Descriptive Analyses of Treatment Group's Education Outcomes

Abt conducted descriptive analyses of the BCO treatment group participants' education outcomes to understand participants' progress in developing their foundational skills while enrolled in BCO, in completing BCO, and in earning educational credentials. The findings are discussed below.

Information about each BCO treatment site's TABE® results is presented in Appendix C, Exhibit C-5-(TABE® Pre-Post Test Results) and Exhibit C-6 (TABE Pre-Test Grade-Equivalent Levels).

BCO Participants' Foundational Literacy Skills

As part of BCO's bridge services, BCO treatment sites were to provide contextualized instruction to increase the foundational literacy skills of BCO participants who had low basic skills. To examine the effects of BCO on literacy skills, we compared the pre- and post-scale score on the Test for Adult Basic Education (TABE®) for all BCO participants (not just those in the matched samples). Of the 1,133 treatment group participants in the evaluation, 594 individuals had TABE® Reading pre-test data, and of those with valid pre-test data, 282 (47.5%) had valid post-test data.

Presented in Exhibit 14 are the results of the TABE® Reading pre-posttest analysis. BCO participants' average TABE® pre-test score of 532 is equivalent to approximately the 6.6 grade-level. At the post test,

BCO participants had increased their reading scores by 9 points or by about one grade-level to the 7.4 grade-level equivalent (CTB/McGraw-Hill, 2004). This increase was statistically significant at p<.001.

Exhibit 14. TABE® Reading Pre-Post Results

Outcome	Average Pre-Test Score	Average Post-Test Score	Average Pre- to Post-Test Gain Score	Standard Deviation of Pre-Test	Standardized Test Score Gain	P-Value of Gain from Paired t-Test
TABE® Reading Scale Score	532	541	9	65.99	0.14	0.0002***

Note: *** Difference is statistically significant at the .001 level. Data include 282 participants in BCO programs that had pre- and post-test TABE® Reading scores.
Source: BCO administrative data in Salesforce: FFT™ TABE® record.

Analysis of Treatment Group's Completion of Education or Training

We analyzed the extent to which the treatment group (1,133 participants) completed their education or training program and obtained an educational or industry credential by the time of follow-up. As shown in Exhibit 15, at follow-up, the majority (86.1%) of treatment group participants had completed their BCO education or training program. As shown in Exhibit 16, of the treatment group participants with data who completed training or education, the majority (79.7%) also earned either an education credential or an industry credential. In one BCO program, the program's completion certificate was the endpoint for success in that program and was recognized by local employers.

Exhibit 15. Education or Training Program Completion Status of Treatment Group

Training Program Completion Status for Treatment Group	Frequency	Percentage
Completed education/training program	878	86.1%
Did not complete education/ training program	142	13.9%

N Missing: 113
Source: BCO administrative data in Salesforce: FFT™ Education/Training Record.

Exhibit 16. Number of Credentials Earned by Treatment Group

Number	Frequency	Percentage
1	586	79.7%
2	134	18.2%
3	14	1.9%
4	1	0.1%

N Missing: 398
Source: BCO administrative data in Salesforce: FFT™ Education/Training Record.

We analyzed the last credential that treatment group participants earned by the time of follow-up. As shown in Exhibit 17, more than half (56.9%) of treatment group participants earned a credential in a healthcare occupation, such as Certified Nurse Assistant and Medical Assistant, which reflects the type of occupational training offered in BCO programs.

Exhibit 17. Type of Credentials Earned by Treatment Group

Credential Type	Frequency	Percentage
Healthcare	418	56.9%
Child Development	64	8.7%
NIMS -Manufacturing	42	5.7%
Hospitality	35	4.8%
Business Technology	23	3.1%
Environmental	0	0.0%
Educational degree	122	16.6%
Ancillary certificates and licenses	31	4.2%

N Missing: 398
Source: BCO administrative data in Salesforce: FFT™ Education/Training Record.

Conclusion

Conclusions

The evaluation found that the BCO model, with well-defined services and training and technical assistance support, can be implemented by community-based organizations with strong adherence to the model. The evaluation also indicated that BCO's goal to facilitate clients' attainment of educational credentials and employment on their path to economic well-being can be attained through the delivery of the multi-component services that define the BCO model. Although BCO evaluation participants were not able to make significant advances in their economic status during the 14 months after they enrolled in the BCO program, they were able to earn credentials and advance in their jobs. Those outcomes are thought to be steps toward economic well-being. The process of increasing individuals' economic status is complex and affected by many factors. Although this evaluation provided preliminary insights about near-term changes in participants' economic status, more robust investigations with larger samples of participants are needed to understand adults' attainment of economic well-being.

Fidelity of BCO Implementation

The seven treatment sites implemented the BCO model's four components of activities with a high degree of fidelity. Many factors contributed to this result including the ongoing training and technical assistance that LISC staff provided to its grantees and the organizational resources of the seven programs that participated as treatment sites. Another factor is that the BCO model is specified with sufficient detail to guide programs' main activities in each of the four BCO components but is not so prescriptive that programs cannot adjust services as they encounter challenges. This model design enabled the treatment programs to respond to the needs of their client populations while delivering the range of services that compose the BCO model.

Education Outcomes

The majority of BCO treatment participants completed the BCO program (86%) and most of those completers earned at least one credential, which was primarily an occupational certificate (80%). The treatment sites' approaches to recruitment and orientation helped clients understand the requirements and commitment needed to succeed in the BCO program. The BCO bridge design also provided clients with an opportunity to master skills in the bridge component that could contribute to their success in the occupational training. The ongoing support provided by BCO coaches and instructors helped clients to persevere and keep on track as they worked to earn an educational credential.

Employment Outcomes

The evaluation results indicated that BCO treatment participants were significantly more likely to obtain or advance in a job after enrollment than FOC comparison participants. Factors contributing to this outcome were the comprehensive job readiness and job placement services that the BCO sites provided. As the BCO implementation study indicated, the treatment sites' employment services were the most highly aligned of the four BCO components of services such that BCO sites provided many similar services. Another factor likely contributing to the BCO participants' job placement and advancement was the partnerships that BCO sites formed with local employers. BCO staff reported that those partnerships not only facilitated participants' job attainment but also help support participants as they moved along in their employment.

Financial Well-Being Outcomes

The evaluation found that FOC comparison group participants were more likely to increase their credit scores than BCO treatment group participants. Comparison group participants also were more likely than

treatment participants to decrease their debt, increase their net worth, and have a higher amount of debt decrease. Comparison group participants' earlier participation in the workforce after program enrollment may have enabled those participants to engage in financial activities helped to increase their financial well-being.

Lessons Learned and Limitations

One lesson from the evaluation concerns processes to mitigate the loss of administrative data. Although LISC and Abt encouraged sites throughout the evaluation to follow established protocols for entering client data, more frequent monitoring of the BCO and FOC data in Salesforce might have resulted in less loss of data.

Because of the evaluation's quasi-experimental design, the BCO treatment programs participating in the evaluation were not selected to represent the full set of BCO programs but were purposively selected because of their planned services, client population, stability of BCO program implementation, and projected number of participants. The FOC comparison programs were purposively selected for the evaluation because their clients who entered services during the evaluation's enrollment period had similar background characteristics as the BCO clients in the treatment group. The BCO and FOC programs were also in cities with similar labor markets. For those reasons, the evaluation's results may not be applicable to clients with background characteristics different from the backgrounds of evaluation participants or because of possible differences in BCO program services.

The goal of using coarsened exact matching (CEM) in the evaluation was to create treatment and comparison groups that were similar, before the start of clients' participation in the BCO and FOC programs, on *observed* characteristics likely to be related to the education, employment, and financial outcomes of interest. Therefore, any differences in education, employment, and financial outcomes observed can be attributed to the BCO program (or unobserved differences) rather than to initial differences between the groups. The treatment and comparison groups' analytic samples were shown to be equivalent at baseline on observed characteristics, even after the loss of sample due to missing outcome data. However, a limitation of the study design is that differences observed may be due to unobserved characteristics of participants or the BCO program. Further, because the missing data led to small sample sizes for the financial outcome, the evaluation may not be powered to detect small differences between the groups.

Appendix A: BCO Logic Model

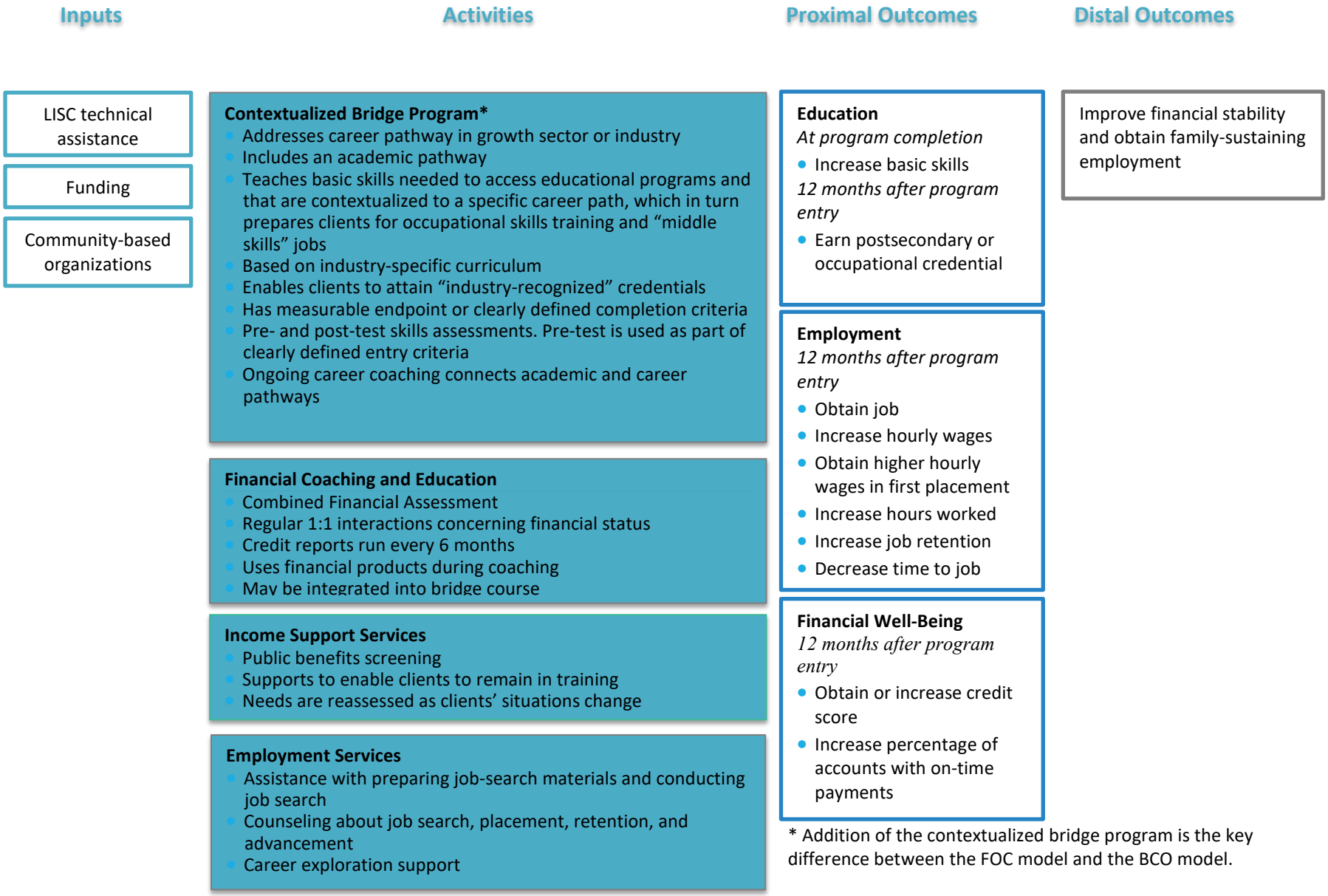
The Bridges to Career Opportunities (BCO) model assumes that contextualized bridge services which are integrated with financial coaching and education, income support services, and employment services will benefit adults with low skills and have difficulty finding employment. The BCO logic model is presented in Exhibit A-1. **Inputs** are the resources needed to ensure implementation of the BCO model. They include but are not limited to LISC technical assistance to BCO grantee sites to facilitate their implementation of the BCO model; funding to BCO grantees to help support the delivery of BCO services; and grantees that provide an organizational structure and community partnerships for operating BCO services.

