



Evaluation of a Demand Driven Vorkforce Solution

Skills for Chicagoland's Future Evaluation Project 2017



Executive Summary

INTRODUCTION

Skills for Chicagoland's Future (Skills) creates demand-driven solutions for employers to get the un- and under-employed back to work. Skills contracted with New Growth Group, LLC (New Growth) in June 2015 to evaluate the effectiveness of their model. New Growth is an independent, private consulting company located in Cleveland, Ohio. New Growth's expertise is in workforce development, and program evaluation is a core competency.

The evaluation activities are centered around the research question:

How do employment outcomes and use of public benefits for unand under-employed job seekers that Skills places compare to outcomes for other similar job seekers?

CONCLUSIONS

This evaluation shows Skills' model has positive return on investment, positive impact on earnings, positive impact on employment retention, and no deterioration of effects over 2 years of follow-up.

Other programs benchmarked from the literature show less positive impact on earnings and a tendency to decrease in effectiveness over time.





RETURN ON INVESTMENT

Based on an average cost to place of \$3,500, Skills' return on investment (ROI) exceeds 75% for one year's worth of impact and exceeds 250% for two years' worth of impact.

IMPACT ON EARNINGS

Skills' placements earned \$6,120 per year more than comparison individuals post placement on average. Those with the lowest prior earnings saw the largest impact.

Table ES1:

How much more Skills' placements earned per year than comparison individuals post placement

Earnings Prior to Placement	Skills' Placements' Excess Earnings
Low	\$9,640
Middle	\$4,160
High	\$2,160

The size of Skills' impact was consistent across demographics like race, age, and gender. Among industries, healthcare and business or financial services saw the largest impact (\$11,000 annual increase in earnings for Skills' placements), and retail and food services saw the smallest impact (\$4,000 annual increase).



Figure ES1:

Average quarterly earnings over time. Each panel highlights a pre-placement earnings group and shows Skills' placements out earning comparison individuals post placement. Also, Skills' placements' earnings show no signs of deteriorating over time.



IMPACT ON EMPLOYMENT

Skills' placements were more likely to be employed 1 year and 2 years post placement by Skills than were comparison individuals.

Table ES2:

Employment retention at 1 and 2 years

Years post placement	Comparison employment retention	Skills' Placement Employment Retention	Difference
1 year	65%	78%	13%-points
2 year	62%	73%	11%-points

As with earnings, the impact of Skills on employment retention was greater for those in the low prior earnings group: 32%-points and 24%-points for 1 and 2 year retention, respectively.

Although post placement Unemployment Insurance (UI) data was not available for comparison individuals, the Skills' placements experienced a drop in UI usage from 46% prior to placement to 13% post placement. In particular, of those Skills' placements who were on UI prior to placement, only 18% received the benefit post placement.

STUDY DESIGN

Participants in this study are those individuals placed by Skills from Q1 of 2014 through Q2 of 2015. There are 1197 such individuals in the Skills database. Of those, 600 are identifiable in the state wage database at the Illinois Department of Employment Security (IDES) (i.e., the combination of name and social security number from the Skills database matches an individual in the IDES database). Therefore, these 600 are the focus of the comparative analysis. Comparing these 600 individuals to the 597 who are not identifiable in the state wage database finds the two groups to be similar demographically: age, race, gender, education, and location (at the zip code level).

Due to the availability of data, the comparison strategy is complicated. Of 600 Skills' placements, 306 appear in the Unemployment Insurance (UI) system, which includes demographic information. Therefore, for these Skills' placements, a comparison group was constructed that is matched on age, race, gender, education, and location, as well as prior earnings history. Of 294 Skills' placements not in the UI system, 226 were matched to a comparison group based on prior earnings history. The remaining 68 Skills' placements did not have a quality matching comparison group because they had unusual earnings histories, typically manifested as no earnings at all.

Demographically, the Skills' placements and comparison individuals are similar. Skills' placements and comparison individuals have similar earnings history, but the Skills' placements see a more pronounced dip in the quarter prior to placement by Skills.

Individuals were assigned to one of three groups of roughly equal size based on how much they earned in the year prior to placement by Skills:

Low	Middle	High
less than \$4,000	between \$4,000 and \$12,000	more than \$12,000

Note that many individuals have no earnings at all for some quarters, and including these \$0 quarters deflates the average earnings.