Those inputs are expected to enable organizations to carry out BCO **activities**. The BCO model has four program components:

- **A contextualized bridge program** to increase clients' basic skills within the context of an academic and career pathway in a specific growth sector or industry (e.g., healthcare);
- **Financial coaching and education** to help clients solve specific financial problems; plan for financial stability; and connect to financial service providers and financial products for saving and building credit;
- **Income support services** to help clients access public benefits for which they are eligible that can enable them to participate in and complete training; and
- **Employment services** to provide job readiness training, job search, and job placement.

Together those activities are hypothesized to change clients' **proximal outcomes** of educational attainment, employment, and financial well-being. The **distal outcomes**, made possible by the proximal outcomes, reflect BCO's goal of helping adults with low incomes improve their financial stability and obtain jobs with living wages.

Exhibit A-1. Logic Model for BCO



* Addition of the contextualized bridge program is the key difference between the FOC model and the BCO model.

Appendix B: Additional Information about the Evaluation Design and Impact Study

This appendix provides details about the evaluation design and its implementation to address the evaluation's research questions. Discussed in this appendix are the research questions, sample, data sources, measures, and analytic methods of the evaluation.

Research Questions

The evaluation examined whether the BCO model, which integrates bridge services with FOC services, better prepared participants with low skills or who are hard to employ to increase their employment prospects and financial stability than FOC services did alone. The impact evaluation was guided by confirmatory and exploratory research questions.

The confirmatory questions tested a key premise of the BCO model compared to the FOC model—that BCO programs, by providing education services to increase low-skilled clients' foundational literacy and numeracy skills, can improve clients' success in occupational training and credentialing programs and enable them to qualify for jobs with family-sustaining wages that lead to financial well-being. The Abt team examined two ***confirmatory*** research questions for the study in two separate domains:

1. Were BCO participants more likely to obtain or advance in a job after program entry relative to a comparison group who received only FOC services? (Employment domain)
2. Were BCO participants more likely to have obtained or increased their credit scores after program entry relative to a comparison group who received only FOC services? (Financial Well-Being domain)

All other research questions were ***exploratory*** and concerned the effects of BCO services on outcomes in the domains of employment, financial well-being, and education.

Exploratory Research Questions Regarding Employment

Because BCO services are intended to place clients in better jobs by first increasing their basic skills and credentials, employment impacts are expected to be realized after clients complete occupational training. For the impact study, this period was 1-14 months after clients' enrollment in BCO services.[9]

[9] Abt's approach to the employment data analyses, as described in the Abt's evaluation plan (Gan et al., 2016)[9] was to compare the treatment and comparison groups' results for a number of employment outcomes at 12 months after participants' enrollment in BCO services (treatment group) or FOC services (comparison group). The timeline assumed that BCO and FOC local staff would conduct follow-up data collection 12 months after enrollment. However, because the BCO model allows for client-driven interactions, only a portion of the follow-up data collection occurred at 12 months after enrollment. This client-driven approach made it difficult to gather point-in-time information, so the model itself did not necessarily lend itself to a 12-month follow-up. Rather, sites collected follow-up data, defined as any data collected after baseline, beginning in month 1 after enrollment and continued throughout the 14-month period in which Abt tracked clients' participation in BCO or FOC services. BCO and FOC staff also reported that part of the variation in the timeline of follow-up data collection was due to sites' difficulty in reaching clients after they ended their participation in program services. Abt analyzed employment outcomes beginning in month one after enrollment through month 14, which was the longest period all clients in the evaluation could participate in follow-up data collection.

The exploratory research questions to assess impacts on employment are:

- Were BCO participants more likely to increase their hourly wages after program entry relative to a comparison group who received only FOC services?
- Were BCO participants more likely to be placed in jobs with higher hourly wages relative to a comparison group who received only FOC services?
- Were BCO participants more likely to work more hours per week after program entry relative to a comparison group who received only FOC services?

Exploratory Questions Concerning Financial Well-Being

BCO services are intended to provide clients with financial coaching and education that will enable them, over time, to increase their assets and financial stability. For the impact study, this period is 1-14 months after clients' enrollment in BCO services.[10]

The exploratory research questions to assess impacts on financial well-being are:

- Were BCO participants more likely to have lower overall debt after program entry relative to a comparison group who received only FOC services?
- Were BCO participants more likely to have increased their net worth after program entry relative to a comparison group who received only FOC services?[11]

Exploratory Question Concerning Education

The exploratory research question[12] in the education domain provides context for the evaluation and was examined for the treatment group only, as the comparison group did not participate in a basic skills assessment as part of their FOC participation:

- Were BCO participants likely to increase their reading skills (as measured by a standardized test) after participating in the BCO program?

To answer the employment and financial well-being research questions, Abt used a quasi-experimental design and compared outcomes of BCO participants' (the treatment group) to a matched group of FOC

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[10] Abt's approach to the financial well-being analyses as described in Abt's evaluation plan (Gan et al., 2016) was to compare the treatment and comparison groups' performance on three financial well-being outcomes at 12 months after participants' enrollment in BCO services (treatment group) and FOC services (comparison group). Similar to the employment analyses, only a portion of the follow-up data collection on financial well-being occurred at 12 months; rather, sites collected follow-up data, defined as any data collected after baseline, beginning in month 1 after enrollment and continued throughout the 14-month period in which Abt tracked clients' participation in BCO or FOC services. Because of the timeline of the follow-up data collection, Abt revised its approach and analyzed financial well-being outcomes beginning in month 1 after enrollment through month 14, which was the longest period all clients in the evaluation could participate in follow-up data collection.

[11] The third question specified in Abt's evaluation plan (Gan et al., 2016) concerned percentage of on-time account payments. Abt could not address this question due to lack of data on on-time account payments. Thus we examined increase in net worth.

[12] The confirmatory research question for the evaluation's education outcome was whether BCO participants were more likely to have attained an occupational certificate or postsecondary credential 12 months after program entry relative to a comparison group who received only FOC services. Abt's analysis of education participation data for the comparison group participants revealed than only four participants had records of attaining occupational certificates or postsecondary credentials at follow-up. Thus we could not address this question in the evaluation.

participants (the comparison group). The pre- and post-outcomes of BCO participants (the treatment group only) used a paired pre-post analysis to descriptively address the research question on education.

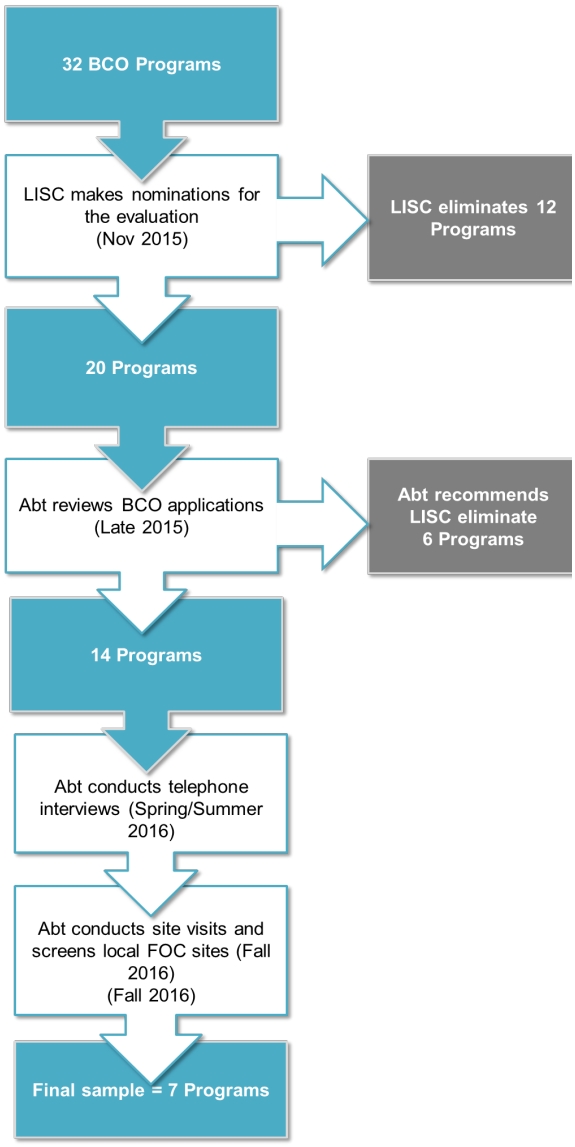
Feasibility Study to Select Study Sample

This section describes how the Abt team identified the BCO and FOC programs for the study, how eligible participants from each program were identified, how the comparison group was formed to address the research questions, the samples included for each analysis, and the baseline equivalence of the groups.

Treatment Sites and Participant Sample

Seven organizations' BCO programs (treatment group) were purposively selected for the study and 1,133 of their clients were eligible to be included in the evaluation.

Exhibit B-1. Site Selection Process



Site selection was a multi-step screening process illustrated in Exhibit B-1. LISC staff began with 32 BCO subgrantee programs that serve the target population for this evaluation—individuals who are unemployed or underemployed (adults with low incomes and low skills) and have not experienced success in traditional education. Of those, they identified 20 BCO grantee programs that were deemed to be high-capacity sites with prior experience in delivering the bridge component and had sufficient projected baseline enrollment to meet the requirements of the evaluation.

Abt reviewed the 20 programs' BCO applications and eliminated six programs from consideration because their timeline for implementation of bridge services did not align with the evaluation timeline, the structure of their bridge services was not conducive to the evaluation, and/or their anticipated enrollment numbers were not sufficient to support the evaluation.

We then conducted two rounds of telephone interviews with the 14 remaining candidate sites to clarify their planned services, client populations (spring 2016), stability of BCO program implementation, and projected number of participants (summer 2016). The multiple rounds of screening were necessary to assess the programs' BCO activities compared to the BCO model as it was articulated for the purposes of the evaluation, and to identify the availability of comparison groups.

Based on this information and sites' interest in participating in the evaluation, seven BCO programs were selected as treatment sites in fall 2016. The seven treatment sites are shown in Exhibit B-2. Because the treatment sites provide a range of occupational training programs aimed at different client populations, some of which are not the target population for this evaluation, we worked with each treatment site to specify the appropriate BCO bridge training programs (i.e., programs offering bridge and FOC services) to include in the evaluation.

Eligible participants from those sites were clients in the appropriate BCO bridge training programs who:

- enrolled in BCO services during the period April 1, 2017 and through December 31, 2018;
- enrolled in an eligible training course; and
- had consented to have their BCO data shared at the time of BCO enrollment.

Exhibit B-2. Seven BCO Treatment Sites

Site	Location	Eligible Participants
Brighton Center, Inc.	Greater Cincinnati and Northern Kentucky	217
Chinese Community Center, Inc.	Houston, TX	117
District 1199C Training and Upgrading Fund	Philadelphia, PA	130
Instituto del Progreso Latino	Chicago, IL	146
International Institute of Minnesota	St. Paul, MN	354
Project for Pride in Living, Inc.	Minneapolis, MN	24
Wesley Community Center, Inc.	Houston, TX	145
Total		**1,133**

Comparison Sites and Participant Sample

Six organizations' FOC programs (comparison group) were purposively selected for the study and 1,217 of their clients were eligible to be included in the evaluation. The six comparison sites are shown in Exhibit B-3.