Researching the literature on similar evaluations shows very few comparable studies. Review of studies of: welfare-to-work, Unemployment Insurance (UI) beneficiaries, Workforce Investment Act (WIA) Adult programs, the Job Training Partnership Act (JTPA), and Detroit's Work First program reveal earnings impacts that vary from \$500 to \$6,000 annually for programs without a training component, and topping out at \$8,000 annually for some training programs. Note, of course, that the increased earnings impact from training must be balanced against the increased cost of providing the training. Also note that the WIA evaluation shows continuously declining impact beginning in quarter two compared to the current evaluation's steady to increasing impact.

The key limitation of the current study is the possibility of a selection effect because Skills' placements are job seeking in a way that cannot be assumed for the comparison groups. The study would be further strengthened by following everyone for additional years to assess longer-term impact.

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Background



Skills for Chicagoland's Future (Skills) is a

public-private partnership working to match businesses that have current, unmet hiring needs with qualified, unemployed and underemployed job seekers. Whereas other public service providers may have mandates to provide universal service to job seekers, Skills differentiates itself by first and foremost working to meet the demands of businesses. This "demanddriven" approach starts with the hiring needs of employers and works to find qualified unemployed or underemployed job seekers to fill jobs.

The Skills model focuses on match quality – finding the right individual to fill the job order. The organization is dedicated to creating access to employers for qualified unemployed and underemployed job seekers, many of whom come from underserved communities or populations. The operation devotes significant effort to cultivating relationships with businesses that result in commitments to hire. Jobs range across industry, experience level, and include both full-time, parttime, and seasonal positions.

Skills recruits using a variety of direct and indirect sourcing strategies, including digital marketing, the state unemployment insurance claimant database, referral partnerships with workforce development agencies and community colleges, and event-based recruiting. Upon initial engagement, job seekers complete a Job Seeker Profile, which includes a resume, and apply for positions in which they are interested. Skills' team of Talent Acquisition Leads reviews applications for potential matches and reaches out to interview candidates – first via phone, then face-to-face – prior to referral to business hiring managers. There is no cost to job seekers.

Employers are cultivated and managed by members of a Client Services Team. Additionally, the team can develop training strategies if matching candidates are not easily available and work with companies to access available public funding such as Workforce Innovation and Opportunity Act On-the-Job training or customized training funds. Matches that incorporate training are called train-to-hire jobs. There is no cost to businesses.

The key hypothesis is that the Skills model results in placements that are more beneficial to job seekers than what they would have achieved independently.

This evaluation uses an econometric approach to assess the merits of this hypothesis. It draws on the literature on placement-first employment programs and staffing agencies to investigate underlying dynamics.



Literature Review

Researching the literature on similar evaluations shows very few comparable studies. Review of studies of: welfare-to-work, Unemployment Insurance (UI) beneficiaries, Workforce Investment Act (WIA) Adult programs, the Job Training Partnership Act (JTPA), and Detroit's Work First program reveal earnings impacts that vary from \$500 to \$6,000 annually for programs without a training component, and topping out at \$8,000 annually for some training programs. Note, of course, that the increased earnings impact from training must be balanced against the increased cost of providing the training. Also note that the WIA evaluation shows continuously declining impact beginning in quarter two compared to the current evaluation's steady to increasing impact.

Placement-oriented employment programs emphasize rapid job placement as opposed to training or other interventions. Many employment programs for low-skilled workers facilitate rapid placement with the philosophy that connecting people to paying jobs is a direct response to the ills of unemployment and that skills, experience, and connections gained through work are important for individual advancement. Evaluation evidence supports the notion that rapid placement programs are at least modestly effective in raising the earnings and employment of participants.¹ An extensive meta-analysis of workforce program evaluations found that placement services and related programs have generally positive impacts, especially in the short run.² Evaluations of placement-oriented employment programs are as varied as the programs themselves. Differences include characteristics of the service population, definitions of intended outcomes, features of the service model, the bundling of targeted programs with other programs, service geography, and job market. Skills, for example, has unique approaches for participant intake and job order development that distinguish it from other programs. Similarly, evaluations have varying designs that make general comparisons difficult including study timeframes and duration, definitions of participants, definitions of outcomes, and counterfactual approaches.

Much evaluation evidence comes from governmentfunded programs such as welfare-to-work, Unemployment Insurance, and Workforce Investment Act programs, which are not directly comparable to Skills, but offer a frame of reference. Several prominent examples come from the welfare-to-work world. For example, Autor and Houseman (2005) find in an evaluation spanning 1999 to 2003 that over a seven-quarter follow-up period, participants in a welfare-to-work program in Detroit who were placed into permanent jobs saw earnings increases of \$493 (\$658 in 2015 dollars) per quarter.³ A prominent national evaluation of welfare-to-work strategies conducted by the evaluation firm MDRC in the late 1990s found that earnings were increased by more than \$125 (\$184) per quarter, on average over the first two-years postplacement for individuals participating in placement-first services in three cities.⁴ For context, over one third of Skills participants utilized either SNAP or TANF benefits prior to placement by Skills.