LISC recommended possible FOC comparison sites, and Abt collected information about seven FOCs to assess their appropriateness. We reviewed extant information about the FOCs and conducted telephone interviews with the FOC leadership in each site. During the interviews, we gathered information about the sites' delivery of FOC services and confirmed that the FOCs were not providing education services to FOC clients. Abt also determined the sites' willingness to serve as comparison sites.

After the interviews, we conducted a preliminary analysis of the sites' Salesforce data for clients who had enrolled in FOC services during the period April 1, 2017, through December 31, 2018, the dates for enrollment of BCO clients participating in the BCO evaluation. Those data analyses examined the extent to which the background characteristics of clients who enrolled in the FOCs during the evaluation enrollment period were like the background characteristics of the treatment group. We also examined the comparability of the labor markets in the cities where the BCO and FOC sites were located. Based on

those analyses and review, Abt determined that the seven FOCs[13] were suitable comparison sites because they:[14]

- did not provide educational services for clients;
- were in cities with similar labor markets and served FOC clients with similar demographic characteristics as the BCO sites selected for the study; and
- collected the evaluation's required data for FOC participants and delivered FOC services according to the FOC model.

Exhibit B-3. Six FOC Comparison Sites

Site	Location	Eligible Participants
Asociación Puertorriqueños en Marcha	Philadelphia, PA	7
Cara	Chicago, IL	503
HumanKind (formerly Southside Community Development and Housing Corporation)	Richmond, VA	53
Prosperity Center for Financial Opportunity	Kansas City, MO	62
Sacred Heart Community Service	San Jose, CA	351
Urban League of Essex County	Newark, NJ	241
Total		**1,217**

Eligible participants from these sites are clients in the appropriate FOC programs who:

- enrolled in an FOC program (with no BCO services) during the period April 1, 2017 and December 31, 2018; and
- had consented to have their data shared at the time of FOC enrollment.

Exhibit B-4 shows the demographic characteristics of those BCO and FOC participants at program intake.

[13] Seven FOCs initially agreed to participate in the evaluation. However, after Abt began to work with the comparison sites regarding their follow up on missing client data, one FOC determined it did not have the staff to obtain missing data and decided to discontinue its participation in the evaluation. Thus six FOCs participated.

[14] Abt considered three options for selecting FOC programs that could serve as the comparison sites for the evaluation. One option was to use the FOCs in the same organizations selected as BCO treatment sites. We found that to meet their BCO enrollment goals, the treatment sites recruited BCO clients from their organization's FOC programs, which meant the remaining FOC clients were not available for or not interested in participating in the bridge services at that time. They were not an appropriate comparison group because their motivation differed from that of the treatment group. Abt also considered other FOC programs in the same cities as the BCO treatment sites, which would control for labor market conditions. However, our review of client data in those FOC programs indicated that clients were not similar in demographic characteristics to the BCO participants eligible for the study.

Exhibit B-4. Characteristics of Eligible BCO and FOC Participants

	BCO Eligible [a] Participants (%)	FOC Eligible [b] Participants (%)
Gender		
Female	84.8	56.0
Race/Ethnicity		
Black/African American non-Hispanic	51.3	58.5
White non-Hispanic	13.5	9.9
Hispanic	24.1	25.1
Other (American Indian, Asian, Multiracial, Biracial, Other)	11.1	6.6
Age at Intake		
17-24	27.8	13.8
25-34	33.9	23.7
35-44	19.4	18.6
45-54	13.1	22.4
55+	5.9	21.5
Marital Status at Intake		
Divorced	7.4	8.9
Married	24.6	12.7
Separated	7.5	6.4
Single	59.6	70.6
Widowed	1.0	1.5
Primary Language Spoken		
English	62.0	86.3
Level of Education at Intake		
No High School Diploma/Equivalency	10.1	15.9
High School Diploma or High School Equivalency	49.8	48.6
Some College	23.9	14.6
College Certificate or Degree	15.9	20.8
Employed at Intake		
Yes	40.9	20.3
FICO Credit Score Range at Intake		
Exceptional (800+)	0.3	1.1
Very Good (740-799)	7.5	3.6
Good (670-739)	16.5	8.0
Fair (580-669)	21.1	16.3
Poor (<580)	29.6	25.0
Insufficient Credit Score	23.5	40.8
Non-FICO Credit Score Available	1.5	5.3
Total	**1,133**	**1,217**

[a] Eligible participants are those who enroll in BCO services during the period April 1, 2017 and December 31, 2018, enrolled in an eligible training course and consented to participate in this evaluation.
[b] Eligible participants are those who enrolled in a FOC program (with no BCO services) during the period April 1, 2017 and December 31, 2018 and consented to participate in this evaluation.
Sample Sizes:
Gender: BCO Participants = 1,125 clients, FOC Participants = 1,203 clients

Race/Ethnicity: BCO Participants = 1,120 clients, FOC Participants = 1,207 clients
Age at Intake: BCO Participants = 1,119 clients, FOC Participants =1,204 clients
Marital Status at Intake: BCO Participants =1,099 clients, FOC=1,181 clients
Primary Language Spoken: BCO Participants =1,085 clients, FOC Participants =1,179 clients
Level of Education at Intake: BCO Participants =1,105 clients, FOC Participants =1,196 clients
Employed at Intake: BCO Participants =1,108 clients, FOC Participants =1,160 clients
FICO Credit Score Range at Intake: BCO Participants =720 clients, FOC Participants =816 clients
Sources: BCO and FOC administrative data in Salesforce: FFT™ Intake Record, FFT™Employment Record, FFT™Credit Report Record.

Formation of the Treatment and Comparison Group

To ensure that the BCO and FOC participants were comparable at program entry for the impact analyses, a coarsened exact matching (CEM)[15] [16] was implemented. CEM controls for selection bias and other biases related to group assignment (although not perfectly) by accounting for multiple characteristics of individuals. With this method, the eligible BCO participants are exactly matched to one or more of the eligible FOC participants on the variables[17] shown in Exhibit B-5 across sites.

Exhibit B-5. Characteristics of Eligible BCO and FOC Participants

Domain	Baseline Measures Used for Matching
Demographic characteristic	• Gender • Race/ethnicity • Age
Education	• Highest level of education completed
Employment	• Employment status
Financial well-being	• Credit score

The full set of baseline measures is described in more detail in Exhibit B-10. Each of the matching variables was measured at program intake prior to the start of clients' services (except for credit score,

[15] **Change to SEP**: The SEP specified that the impact evaluation would o use Propensity Score Analysis (PSA), a matching technique wherein participants in a program are matched to non-participants based on their participation propensity score. This technique uses characteristics measured before the start of a program to determine the probability (the propensity score) that participants are in the treated group. After assigning propensity scores to individuals, participants are placed into blocks (or matching strata) such that the treatment and control individuals within each block have approximately equal propensity to be in the treated group. PSA is useful for selecting comparison members on a large number (20 or more) of characteristics. Given the small number of variables identified for matching in the BCO evaluation, Abt selected the CEM approach instead of a PSA matching approach. Because all matching variables are combined into a summary score, PSA does not guarantee close or exact matches on variables of interest. However, CEM ensures exact matches on variables of interest (because treatment and comparison matches within the same block have identical values on coarsened matching variables). A drawback of CEM is that it does not work well with more than a few matching variables.

[16] Iacus, King, & Porro (2012); Berta, Bossi, & Verzillo (2017).

[17] Some of the matching variables were selected because they are baseline measures of the outcomes for the study—i.e., level of education, employment status, and credit score range. We also considered other variables that prior studies have shown to be related to or predictive of outcomes—that is, gender, age, race/ethnicity, marital status, type of training program, and income. Prior studies show that there is a correlation between types of training (e.g., for traditionally female jobs such as certified nursing assistant and child development associate) and income (traditionally female jobs pay less than entry-level traditionally male jobs), hence we included gender as a matching variable to address these issues. More than half of the participants were White non-Hispanic or Hispanic across treatment sites, so we recruited comparison sites with a majority of Hispanic or White non-Hispanic participants and matched on race/ethnicity. Marital status is important in that it is related to financial status, but the Abt team already matched on employment status and credit score, hence we did not match on marital status. We also could not match on income because there is a very high rate of missing data for all participants, so we used baseline employment status as a proxy for income.

which may be measured up to 5 weeks[18] after intake). The variables identified for matching are the baseline measures of the outcomes of interest or have been found to be associated with (or predictive of—depending on the design) the outcomes of interest in previous studies. Matching on these variables should significantly account for observable differences between BCO and FOC participants (e.g., Roder 2016, Rankin 2015). However, one way in which BCO and FOC participants may vary is in *why* they chose to enroll in the BCO or FOC program, which the evaluation was unable to observe.

The CEM was applied to the data using a SAS macro written by Berta, Bossi, & Verzillo (2017). In this process, blocks were created where within blocks' participants were exactly matched on highest level of education, employment status, gender, race/ethnicity, age, and credit score. Blocks were created by forming categories for the BCO participants across the matching variables (e.g., an employed, white female, 25-34 years old with a high school diploma and a credit score between 500 and 550) and finding FOC participants with the exact same combination of characteristics. If a given block did not contain at least one BCO and one FOC participant, it was dropped.

Abt formed separate comparison groups for the employment and financial impact analyses because of the high percent of missing values on credit scores for both the BCO and FOC participants. There is no correlation between credit score and employment outcomes. Hence, credit score was included in the match when looking at financial outcomes but was not included in the match when examining educational outcomes. Both matches only included participants with non-missing data on all matching variables. Exhibits B-6 and B-7 list the number of participants matched across sites for both comparison groups.

[18] The BCO and FOC sites' downloading of clients' baseline credit scores generally occurred during the first meeting between clients and their financial coach. For BCO clients whose bridge training program did not begin at time of program enrollment because of the schedule, the meeting between clients and their financial coach may not occur until after clients began the training, which could be about five weeks after enrollment.

Exhibit B-6. Employment Outcomes: Number of Participants Matched per Site (excludes Credit Score from the Match)

Site	Number of Matched BCO Participants
BCO Sites	
Brighton Center, Inc.	182
Chinese Community Center, Inc.	102
District 1199C Training and Upgrading Fund	112
Instituto del Progreso Latino	131
International Institute of Minnesota	303
Project for Pride in Living, Inc.	22
Wesley Community Center, Inc.	141
Total	**993**

Site	Number of Matched FOC Participants
FOC Sites	
Asociación Puertorriqueños en Marcha	7
Cara	448
HumanKind	49
Prosperity Center for Financial Opportunity	51
Sacred Heart Community Service	250
Urban League of Essex County	170
Total	**975**

Exhibit B-7. Financial Well-Being Outcomes: Number of Participants Matched per Site (includes Credit Score in the Match)

Site	Number of Matched Participants
BCO Sites	
Brighton Center, Inc.	26
Chinese Community Center, Inc.	42
Wesley Community Center, Inc.	76
District 1199C Training and Upgrading Fund	33
Instituto del Progreso Latino	29
International Institute of Minnesota	99
Project for Pride in Living, Inc.	2
Total BCO	**307**

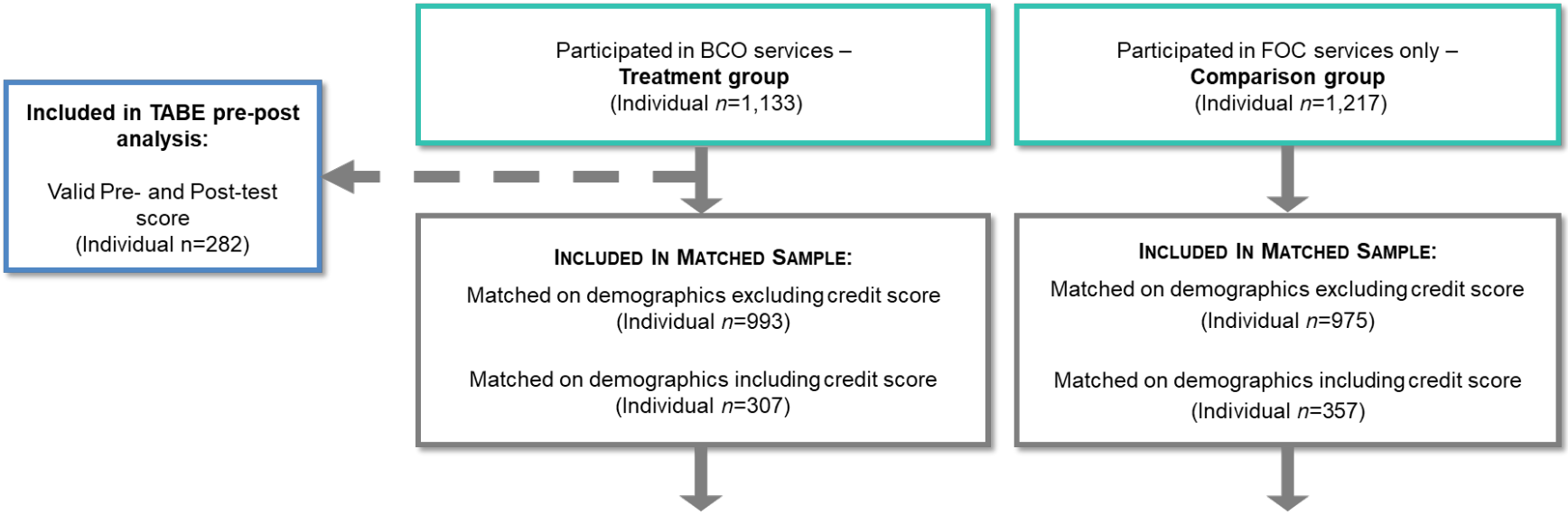
Site	Number of Matched Participants
FOC Sites	
Asociación Puertorriqueños en Marcha	6
Cara	227
HumanKind	22
Prosperity Center for Financial Opportunity	20
Sacred Heart Community Service	72
Urban League of Essex County	10
Total FOC	**357**

Sample Loss and Attrition

Exhibit B-8 provides a detailed consort diagram that shows the number of eligible treatment and comparison participants, the number of participants included in the matched samples and the number of participants in the analytic sample for each outcome. The difference between the numbers in the matched sample and the number of participants included in the analytic sample for each outcome is the number of participants "lost to follow-up." For example, for the *Job Status Improvement* outcome, the matched sample included n=993 T group members and n=975 C group members, while the analytic sample (which included only individuals with non-missing outcome data) included n=673 T group members and n=566 C group members. In the T group 993-673 = 320 were lost because they had a missing outcome measure, while in the C group 975-566=409 were lost because they had a missing outcome measure. Because this evaluation uses all administrative data and only includes non-missing outcomes in the analysis, there is a different amount of missing data for each outcome, so the "lost to follow-up" varies by outcome.

The attrition rate for each outcome can also be calculated from Exhibit B-8. For example, for the *Job Status Improvement* outcome, the matched sample included n=993 T group members and n=975 C group members, while the analytic sample (which included only individuals with non-missing outcome data) included n=673 T group members and n=566 C group members. In the T group 993-673 = 320, (32%) were lost because they had a missing outcome measure. In the C group 975-566=409, (42%) were lost because they had a missing outcome measure. The overall attrition rate is 37% (320+409) / (993+975) and the differential attrition is 10% (42%-32%). Although this represents considerable sample loss due to missing outcome data, the results in Exhibit B-10 show that n=674 T and n=566 C group members that remained in the analytic sample were well matched on baseline characteristics. That is, the treatment and comparison group individuals in the analytic sample were practically identical to each other at baseline in terms of their gender, race/ethnicity, age, level of education, and employment status (as shown by the standardized effect size difference of zero between groups for each characteristic). Exhibits B-9 to B-22 show that baseline equivalence is established for each analytic sample, as is required for a quasi-experimental design (QED). Further, Exhibit B-11 and Exhibit B-20 for the job status improvement and credit score confirmatory outcomes, respectively, show that the treatment and comparison participants lost at follow-up because of missing outcome data are also equivalent. For example, for the *Job Status Improvement* outcome, the 320 treatment participants (993-673=320) and the 409 comparison participants (975-566) were practically identical to each other at baseline in terms of their gender, race/ethnicity, age, level of education, and employment status (as shown by the standardized effect size difference of zero between groups for each characteristic).

Exhibit B-8. Flow from Eligible BOC and FOC Participants to Analytic Study Samples



Included in analytic samples:							
Employment Outcomes							
Job Status Improvement* (Treatment *n*=673) (Comparison *n*=566)	**Job Advancement** (Treatment *n*=673) (Comparison *n*=566)	**Wage Increase** (Treatment *n*=407) (Comparison *n*=288)	**Value of Wage Increase** (Treatment *n*=407) (Comparison *n*=288)	**Wage at Follow-Up** (Treatment *n*=523) (Comparison *n*=310)	**Hours Worked Increase** (Treatment *n*=367) (Comparison *n*=269)	**Value of Hours Worked Increase** (Treatment *n*=367) (Comparison *n*=269)	**Hours Worked at Follow-up** (Treatment *n*=484) (Comparison *n*=291)
Financial Outcomes							
Maximum Credit Score at Follow-Up* (Treatment *n*=181) (Comparison *n*=79)			**Latest Credit Score at Follow-Up** (Treatment *n*=177) (Comparison *n*=79)			**Financial Worth** (Treatment *n*=194) (Comparison *n*=81)	

*Outcome used in confirmatory analysis.

Method for Testing Baseline Equivalence

Abt estimated the standardized differences between the matched treatment and comparison groups at baseline to determine their level of similarity on all characteristics used in the matching. By construction, the treatment and comparison groups will be exactly matched on the CEM matching variables (highest level of education, employment status, gender, age, race/ethnicity and credit score range).

To estimate the differences between BCO treatment and FOC comparison group participants at baseline, a modified version of the impact model (described below) that similarly accounts for the matching blocks design by including a set of indicators for the CEM matching blocks was fitted. The result is the average difference between treatment and comparison participants within each matching block. The model has the structure of Equation 1.

Eq (1) $$X_{ki} = \alpha_0 + \alpha_1 T_i + \sum_{m=1}^{M} \delta_{0m} D_m + \epsilon_i,$$

where:

X_{ki}, T_i, and D_m are as described in the impact model.

α_1 represents the difference between BCO and comparison group learners on the k^{th} baseline characteristic.

Separate models are fit to each of the k baseline characteristics, and the reported difference at baseline is the coefficient $\hat{\alpha}_1$ from the model.

Standardized differences less than or equal to 0.05 standard deviations do not require a statistical adjustment to the analysis models; regression adjustments are made for differences that are between 0.05 and 0.25 standard deviations; and baseline equivalence is not met for any standardized difference greater than 0.25 standard deviations. The Abt team verified that the matched groups were similar on the baseline characteristics used for matching; that is, all standardized differences less than or equal to 0.05 standard deviations.

Exhibits B-9 to B-22 show tests for similarity between the treatment and comparison groups for the initial match and each analytic sample used in the evaluation. By construction, the treatment and comparison groups are exactly matched on the CEM matching variables. Further, Exhibits B-11 and B-20 show the similarity between the treatment and comparison groups' members that were lost for the two confirmatory outcomes.

Exhibit B-9. Employment Outcomes Initial Match: Baseline Equivalence of Matched Sample (excludes Credit Score)

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	85.9	85.9	0.0
Male	14.1	14.1	0.0
Race/Ethnicity			
Black/African American non-Hispanic	53.3	53.3	0.0
White non-Hispanic	12.0	12.0	0.0
Hispanic	25.1	25.1	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	9.7	9.7	0.0
Age at Intake			
17-24	27.2	27.2	0.0
25-34	33.7	33.7	0.0
35-44	19.3	19.3	0.0
45-54	13.5	13.5	0.0
55+	6.2	6.2	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	6.7	6.7	0.0
High School Diploma or High School Equivalency	51.4	51.4	0.0
Any College	42.0	42.0	0.0
Employed at Intake			
No	59.9	59.9	0.0
Yes	40.1	40.1	0.0
Total N	993	975	

Confirmatory Employment Outcome

Exhibit B-10. Baseline Equivalence of Matched Sample for Job Status Improvement Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	84.8	84.8	0.0
Male	15.2	15.2	0.0
Race/Ethnicity			
Black/African American non-Hispanic	53.9	53.9	0.0
White non-Hispanic	10.9	10.9	0.0
Hispanic	27.3	27.3	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	7.9	7.9	0.0
Age at Intake			
17-24	27.8	27.8	0.0
25-34	30.9	30.9	0.0
35-44	20.8	20.8	0.0
45-54	14.1	14.1	0.0
55+	6.4	6.4	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	5.2	5.2	0.0
High School Diploma or High School Equivalency	52.9	52.9	0.0
Any College	41.9	41.9	0.0
Employed at Intake			
No	59.6	59.6	0.0
Yes	40.4	40.4	0.0
Total N	**673**	**566**	

Exhibit B-11. Baseline Equivalence of Matched Sample Lost for Job Status Improvement Outcome

Baseline Characteristic	BCO Participants Excluded from Analysis Mean (n=320)	FOC Participants Excluded from Analysis Mean (n=409)	Standardized Effect Size Difference
Gender			
Female	88.1	88.1	0.0
Male	11.9	11.9	0.0
Race/Ethnicity			
Black/African American non-Hispanic	51.9	51.9	0.0
White non-Hispanic	14.4	14.4	0.0
Hispanic	20.3	20.3	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	13.4	13.4	0.0
Age at Intake			
17-24	25.9	25.9	0.0
25-34	39.7	39.7	0.0
35-44	16.3	16.3	0.0
45-54	12.2	12.2	0.0
55+	5.9	5.9	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	9.7	9.7	0.0
High School Diploma or High School Equivalency	48.1	48.1	0.0
Any College	42.2	42.2	0.0
Employed at Intake			
No	60.6	60.6	0.0
Yes	39.4	39.4	0.0

Exploratory Employment Outcomes

Exhibit B-12. Baseline Equivalence of Matched Sample for Hourly Wage Increase Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	88.7	88.7	0.0
Male	11.3	11.3	0.0
Race/Ethnicity			
Black/African-America non-Hispanic	55.5	55.5	0.0
White non-Hispanic	10.8	10.8	0.0
Hispanic	24.8	24.8	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	8.9	8.9	0.0
Age at Intake			
17-24	26.8	26.8	0.0
25-34	31.0	31.0	0.0
35-44	22.9	22.9	0.0
45-54	14.7	14.7	0.0
55+	4.7	4.7	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	5.4	5.4	0.0
High School Diploma or High School Equivalency	52.6	52.6	0.0
Any College	42.0	42.0	0.0
Employed at Intake			
No	75.9	75.9	0.0
Yes	24.1	24.1	0.0
Total N	**407**	**288**	