¹ Does Workforce Development Work? King, Christopher. Workforce Narrative Project. Annie E. Casey Foundation. January 2008.

² Active Labor Market Policy Evaluations: A Meta-Analysis. Card, David, et al. National Bureau of Economic Research. Working Paper 16173. July 2010.

- ³ Temporary Agency Employment as a Way Out of Poverty. Autor, David and Houseman, Susan. National Bureau of Economic Research. Working Paper 11742. November 2005.
- ⁴ Evaluating Two Welfare-to-Work Program Approaches: Two-Year Findings on Labor Force Attachment and Human Capital Development Programs in Three Sites. Hamilton, Gayle, et al. U.S. Department of Health and Human Services Administration for Children and Families. December 1997.

A rigorous evaluation of job placement assistance programs for Unemployment Insurance (UI) beneficiaries in Washington D.C. and Florida in 1995/1996 found that impacts of the program on quarterly earnings in D.C. were about \$200 (\$300) per quarter relative to a control group, and persistent over the 10- quarter follow-up period, but in Florida quarterly earnings tended to be smaller and not statistically significant.⁵ For context, 46% of Skills' participants utilized UI benefits prior to placement.

An econometric evaluation of Workforce Investment Act (WIA) Adult programs in the 2003-2005 time period found large impacts on earnings from non-training services immediately after placement that diminished in subsequent quarters; and lower initial returns for recipients of training that grow over time into fairly noteworthy gains. For WIA participants who do not obtain training, the initial earnings gain relative to a comparison group in the quarter following program entry was approximately \$550 (\$694) for women and nearly \$700 (\$883) for men. However, following the initial quarter, the impacts decline continuously, approaching \$200 (\$252) for women and \$300 (\$379) for men after 16 quarters. The evaluators conclude that participants are likely to gain \$100 (\$126) or \$200 (\$252) per guarter over the four years following program entry. At the same time, WIA training impacts were observed to be greater, suggesting benefits of over \$400 (\$505) per quarter by quarter 10.6

A national randomized experiment on the Job Training Partnership Act, the federal predecessor to the Workforce Investment Act, found that earnings impacts for women ranged from \$533 (\$711) annually for Classroom Training to nearly \$1,500 (\$2,000) annually for OJT/Job Search Assistance. Impacts for adult men in the study were \$1,329 for Classroom Training (\$1,774), \$1,641 for OJT/JSA (\$2,190), and \$1,249 overall (\$1,667).⁷

Not everyone is served well in placement-oriented interventions. For example, Autor et al. (2017) observe that in Detroit's Work First program, individuals entering the program in the lower quartile of the participant's earnings distribution are served less effectively than individuals in the upper quartile.⁸ Of note, 20 percent of participants were placed in temporary help jobs and 80 percent were placed in direct-hire jobs. The analysis factors-in the two distinct types of placements observing differentiated effects. Direct-hire placements did not affect the employment or earnings outcomes of individuals in the lower quartile one year after job placement. Whereas, direct-hire placements improved earnings and employment outcomes for individuals in the upper quartile. Temporary hire placements did not benefit anyone regardless of quartile.



⁵ Assisting Unemployment Insurance Claimants: The Long-Term Impacts of the Job Search Assistance Demonstration. Decker, Paul T., et al. U.S. Department of Labor Employment and Training Administration. February 2000.

⁶ Workforce Investment Act Non-Experimental Net Impact Evaluation Final Report. Heinrich, Carolyn J., et al. IMPAQ International. December 2008.

⁷ Does Training for the Disadvantaged Work? Evidence from the National JTPA Study. Orr, Larry L., et al. The Urban Institute Press. January 1996.

⁸ The Effect of Work First Job Placements on the Distribution of Earnings: An Instrumental Variable Quantile Regression Approach. Autor, David H., et al. Journal of Labor Economics, 2017, vol. 35, no.1.



The notion that placement-oriented models may not be effective for everyone is influential in this report.

Whereas the Detroit Work First program is obligated to serve all clients, the Skills model is designed to fill job orders received from businesses with the most qualified candidates available. There is no obligation to serve every job seeker registered in the system. Skills may be effective in identifying individuals more likely to achieve success. This evaluation investigates the characteristics of Skills' participants, including pre-Skills earnings, to assess the effectiveness of Skills in identifying qualified, low-income candidates.

While Autor et al. (2017) find that placement into temporary help jobs did not benefit participants in Detroit's Work First program, there is other evidence that temporary jobs can help low earners advance into more stable and higher wage jobs. The characteristics of specific jobs and firms, separate from the characteristics of workers, affect the earnings and employment outcomes of low-skilled workers.⁹ Temporary placement agencies can help introduce workers to beneficial jobs and firms they may not have otherwise accessed. Skills uses the terminology "access gap" to describe the challenges that many people in Chicago face when seeking to gain traction and advance in careers. Andersson et al. (2007), using a massive dataset on firms and employees, found that temporary agencies can have positive effects on earnings for those who manage to transition to stable non-temp employment. In a longitudinal study of employment, temporary placement workers rose to higher levels of earnings than their non-temp comparisons due to being less likely to work in agriculture, retail, or other service fields; and over time more likely to work in higher-wage fields including manufacturing. The notion that workforce intermediaries can introduce workers to networks of firms and jobs that they otherwise may not have accessed is addressed in this evaluation by considering the mix of industries at which Skills places workers relative to the workplaces of comparison individuals.

⁹ Temporary Help Agencies and the Advancement Prospects of Low Earners. Andersson, Fredrik., et al. National Bureau of Economic Research. Working Paper 13434. September 2007.

Study Design

STUDY DESIGN - PARTICIPANTS

Study design begins with the Skills' participant database. Skills tracks the individuals it serves including demographics and placement information. Individuals who have been placed by Skills are the target group under study. For the purposes of this report, the sample is restricted to those who were placed by Skills between the first quarter of 2014 and the second quarter of 2015, totaling 1197 participants.

Because state wage record data is a key source of outcomes data for this study, participants are categorized by who can be found in the state wage system (i.e., those who have social security numbers available in the Skills database). The Illinois Department of Employment Security (IDES) is the state entity with control over the records. The list of Skills' participants was submitted to IDES, and they matched these individuals to the wage records.

Based on these criteria, there are 600 participants with earnings data available and 597 participants without available earnings data.

Table 1:

Number of participants Number of participants **Quarter of placement** with earnings data without earnings data 2014 Q1 104 43 2014 Q2 165 28 2014 Q3 115 15 2014 Q4 142 47 2015 Q1 61 145 2015 Q2 13 309 Total 600 597

Number of participants over time by participant group

The number of individuals that Skills placed per quarter increased significantly over time, from less than 150 to more than 300. However, starting in 2015, Skills stopped mandating SSNs from every job seeker placed in order to lower the barrier to applying to jobs via Skills. Therefore, the number of participants with earnings data available per quarter dwindles over time.

The focus of the Final Report is the 600 participants who appear in the wage record data.



COMPARISON OF PARTICIPANT GROUPS

Because half of the participants do not have earnings data available, it is important to investigate group differences between the two groups.

Table 2:

Demographics of participant groups

Demographic	Participants with earnings data (n=600)	Participants without earnings data (n=597)
Male gender	38%	41%
Black or African American	80%	73%
Associate's degree or higher education	38%	32%
25 years of age or older	78%	60%
Average age (standard deviation)	34 (11)	29 (10)

The participant groups are similar, demographically. The correspondence is not perfect, but the differences are not large enough to endanger the validity of the conclusions of the report.

Additionally, the maps below show the geographic comparison of participant groups, based on the home zip-code listed in the Skills database.

Figure 1:

Map of participant locations by participant group





Geographically, the participant groups are concentrated in the same areas.

SURVEY

In order to obtain data directly from the individuals Skills serves, a survey was constructed and administered via email and phone in the first quarter of 2016. Of 1197 individuals, 1109 had contact information available, and of those 326 (29%) responded.

Analysis of the survey data was the focus of the Interim Report, completed in June 2016, which can be found as an appendix to this Final Report.

STUDY DESIGN - COMPARISON STRATEGY

As noted above, 600 Skills participants were identified in the wage records databases housed at the Illinois Department of Employment Security (IDES). The next step was to identify individuals as similar as possible to the participants to serve as a comparison group.