Exhibit B-13. Baseline Equivalence of Matched Sample for Amount of Wage Increase Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	88.7	88.7	0.0
Male	11.3	11.3	0.0
Race/Ethnicity			
Black/African American non-Hispanic	55.5	55.5	0.0
White non-Hispanic	10.8	10.8	0.0
Hispanic	24.8	24.8	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	8.9	8.9	0.0
Age at Intake			
17-24	26.8	26.8	0.0
25-34	31.0	31.0	0.0
35-44	22.9	22.9	0.0
45-54	14.7	14.7	0.0
55+	4.7	4.7	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	5.4	5.4	0.0
High School Diploma or High School Equivalency	52.6	52.6	0.0
Any College	42.0	42.0	0.0
Employed at Intake			
No	75.9	75.9	0.0
Yes	24.1	24.1	0.0
Total N	**407**	**288**	

Exhibit B-14. Baseline Equivalence of Matched Sample for Wage at Follow-Up Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	85.9	85.9	0.0
Male	14.2	14.2	0.0
Race/Ethnicity			
Black/African American non-Hispanic	57.4	57.4	0.0
White non-Hispanic	9.9	9.9	0.0
Hispanic	24.1	24.1	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	8.6	8.6	0.0
Age at Intake			
17-24	27.7	27.7	0.0
25-34	31.9	31.9	0.0
35-44	20.8	20.8	0.0
45-54	14.5	14.5	0.0
55+	5.0	5.0	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	5.2	5.2	0.0
High School Diploma or High School Equivalency	50.7	50.7	0.0
Any College	44.2	44.2	0.0
Employed at Intake			
No	59.1	59.1	0.0
Yes	40.9	40.9	0.0
Total N	**523**	**310**	

Exhibit B-15. Baseline Equivalence of Matched Sample for Increase in Hours Worked Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	88.0	88.0	0.0
Male	12.0	12.0	0.0
Race/Ethnicity			
Black/African American non-Hispanic	53.7	53.7	0.0
White non-Hispanic	11.4	11.4	0.0
Hispanic	25.3	25.3	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	9.5	9.5	0.0
Age at Intake			
17-24	27.8	27.8	0.0
25-34	28.9	28.9	0.0
35-44	22.6	22.6	0.0
45-54	15.5	15.5	0.0
55+	5.2	5.2	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	5.7	5.7	0.0
High School Diploma or High School Equivalency	50.7	50.7	0.0
Any College	43.6	43.6	0.0
Employed at Intake			
No	83.9	83.9	0.0
Yes	16.1	16.1	0.0
Total N	**367**	**269**	

Exhibit B-16. Baseline Equivalence of Matched Sample for Mean Hours Worked Increase Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	88.0	88.0	0.0
Male	12.0	12.0	0.0
Race/Ethnicity			
Black/African American non-Hispanic	53.7	53.7	0.0
White Hispanic	11.4	11.4	0.0
Hispanic	25.3	25.3	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	9.5	9.5	0.0
Age at Intake			
17-24	27.8	27.8	0.0
25-34	28.9	28.9	0.0
35-44	22.6	22.6	0.0
45-54	15.5	15.5	0.0
55+	5.2	5.2	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	5.7	5.7	0.0
High School Diploma or High School Equivalency	50.7	50.7	0.0
Any College	43.6	43.6	0.0
Employed at Intake			
No	83.9	83.9	0.0
Yes	16.1	16.1	0.0
Total N	**367**	**269**	

Exhibit B-17. Baseline Equivalence of Matched Sample for Hours Worked at Follow-Up Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	85.1	85.1	0.0
Male	14.9	14.9	0.0
Race/Ethnicity			
Black/African American non-Hispanic	56.0	56.0	0.0
White non-Hispanic	10.3	10.3	0.0
Hispanic	24.6	24.6	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	9.1	9.1	0.0
Age at Intake			
17-24	28.5	28.5	0.0
25-34	30.4	30.4	0.0
35-44	20.7	20.7	0.0
45-54	15.1	15.1	0.0
55+	5.4	5.4	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	5.4	5.4	0.0
High School Diploma or High School Equivalency	49.0	49.0	0.0
Any College	45.7	45.7	0.0
Employed at Intake			
No	63.6	63.6	0.0
Yes	36.4	36.4	0.0
Total N	**484**	**291**	

Exhibit B-18. Financial Outcomes Initial Match: Baseline Equivalence of Matched Sample (includes Credit Score)

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	89.3	89.3	0.0
Male	10.8	10.8	0.0
Race/Ethnicity			
Black/African American non-Hispanic	67.4	67.4	0.0
White non-Hispanic	5.2	5.2	0.0
Hispanic	22.8	22.8	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	4.6	4.6	0.0
Age at Intake			
17-24	17.3	17.3	0.0
25-34	34.2	34.2	0.0
35-44	23.8	23.8	0.0
45-54	15.6	15.6	0.0
55+	9.1	9.1	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	7.8	7.8	0.0
High School Diploma or High School Equivalency	52.4	52.4	0.0
Any College	39.7	39.7	0.0
Employed at Intake			
No	75.2	75.2	0.0
Yes	24.8	24.8	0.0
Credit Score			
A2 (FICO: 800-825)	0.0	0.0	0.0
B1 (FICO: 770-799)	1.3	1.3	0.0
B2 (FICO: 740-769)	1.0	1.0	0.0
C1 (FICO: 705-739)	3.3	3.3	0.0
C2 (FICO: 670-704)	2.3	2.3	0.0
D1 (FICO: 625-669)	10.1	10.1	0.0
D2 (FICO: 580-624)	10.8	10.8	0.0
E1 (FICO: 440-579)	37.1	37.1	0.0
XE1 (non-FICO: 451-600)	0.3	0.3	0.0
Z (Zero/Insufficient Credit History)	33.9	33.9	0.0
Total N	**307**	**357**	

Confirmatory Financial Well-Being Outcome

Exhibit B-19. Baseline Equivalence of Matched Sample for Maximum Credit Score Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	91.7	91.7	0.0
Male	8.3	8.3	0.0
Race/Ethnicity			
Black/African American non-Hispanic	68.5	68.5	0.0
White non-Hispanic	5.5	5.5	0.0
Hispanic	23.8	23.8	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	2.2	2.2	0.0
Age at Intake			
17-24	9.4	9.4	0.0
25-34	35.9	35.9	0.0
35-44	28.7	28.7	0.0
45-54	16.6	16.6	0.0
55+	9.4	9.4	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	2.8	2.8	0.0
High School Diploma or High School Equivalency	50.8	50.8	0.0
Any College	46.4	46.4	0.0
Employed at Intake			
No	66.9	66.9	0.0
Yes	33.2	33.2	0.0
Credit Score			
A2 (FICO: 800-825)	0.0	0.0	0.0
B1 (FICO: 770-799)	1.7	1.7	0.0
B2 (FICO: 740-769)	1.1	1.1	0.0
C1 (FICO: 705-739)	5.5	5.5	0.0
C2 (FICO: 670-704)	3.3	3.3	0.0
D1 (FICO: 625-669)	14.9	14.9	0.0
D2 (FICO: 580-624)	17.1	17.1	0.0
E1 (FICO: 440-579)	55.8	55.8	0.0
XE1 (non-FICO: 451-600)	0.6	0.6	0.0
Z (Zero/Insufficient Credit History)	0.0	0.0	0.0
Total N	**181**	**79**	

Exhibit B-20. Baseline Equivalence of Matched Sample Lost for Maximum Credit Score

Baseline Characteristic	BCO Participants Excluded from Analysis Mean (n=126)	FOC Participants Excluded from Analysis Mean (n=278)	Standardized Effect Size Difference
Gender			
Female	85.7	85.7	0.0
Male	14.3	14.3	0.0
Race/Ethnicity			
Black/African American non-Hispanic	65.9	65.9	0.0
White non-Hispanic	4.8	4.8	0.0
Hispanic	21.4	21.4	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	7.9	7.9	0.0
Age at Intake			
17-24	28.6	28.6	0.0
25-34	31.8	31.8	0.0
35-44	16.7	16.7	0.0
45-54	14.3	14.3	0.0
55+	8.7	8.7	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	15.1	15.1	0.0
High School Diploma or High School Equivalency	54.8	54.8	0.0
Any College	30.2	30.2	0.0
Employed at Intake			
No	87.3	87.3	0.0
Yes	12.7	12.7	0.0
Credit Score			
A2 (FICO: 800-825)	0.0	0.0	0.0
B1 (FICO: 770-799)	0.8	0.8	0.0
B2 (FICO: 740-769)	0.8	0.8	0.0
C1 (FICO: 705-739)	0.0	0.0	0.0
C2 (FICO: 670-704)	0.8	0.8	0.0
D1 (FICO: 625-669)	3.2	3.2	0.0
D2 (FICO: 580-624)	1.6	1.6	0.0
E1 (FICO: 440-579)	10.3	10.3	0.0
XE1 (non-FICO: 451-600)	0.0	0.0	0.0
Z (Zero/Insufficient Credit History)	82.5	82.5	0.0

Exploratory Financial Well-Being Outcomes

Exhibit B-21. Baseline Equivalence of Matched Sample for Latest Credit Score Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	91.5	91.5	0.0
Male	8.5	8.5	0.0
Race/Ethnicity			
Black/African American non-Hispanic	68.4	68.4	0.0
White non-Hispanic	5.7	5.7	0.0
Hispanic	23.7	23.7	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	2.3	2.3	0.0
Age at Intake			
17-24	9.6	9.6	0.0
25-34	36.2	36.2	0.0
35-44	28.8	28.8	0.0
45-54	16.4	16.4	0.0
55+	9.0	9.0	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	2.8	2.8	0.0
High School Diploma or High School Equivalency	50.9	50.9	0.0
Any College	46.3	46.3	0.0
Employed at Intake			
No	67.2	67.2	0.0
Yes	32.8	32.8	0.0
Credit Score			
A2 (FICO: 800-825)	0.0	0.0	0.0
B1 (FICO: 770-799)	1.7	1.7	0.0
B2 (FICO: 740-769)	1.1	1.1	0.0
C1 (FICO: 705-739)	5.7	5.7	0.0
C2 (FICO: 670-704)	3.4	3.4	0.0
D1 (FICO: 625-669)	15.3	15.3	0.0
D2 (FICO: 580-624)	17.0	17.0	0.0
E1 (FICO: 440-579)	55.4	55.4	0.0
XE1 (non-FICO: 451-600)	0.6	0.6	0.0
Z (Zero/Insufficient Credit History)	0.0	0.0	0.0
Total N	**177**	**79**	

Exhibit B-22. Baseline Equivalence of Matched Sample for Financial Net-Worth Outcome

Baseline Characteristic	BCO Participants Mean	FOC Participants Mean	Standardized Effect Size Difference
Gender			
Female	88.1	88.1	0.0
Male	11.9	11.9	0.0
Race/Ethnicity			
Black/African American non-Hispanic	70.6	70.6	0.0
White non-Hispanic	6.2	6.2	0.0
Hispanic	20.1	20.1	0.0
Other (American Indian, Asian, Multiracial, Biracial, Other)	3.1	3.1	0.0
Age at Intake			
17-24	13.4	13.4	0.0
25-34	35.1	35.1	0.0
35-44	25.8	25.8	0.0
45-54	15.0	15.0	0.0
55+	10.8	10.8	0.0
Level of Education at Intake			
No High School Diploma/Equivalency	5.2	5.2	0.0
High School Diploma or High School Equivalency	50.0	50.0	0.0
Any College	44.9	44.9	0.0
Employed at Intake			
No	76.8	76.8	0.0
Yes	23.2	23.2	0.0
Credit Score			
A2 (FICO: 800-825)	0.0	0.0	0.0
B1 (FICO: 770-799)	1.6	1.6	0.0
B2 (FICO: 740-769)	1.0	1.0	0.0
C1 (FICO: 705-739)	4.1	4.1	0.0
C2 (FICO: 670-704)	2.6	2.6	0.0
D1 (FICO: 625-669)	13.4	13.4	0.0
D2 (FICO: 580-624)	12.9	12.9	0.0
E1 (FICO: 440-579)	42.3	42.3	0.0
XE1 (non-FICO: 451-600)	0.0	0.0	0.0
Z (Zero/Insufficient Credit History)	22.2	22.2	0.0
Total N	**194**	**81**	

Data Collection

Because evaluation participants were drawn from each site's existing service population, all analyses were based on extant administrative data that the sites submit to LISC. The impact study data for BCO treatment group participants FOC-only comparison group participants were drawn from Salesforce, the commercial platform that LISC uses to store its client data. BCO and FOC site staff collect and store all client demographic and background information, service receipt, and outcome data in the system using the same procedures. Staff collect baseline data when clients enter a BCO or FOC-only program, prior to the delivery of an intervention; document the activities in which clients participate as services are provided (within 48 hours of data receipt); and collect follow-up data on clients' employment, financial well-being, and education outcomes (when clients initiate contact with staff or staff contact clients). Abt identified the key variables in Salesforce to be used in the evaluation, and LISC staff transferred de-identified client data for those variables to Abt using Huddle™, a secure web portal.

Analytic Methods

Abt created measures about participants' employment, financial well-being, and education, and estimated the effectiveness of BCO on the employment, and financial well-being measures for all participants. This section describes the approach we used to examine the effectiveness of the BCO. Described first is the rationale for selecting the evaluation's measures that were used to examine the effects of BCO, and how those and other evaluation measures were constructed. Measures were constructed to capture (1) employment; (2) financial well-being; and (3) education. Discussed next are the evaluation's analytic methods that were used to estimate effects of the BCO and FOC-only services on participants' employment, and financial well-being measures. The final section provides the approach to examine the pre-post change for BCO participants' education measure.

Study Measures

The evaluation examined the effects of BCO on multiple measures of employment and financial well-being for treatment and comparison participants, as well as the pre-post change of an education measure for BCO treatment participants. The evaluation's confirmatory employment measure was job advancement after program entry and is discussed in the main body of the report. The evaluation also examined two exploratory measures of employment—hourly wages and number of hours worked after program entry. The evaluation's confirmatory measure of financial well-being was credit score increase and is discussed in the main body of the report. The evaluation also examined two exploratory measures of financial well-being—overall debt and net worth. One exploratory measure of education—level of reading skills—is discussed in the main body of the report. Presented in Exhibit B-23 through Exhibit B-27 are the data sources and construction of the measures for the employment, financial well-being, and education measures, and participant characteristics. Because the two confirmatory measures were observed over a period of months, Exhibit B-24 shows the distribution of the number of months that elapsed between enrollment and measurement of the outcome.

Presented in Appendix C are the results of the exploratory analyses.

Exhibit B-23. Employment Outcome Measures Examined: Data Source and Measure Construction

Measure	Data Source	Definition/Coding
Job Status Improvement	BCO and FOC	1= (a) Enrolls in the program unemployed and then starts a new job in the 1-14 months after enrollment or (b) employed at enrollment and has one of the following records in the 1-14 months after enrollment: (1) gets a new job and the new wage is greater than the wage at enrollment; or (2) has an advancement record for an increase in wages or obtaining a promotion 0= (a) Enrolls in the program unemployed, has record of follow up with the program but no record of new employment in the 1-14 months after enrollment or (b) employed at enrollment, has a record of follow-up, but has no record of advancement or record of a new job with a higher wage
Maximum Wage Increase at Follow-Up	BCO and FOC	1 = Maximum wage at follow-up in the 1-14 months after enrollment is greater than the wage at enrollment (wage defined as $0 for those unemployed at the time of enrollment) 0 = Maximum wage at follow-up in the 1-14 months after enrollment is less than or equal to the wage at enrollment (wage defined as $0 for those unemployed at the time of enrollment)
Value of Maximum Wage Increase at Follow-Up	BCO and FOC	= The difference between the maximum wage at follow-up in the 1-14 months after enrollment and the wage at enrollment
Maximum Wage at Follow-Up	BCO and FOC	= The maximum wage at follow-up in the 1-14 months after enrollment
Latest Wage Increase at Follow-Up	BCO and FOC	1 = Latest wage at follow-up in the 1-14 months after enrollment is greater than the wage at enrollment (wage defined as $0 for those unemployed at the time of enrollment) 0 = Latest wage at follow-up in the 1-14 months after enrollment is less than or equal to the wage at enrollment (wage defined as $0 for those unemployed at the time of enrollment)
Value of Latest Wage Increase at Follow-Up	BCO and FOC	= The difference between the latest wage at follow-up in the 1-14 months after enrollment and the wage at enrollment
Latest Wage at Follow-Up	BCO and FOC	= The latest wage at follow-up in the 1-14 months after enrollment
Hours Worked Increase	BCO and FOC	1 = Latest number of hours worked at follow-up in the 1-14 months after enrollment are greater than the number of hours worked at enrollment (hours worked defined as 0 hours for those unemployed at the time of enrollment) 0 = Latest number of hours worked at follow-up in the 1-14 months after enrollment are less than or equal to the number of hours worked at enrollment (hours worked defined as 0 hours for those unemployed at the time of enrollment)
Value of Hours Worked Increase	BCO and FOC	= The difference between the latest hours worked at follow-up in the 1-14 months after enrollment and the hours worked at enrollment
Hours Worked	BCO and FOC	= The latest hours worked at follow up in the 1-14 months after enrollment

Source: BCO and FOC administrative data in Salesforce.

Exhibit B-24. Number of Months Between Enrollment and Measurement of Confirmatory Outcomes

Number of Months Between Enrollment and Measurement of Outcome	BCO Participants N (%)	FOC Participants N (%)
Job Status Improvement (Confirmatory)		
1 month	33 (4.9)	130 (23.0)
2 months	48 (7.1)	126 (22.3)
3 months	68 (10.1)	65 (11.5)
4 months	94 (14.0)	44 (7.8)
5 months	95 (14.1)	42 (7.4)
6 months	61 (9.1)	24 (4.2)
7 months	49 (7.3)	22 (3.9)
8 months	31 (4.6)	25 (4.4)
9 months	34 (5.1)	19 (3.4)
10 months	28 (4.2)	15 (2.7)
11 months	30 (4.5)	8 (1.4)
12 months	29 (4.3)	8 (1.4)
13 months	37 (5.5)	18 (3.2)
14 months	36 (5.4)	20 (3.5)
Credit Score (Maximum Credit Score at Follow-up) (Confirmatory)		
1 month	0 (0.0)	0 (0.0)
2 months	0 (0.0)	4 (5.1)
3 months	3 (1.7)	6 (7.6)
4 months	1 (0.6)	1 (1.3)
5 months	3 (1.7)	2 (2.5)
6 months	13 (7.2)	4 (5.1)
7 months	14 (7.7)	4 (5.1)
8 months	15 (8.3)	5 (6.3)
9 months	10 (5.5)	2 (2.5)
10 months	9 (5.0)	5 (6.3)
11 months	7 (3.9)	2 (2.5)
12 months	5 (2.8)	5 (6.3)
13 months	2 (1.1)	5 (6.3)
14 months	6 (3.3)	9 (11.4)
15 months	9 (5.0)	2 (2.5)
16 months	12 (6.6)	1 (1.3)
17 months	9 (5.0)	3 (3.8)
18 months	5 (2.8)	4 (5.1)
19 months	3 (1.7)	4 (5.1)
20 months	7 (3.9)	5 (6.3)
21 months	6 (3.3)	1 (1.3)
22 months	5 (2.8)	1 (1.3)
23 months	8 (4.4)	0 (0.0)
24 months	11 (6.1)	1 (1.3)
25 months	2 (1.1)	1 (1.3)
26 months	4 (2.2)	1 (1.3)
27 months	1 (0.6)	0 (0.0)

Number of Months Between Enrollment and Measurement of Outcome	BCO Participants N (%)	FOC Participants N (%)
28 months	4 (2.2)	0 (0.0)
29 months	3 (1.7)	0 (0.0)
30 months	3 (1.7)	1 (1.3)
31 months	0 (0.0)	0 (0.0)
32 months	1 (0.6)	0 (0.0)

Note: Data include 673 participants in BCO programs and 566 participants in FOC programs for Job Status Improvement. Percentage of participants represents those who had a "job improvement" in 1-14 months after program enrollment.
Data include 181 participants in BCO programs and 79 participants in FOC-only programs. Percentage of participants represents those whose maximum credit score after program enrollment was higher than their credit score at intake.
Source: BCO and FOC administrative data in Salesforce: FFT™ Employment Record/Job Advancement Record.

Exhibit B-25. Financial Well-Being Outcome Measures Examined: Data Source and Measure Construction

Measure	Data Source	Definition/Coding
Credit Score Increase at Follow-Up	BCO and FOC	1 = Has a credit score at baseline and follow-up, and the credit score at follow-up is greater than the credit score at baseline 0 = Has a credit score at baseline and follow-up, and the credit score at follow-up is less than or equal to the credit score at baseline
Credit Score Increase at Least One Level at Follow-Up	BCO and FOC	1 = Has a credit score at baseline and follow-up, and the credit score level (A/B/C/D/E) at follow-up is greater than the credit score level at baseline 0 = Has a credit score at baseline and follow-up, and the credit score level (A/B/C/D/E) at follow-up is less than or equal to the credit score level at baseline For all FICO scores – Transunion, Equifax, Experian: (A= 800-850, B= 740-799, C= 670-739, D= 580-669, E= 300-579) For all non-FICO scores – Transunion, Vantage: (A=781-850, B=720-780, C=658-719, D=601-657, E=300-600)
Credit Score Reached a Score of 580 at Follow-Up	BCO and FOC	1 = Has a credit score at baseline and follow-up, and the credit score at follow-up is greater than or equal to 580 (580 is the minimum credit score to receive a loan) 0 Has a credit score at baseline and follow-up, and the credit score at follow-up is less than 580
Credit Score Reached a Score of 620 at Follow-Up	BCO and FOC	1 = Has a credit score at baseline and follow-up, and the credit score at follow-up is greater than or equal to 620 (620 is the minimum credit score for a conventional home loan approval) 0 Has a credit score at baseline and follow-up, and the credit score at follow-up is less than 620
Credit Score at Follow Up	BCO and FOC	= Credit score at follow-up, for individuals with a credit score at baseline and a credit score at follow-up
Debt Decrease at Follow-Up	BCO and FOC	1 = Has a measure of total debt at baseline and follow-up, and total debt at follow-up is less than total debt at baseline 0 = Has a measure of total debt at baseline and follow-up, and total debt at follow-up is greater than or equal to total debt at baseline *Calculations for debt exclude student loans, mortgages, and transportation loans.
Net Worth Increase at Follow-Up	BCO and FOC	1 = Has a measure of total net worth at baseline and follow-up, and total net worth at follow-up is greater than total net worth at baseline 0 = Has a measure of total net worth at baseline and follow-up, and total net worth at follow-up is less than or equal to total net worth at baseline *Calculations for net worth exclude student loans, mortgages, and transportation loans.
Change in Debt at Follow-Up	BCO and FOC	= Difference between individual's total debt at follow-up and total debt at baseline, for individuals with measures of total debt at baseline and at follow up *Calculations for debt exclude student loans, mortgages, and transportation loans.
Change in Net Worth at Follow-Up	BCO and FOC	= Difference between individual's total net worth at follow-up and total net worth at baseline, for individuals with measures of total net worth at baseline and at follow-up *Calculations for net worth exclude student loans, mortgages, and transportation loans.

Source: BCO and FOC administrative data in Salesforce.

Exhibit B-26. Education Outcome Measure Examined: Data Source and Measure Construction

Measure	Data Source	Definition/Coding
Test Score Gain from Pre- to Post-test	BCO	= The difference between the final post-test TABE® Reading scale score and pre-test TABE® Reading scale score

Exhibit B-27. Participant Characteristics at Baseline: Data Source and Measure Construction

Measure	Data Source	Definition/Coding
Gender	BCO and FOC	1=Female 0=Male
Race/Ethnicity	BCO and FOC	1=Black/African American non-Hispanic 2=White non-Hispanic 3=Hispanic 4=Other (American Indian, Asian, Multiracial. Biracial, Other)
Age at Intake	BCO and FOC	1=17-24 years old 2=25-34 years old 3=35-44 years old 4=45-54 years old 5=55+ years old
Marital Status at Intake	BCO and FOC	1=Divorced 2=Married 3=Separated 4=Single 5=Widowed
Primary Language Spoken	BCO and FOC	1=English 0=Not English
Level of Education at Intake	BCO and FOC	1=No High School Diploma/Equivalency 2=High School Diploma or High School Equivalency 3=Some College 4=College Certificate or Degree
Employed at Intake	BCO and FOC	1=Employed 0=Not Employed
FICO Credit Score Range at Intake	BCO and FOC	1=Exceptional (800+) 2=Very Good (740-799) 3=Good (670-739) 4=Fair (580-669) 5=Poor (<580) 6=Insufficient Credit Score History 7=Non-FICO Score Available

Estimating the Effects of BCO

To account for the matching block design, Abt estimated the impact of BCO using regression models that include terms for the matching blocks. The inclusion of terms for the matching blocks ensures that the overall estimate of the treatment-comparison group outcome difference is calculated by comparing the BCO and FOC participant outcomes within the matched blocks and calculating a precision-weighted average of the within-block differences to produce the overall estimate. To control for other baseline differences between the groups that might be related to outcomes, the model also includes covariates for participants' baseline level of education, employment, credit score range, gender, age, and race/ethnicity.

For each outcome, we estimated a model that reflects this matched design and has the structure of Equation 2.

Eq (2) $$Y_i = \beta_0 + \beta_1 T_i + \sum_{k=1}^{K} \lambda_k X_{ki} + \sum_{m=1}^{M} \gamma_{0m} D_m + \varepsilon_i$$

where:

Y_i is the outcome of interest (e.g., receipt of educational credential) for the i^{th} individual in the m^{th} matching block.

T_i is an indicator variable equal to 1 if individual i was an BCO participant and 0 if a FOC participant.

X_{ki} is the k^{th} baseline covariate; these include baseline level of education, employment, credit score range, gender, age, and race/ethnicity.

D_m is the indicator variable representing the m^{th} matching block.

ε_i is the usual random error term.

In this model, β_1 represents the impact of BCO on the study outcomes, where the impact estimate is averaged over the matching blocks. The *p*-values reported for impact estimates are two-tailed to account for the possibility that the intervention might adversely affect one or more of the outcomes. The coefficients on the covariates (λ_k) reflect the relationship between the outcome measure and each of the covariates while controlling for others.

Pre-Post Reading Gain Analysis

Analysis of Changes in BCO Participants' Reading Skills

For each reading test, Abt converted BCO participants' raw scores into two measures: (1) grade equivalent scores that are useful for descriptive purposes; and (2) scale scores that are appropriate for more complex statistical analyses. Change scores that represent the amount of a BCO participant's skill change from pre- to post-tests were constructed by subtracting each participant's pre-test scale score from their post-test scale scores. The statistical significance of the mean scale score gain was assessed using the paired t-test.

Hypothesis Testing of Change in Scores

Abt tested the null hypothesis that participants' change scores are zero by conducting a paired t-test. The null hypothesis for the paired t-test is that the average population gain is zero scale score points. The two-tail alternative hypothesis is that the average gain is not equal to zero. The use of the paired t-test is predicated on the assumption that, absent BCO, the reading ability of the learners would not be expected to measurably improve over the span of time from pre-test to post-test. If the average change is positive

and the null hypothesis is rejected, we interpret this as an indication that program participation is associated with the shift in the distribution of reading skills among the population of participants.

Effect Sizes

Abt examined the effect size of the pre-post changes in BCO participants' reading test scores. The effect size is a measure of the mean gain expressed in standard deviation units. An advantage of expressing mean gain as an effect size is that the mean gains for each of the various standardized reading tests can be directly compared to one another. This is possible because, when expressed as an effect size, they are each expressed in a common metric.

Additionally, there is a commonly used rule-of-thumb for evaluating the magnitude of effect sizes (Cohen, 1988). For effect sizes calculated as differences in means, effect sizes of .20 or lower are generally considered to be "small"; a "medium" effect size is approximately .50; and a "large" effect size is .80 or greater. *In interpreting skill change data, we used as conservative standard by focusing on skill gains that were statistically significant (by paired t-tests at p<.05 level) and that produced effect sizes of .20 or higher.*

Effect sizes were calculated using the formula shown below:

$$Effect\ \ Size_{post-pre} = \frac{\overline{X}_{post} - \overline{X}_{pre}}{s_{pooled}}$$

Where:

$\overline{X}_{post}$ is the standard score mean at post-test,

$\overline{X}_{pre}$ is the standard score mean at pre-test,

S_{pooled} is the pooled standard deviation of the pre- and post-test means.

Because the sample sizes are equal for the pre- and post-tests, the pooled standard deviation was calculated as

$$s_{pooled} = \sqrt{\frac{s^2_{pre} + s^2_{post}}{2}}$$

where S_{pre} and S_{post} are the standard deviations for the pre- and post-test data.

Additionally, effect sizes were calculated for pre-follow-up gains and post-follow-up gains. To ensure that these effect sizes were directly comparable to the pre-post effect sizes, Abt used the same value for the pooled standard deviation in the denominator for the calculations of the pre-follow-up and post-follow-up effect sizes, as was used for the pre-post gains.

The formulas are shown below.

$$Effect\ \ Size_{followup-pre} = \frac{\overline{X}_{followup} - \overline{X}_{pre}}{s_{pooled}}, \quad Effect\ \ Size_{followup-post} = \frac{\overline{X}_{followup} - \overline{X}_{post}}{s_{pooled}},$$

where S_{pooled} is the same as shown above.

Treatment of Missing Data

Abt did not impute any baseline or outcome data. By design, only participants with non-missing baseline data were included in the matched sample. All analyses included participants with non-missing outcomes (complete case analysis).

Multiple Outcome Measures

To address multiple comparisons, Abt defined confirmatory and exploratory analysis components prior to data analysis (Schochet, 2008). Because there is a single confirmatory impact estimate for the evaluation's outcome domains of employment and financial well-being, no multiple comparison corrections are required to reduce the chance of a Type-I error. Because the purpose of exploratory analyses is to examine relationships within the data—for example, to identify hypotheses for more rigorous future evaluation, Abt did not conduct multiplicity adjustments. Instead, we included explicit statements in Appendix C that these exploratory analyses do not provide rigorous evidence on the intervention's overall effectiveness.

Appendix C: Supplemental Tables and Information on Study Findings

This appendix provides the results of the exploratory analyses concerning employment and financial well-being that Abt conducted in the BCO evaluation's impact study. Note that these exploratory analyses do not provide rigorous evidence on the intervention's overall effectiveness.

The appendix also includes BCO site-level data for the TABE® pre-post test results for each BCO site, which was one of the treatment group's descriptive education outcomes measured used in the study.

Employment

The impact study's exploratory research questions related to employment and results from the analyses to address those questions are described below.

Exploratory Research Questions for Employment

1. Were BCO participants more likely to increase their hourly wages after program entry relative to a comparison group who received only FOC services?

2. Were BCO participants more likely to be placed in jobs with higher hourly wages relative to a comparison group who received only FOC services?

3. Were BCO participants more likely to work more hours per week after program entry relative to a comparison group who received only FOC services?

Impacts on Employment

Presented in Exhibit C-1 are the findings from the employment impact analyses. The far-left column in the table lists the employment outcomes that are reported. The second column contains the outcomes for the treatment group and the third column contains the outcomes for the comparison group. The fourth column lists the impact results. The fifth column lists the standard error and the sixth column provides the *p*-Value for each impact. The first row in the exhibit has data for the confirmatory research question, which is discussed in the main body of the report. The data in the other rows in the table pertain to the exploratory research questions. Because the confirmatory employment measure was observed over a period of months, the study also conducted an exploratory analysis that included the number of months that elapsed between enrollment and measurement of the confirmatory outcome as a covariate in the impact model to investigate the sensitivity of the results to the timing of the measure. Exhibit C-2 shows that the finding remains the same.

Wage Increase

Abt analyzed two types of wage increases to address exploratory Research Questions 1 and 2 concerning hourly wages: (1) the maximum hourly wage increase for participants in months 1-14 after enrollment, and (2) the latest hourly wage increase for participants in months 1-14 after enrollment. The analyses of participants' maximum hourly wage data indicated that a slightly higher percentage of BCO treatment group participants (87.5%) increased their hourly wages compared to FOC comparison group participants (85.2%), but this difference is not statistically significant. A similar pattern was found in the analyses of participants' latest hourly wage after enrollment.

Abt analyzed participants' mean hourly wage increase in months 1-14 after enrollment. Exhibit C-1 shows that FOC comparison group participants' maximum mean hourly wage increase ($11.80) was significantly higher than the maximum mean hourly wage increase for BCO treatment group participants

($10.38), with an impact of -$1.42 for the treatment group. Analyses of the latest mean hourly wage increase indicated the same pattern of results.

We also analyzed participants' mean hourly wage in months 1-14 after enrollment. Exhibit C-1 shows that FOC comparison group participants' maximum mean hourly wage ($15.00) was higher than the maximum mean hourly wage for BCO treatment group participants ($13.23), with an impact of -$1.77 for the treatment group. Analyses of the latest mean hourly wage showed the same pattern of results.

Hours Worked

Research Question 3 explored whether participants increased the number of hours they worked in a week in months 1-14 after enrollment. Exhibit C-1 shows that BCO treatment group participants (92.4%) were slightly more likely than comparison group participants (91.3%) to increase the number of hours that they worked in a week, but this increase is not statistically significant. We also examined the number of hours that participants worked during months 1-14 after enrollment and found that comparison group participants increased their number of hours worked in a week by 29.92 hours compared with treatment group participants, who increased the number of hours worked in a week by 28.72. However, this increase is not statistically significant.

The final analysis concerning hours worked examined the number of hours per week that participants worked in months 1-14 after enrollment. Exhibit C-1 shows that FOC comparison group participants worked a mean of 34.29 hours per work compared to BCO treatment group participants who worked a mean of 33.20 hours per week. This difference is not statistically significant.

Exhibit C-1. Impacts on Confirmatory and Exploratory Employment Outcomes

	BCO Participants	FOC Participants	Impact	Standard Error	*p*-Value [a]
Job Status (Confirmatory)					
Job Status Improvement	55.6%	36.8%	18.7%	3.0	.000***
Wage (Maximum Wage at Follow-up) (Exploratory)					
Wage Increase	87.5%	85.2%	2.3%	2.0	.251
Mean Hourly Wage Increase	10.38	11.80	-1.42	0.41	.001**
Mean Hourly Wage at Follow-up	13.23	15.00	-1.77	0.39	.000***
Wage (Latest Wage at Follow-up) (Exploratory)					
Wage Increase	86.5%	85.3%	1.2%	2.0	.537
Mean Hourly Wage Increase	10.02	11.85	-1.83	0.39	.000***
Mean Hourly Wage at Follow-up	12.89	14.83	-1.93	0.36	.000***
Hours Worked (Latest Hours Worked at Follow-up) (Exploratory)					
Hours Worked Increase	92.4%	91.3%	1.1%	1.7	.523
Mean Hours Worked Increase	28.72	29.92	-1.19	0.99	.230
Hours Worked per Week at Follow-up	33.20	34.29	-1.09	0.83	.187

[a] *p*-Values shown in this column are for tests of whether there was a statistically significant impact for the outcome in the row.
Notes:
* Difference is statistically significant at the .05 level.
** Difference is statistically significant at the .01 level.
*** Difference is statistically significant at the .001 level.
Sample Sizes:
Job Status Improvement: BCO Participants=673 clients, FOC Participants=566 clients.
Wage Increase: BCO Participants=407 clients, FOC Participants=288 clients.
Mean Hourly Wage Increase: BCO Participants=407 clients, FOC Participants=288 clients.
Mean Hourly Wage at Follow-up: BCO Participants=523 clients, FOC Participants=310 clients.

Hours Worked Increase: BCO Participants=367 clients, FOC Participants=269 clients.
Mean Hours Worked Increase: BCO Participants=367 clients, FOC Participants=269 clients.
Hours Worked per Week at Follow-up: BCO Participants=484 clients, FOC Participants=291 clients.
Source: BCO and FOC administrative records in Salesforce FFT™ Employment /Employment Advancement Record, FFT™ Employment Counseling Record.

Exhibit C-2. Sensitivity Analysis: Impact on Confirmatory Employment Outcome Controlling for Number of Months Between Enrollment and Measure of Outcome

	BCO Participants	FOC Participants	Impact	Standard Error	*p*-Value [a]
Job Status (Confirmatory)					
Job Status Improvement	55.6%	40.7%	14.8%	3.0	.000***

Note: ***Difference is statistically significant at the .001 level. Data include 673 participants in BCO programs and 566 participants in FOC programs. Percentage of participants represents those who had a "job improvement" in 1-14 months after program enrollment.
Source: BCO and FOC administrative data in Salesforce: FFT™ Employment Record/Job Advancement Record.

Interpretation of Results

The overall results concerning BCO treatment and FOC comparison groups' wage increases show that most participants in both groups increased their wages from the time of their enrollment in the BCO or FOC program to follow-up, and both groups increased the amount of their mean hourly wages. Both groups also increased their mean hourly wage at follow-up. The fact that both BCO treatment and FOC comparison group participants received employment services may account for the large percentage of both groups who increased their overall wages and mean hourly wages. The value of participating in occupational training and earning occupational credentials did not have an effect during this short-term follow-up period.

One factor that might explain why the treatment group's mean hourly wage at follow-up is lower than the FOC comparison group's is that over half (55%) of the BCO treatment group obtained jobs in the supportive healthcare sector, where the hourly rate of pay is often at minimum wage. In contrast, over half (59%) of FOC comparison group participants obtained jobs in building and grounds, food preparation, and office and administrative support sectors where the hourly rate of pay might have been higher than jobs in healthcare.

Financial Well-Being

The impact study's exploratory research questions related to financial well-being and results from the analyses to address those questions are described below.

Exploratory Research Questions for Financial Well-Being

1. Are BCO participants more likely to have lower overall debt after program entry relative to a comparison group who received only FOC services?

2. Are BCO participants more likely to have increased their net worth after program entry relative to a comparison group who received only FOC services?

Impacts on Financial Well-Being

Presented in Exhibit C-3 are the findings from the financial well-being impact analyses. The far-left column in the table lists the financial well-being outcomes that are reported. The second column contains the outcomes for the treatment group and the third column contains the outcomes for the comparison group. The fourth column lists the impact results. The fifth column lists the standard error, and the six column provides the p-Value for each impact. Because the confirmatory financial well-being measure was

observed over a period of months, the study also conducted an exploratory analysis that include the number of months that elapsed between enrollment and measurement of the confirmatory outcome as a covariate in the impact model to investigate the sensitivity of the results to the timing of the measure. Exhibit C-4 shows that the finding remains the same.

Total Debt

Abt examined participants who had a measure of total debt at baseline and follow-up and analyzed whether their total debt was lower at follow up than at baseline. For the debt analysis, the calculations excluded student loans, mortgages, and transportation loans, which has been LISC's practice in previous studies.

Exhibit C-3 shows that comparison group participants (57%) were more likely to decrease their debt than treatment group participants (29%), with an impact of -28% for the treatment group. Comparison group participants also decreased their debt by $3,057.70 while treatment group participants increased their debt by $1,785.17.

Net Worth

Abt also examined participants who had a measure of net worth at baseline and follow-up and analyzed whether their total net worth was higher at follow up than at baseline. Exhibit C- 3 shows while both treatment and comparison group participants had increased their net worth, a larger percentage of comparison group participants (65%) increased their net worth compared with treatment group participants (41%). Comparison group participants' mean change in net worth was $9,954.86 compared with treatment group participants' mean change in net worth, which was $2,636.26.

Exhibit C-3. Impacts on Confirmatory and Exploratory Financial Well-Being Outcomes

	BCO Participants	FOC Participants	Impact	Standard Error	*p*-Value [a]
Credit Score (Maximum Credit Score at Follow-up) (Confirmatory)					
Credit Score Increase	68.0%	79.8%	−11.8%	7.1	.100
Credit Score Level Increase	28.7%	36.3%	−7.5%	7.4	.310
Credit Score Reached 580	59.7%	67.7%	−8.0%	7.3	.272
Credit Score Reached 620	35.4%	42.7%	−7.4%	5.6	.192
Credit Score Value at Follow-Up	604.1	607.9	-3.8	8.1	.637
Credit Score (Latest Credit Score at Follow-Up) (Confirmatory)					
Credit Score Increase	54.8%	76.7%	−21.9%	7.6	.005**
Credit Score Level Increase	23.7%	32.8%	-9.1%	7.1	.202
Credit Score Reached 580	49.7%	63.1%	−13.4%	7.5	.076
Credit Score Reached 620	31.1%	36.3%	−5.3%	5.4	.333
Credit Score Value at Follow-Up	591.5	605.7	-14.2	9.0	.117
Financial Worth [b] (Exploratory)					
Debt Decrease	29.0%	57.0%	−28.0%	7.5	.000***
Net Worth Increase	41.0%	65.0%	−24.0%	7.9	.002**
Change in Debt	1,785.17	-3,057.70	4,842.86	1,603.53	.003**
Change in Net Worth	2,636.26	9,954.86	-7,318.60	4,640.87	.117

[a] *p*-Values shown in this column are for tests of whether there was a statistically significant impact for the outcome in the row.
[b] Calculations for debt and net worth exclude student loans, mortgages, and transportation loans.
Notes:
* Difference is statistically significant at the .05 level.
** Difference is statistically significant at the .01 level.

*** Difference is statistically significant at the .001 level.
Sample Sizes:
Credit Score (Maximum Credit Score at Follow-Up): BCO Participants=181 clients, FOC Participants=79 clients.
Credit Score (Latest Credit Score at Follow-Up): BCO Participants=177 clients, FOC Participants=79 clients.
Financial Worth: BCO Participants=194 individuals, FOC Participants=81clientss.
Source: BCO and FOC administrative data in Salesforce: FFT™ Credit Report Record, FFT™ Balance Sheet Record.

Exhibit C-4. Sensitivity Analysis: Impact on Confirmatory Financial Well-Being Outcome Controlling for Number of Months Between Enrollment and Measurement of Outcome

	BCO Participants	FOC Participants	Impact	Standard Error	*p*-Value [a]
Credit Score (Confirmatory)					
Credit Score (Maximum Credit Score at Follow-Up) Increase	68.0%	84.5%	-16.5%	6.9	.018*

Note: Data include 181 participants in BCO programs and 79 participants in FOC-only programs. Percentage of participants represents those whose maximum credit score after program enrollment was higher than their credit score at intake.
Source: BCO and FOC administrative data in Salesforce: FFT™ Credit Score Record.

Interpretation of Results

The FOC comparison group participants' increases in net worth and decreases in debt might be explained by the length of time since they have been in the workforce since enrolling in the FOC compared with BCO treatment group participants. The comparison group participants' length of time in the workforce along with their possibly higher hourly wage rates might have enabled them to reduce their debt in the near term compared to treatment group participants.

Education

Abt's evaluation plan included an exploratory research question for the treatment group concerning whether BCO participants were likely to increase their reading skills (as measured by a standardized test) after participating in the BCO program. To address this question, Abt conducted a pre-post analysis of all treatment group participants' performance on the Test for Adult Basic Education (TABE®) Reading Test, not just individuals included in the matched samples. Exhibit 12 in the main body of the report shows the results from the pre-post analysis of the TABE® Reading scores for the whole treatment group. Exhibit C-5 shows the results of the pre-post analysis of TABE® Reading test scores by BCO treatment site. The sites varied in the amount of complete pre-post data that were entered into the Salesforce database, with two sites submitting minimal data. Four of the sites had statistically significant gains in reading test scores with small effects.

Exhibit C-5. TABE® Reading Pre-Post Test Results by BCO Site

	All BCO Sites	Site A	Site B	Site C	Site D	Site E	Site F	Site G
Number of Learners	(n=282)	(n=4)	(n=36)	(n=6)	(n=1)	(n=155)	(n=12)	(n=68)
Average Test Score Gain from Pre- to Final Post Test	9.05	19.00	-12.81	-4.67	13.00	8.98	8.75	21.40
Standard Deviation of Pre-Test	65.99	19.50	54.79	50.42	-	48.75	31.33	60.03
Standardized Test Score Gain	0.14	0.97	-0.23	-0.09	-	0.18	0.28	0.36
***p*-Value of Gain from Paired T-Test**	0.0002***	0.004**	0.078	0.460	-	0.001**	0.589	0.0004***

Notes:
* Difference is statistically significant at the .05 level.
** Difference is statistically significant at the .01 level.
*** Difference is statistically significant at the .001 level.
Source: BCO administrative data in Salesforce: FFT™ TABE® Records.

Exhibit C-6 shows the distribution of BCO sites' comparison group participants' reading skills by grade level-equivalence at baseline. A slightly higher percentage of participants scored below the 6th grade equivalent at baseline. This finding is likely due to the large number of participants at Site D and Site E, whose native language is not English. The treatment group participants are distributed across the four grade-equivalent levels, which reflects the BCO treatment sites' skill criteria for participating in the occupational training that they offered. Sites generally enrolled participants who tested at the 6th grade equivalent or higher at program intake.

Exhibit C-6. TABE® Reading Pre-Test Results for BCO Participants at Baseline by Site

	All BCO Sites (n=1,133)	Site A (n=217)	Site B (n=117)	Site C (n=130)	Site D (n=146)	Site E (n=354)	Site F (n=24)	Site G (n=145)
Reading	(n=594)	(n=83)	(n=110)	(n=73)	(n=47)	(n=170)	(n=19)	(n=92)
Grade Equivalent <5.9 (%)	29.6	6.0	15.5	19.2	8.5	72.4	0.0	14.1
Grade Equivalent 6.0-8.9 (%)	24.9	20.5	31.8	32.9	19.2	18.2	26.3	29.4
Grade Equivalent 9.0-10.9 (%)	19.9	27.7	25.5	26.0	19.2	7.7	26.3	22.8
Grade Equivalent 11-12.9 (%)	25.6	45.8	27.3	21.9	53.2	1.8	47.4	33.7

Source: BCO administrative data in Salesforce: FFT™ TABE® Record.

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