Criteria for comparison included demographics and prior earnings history, but data sources are notoriously difficult to find. IDES does not track demographic information in the wage record system. Fortunately, they do have demographic information for individuals who appear in the Unemployment Insurance (UI) system. Therefore, the 600 Skills participants were submitted to IDES for identification of UI status. It was determined that 306 participants appear in the UI new claimant database. Comparison individuals were extracted from the UI new claimant database based on matching demographics. Specifically, age, race, gender, education, and location at the zip code level were used in constructing a preliminary match with oversampling. That is, 14 potential comparison individuals were identified for each participant (14 chosen due to financial constraints due to data acquisition fees based on sample size).

The match was then further refined based on prior earnings for the quarters prior to placement. The 4 best matches (closest quarterly earnings to the participant) were retained as the final comparison group for the participants who appear in the UI claimant database.

For the 294 participants who do not appear in the UI claimant database, a match was developed based on quarterly earnings in the quarters prior to placement by Skills. Through this process, 226 participants were matched. These individuals are not matched with their comparisons on demographic variables. Although demographics are known for the participants (through Skills' database), they are not known for the comparison individuals because only their earnings data was available.

This leaves 68 participants who do not have a quality matching comparison group. This group is dominated by individuals who do not have any earnings prior to placement by Skills (presumably long-term unemployed and/or young adults who have not previously held employment). With no prior earnings, it is not possible to construct a comparison group based on prior earnings.

In summary, the participants and comparison individuals are grouped as follows:

Table 3:

Matching characteristics of participant and comparison groups

Demographic	Sample size	Match based on
Participants in UI	306	Age, race, gender, education, location,
Comparisons in UI	1224	use of UI, and prior earnings
Participants not in UI	226	
Comparisons not in UI	641	Non-use of of and prior earnings
Participants with no match	68	No good matches available



Demographics of Participant and Comparison Groups

Below is a summary of the demographic characteristics of each group. Note that the "Comparisons not in Ul" group is not included below because there is no demographic information available on this group (see also Study Design – Comparison Strategy above).

Table 4:

Demographics of participants and comparisons by group

Demographic	Participants with no match	Participants not in Ul	Participants in Ul	Comparisons in Ul
Average age at placement (standard deviation)	36 (10)	32 (10)	35 (11)	35 (11)
25 years of age or older	83%	69%	84%	84%
Black or African American	80%	79%	81%	86%
Male gender	36%	37%	39%	40%
Associate's degree or higher education	44%	36%	39%	41%
Southside Neighborhood	47%	45%	43%	44%

The only two groups that are directly comparable are the participants versus comparisons for those found in the UI claimant database. However, all groups are very similar demographically.

The conversion of zip codes into neighborhood definitions comes from choosechicago.com. Broadly, these are downtown, north, south, west, and exurb as shown.

Figure 2:

Crosswalk between zip codes and neighborhoods



The following table shows the breakdown of how many individuals live in each neighborhood by participant and comparison groups.

Table 5:

Neighborhoods by participant and comparison groups

Neighborhood	Participants with no match	Participants not in Ul	Participants in Ul	Comparisons in Ul
Downtown	4%	2%	3%	1%
Exurb	7%	15%	19%	20%
North	24%	17%	15%	15%
South	47%	45%	43%	44%
West	18%	21%	20%	20%

The participants and comparisons are similarly situated geographically.

Additional information about the participants from the Skills database includes the type of job placement by Skills.

Table 6:

Job placement characteristics of participants

Job placement characteristic	Percent
Full-time job	62%
Permanent (rather than temporary) job	85%
Full-time AND permanent	60%
Placed wage ≤ \$10.50/h	49%
\$10.50/h < Placed wage < \$13.00	28%
\$13.00 ≤ Placed wage < \$15.00	13%
\$15.00 ≤ Placed wage	10%
Aviation/Transportation/Security	15%
Business/Financial Services	43%
Food Services	17%
Healthcare	6%
Manufacturing	4%
Non-Profit/Government	1%
Retail	15%

The majority of Skills participants were placed in a permanent, full-time job. The most common industry was Business Services, followed by Food Services and Retail.



Study Outcomes

EARNINGS - PRIOR TO PLACEMENT

The primary outcome for this study is quarterly earnings. The quarters are indexed to each participant's quarter of placement. So, for a participant, the quarter of placement is the quarter when he or she was placed in employment by Skills. For a comparison individual, the quarter of placement is the same as his or her corresponding participant. Moving from the quarter of placement into the past refers to quarter 1 prior to placement, quarter 2 prior, ..., quarter 8 prior. Moving from the quarter of placement into the future refers to quarter 1 post placement, quarter 2 post, ..., quarter 8 post.

The range of quarters of placement is from 2014 Q1 to 2015 Q2, and the range of quarterly earnings is from 2013 Q1 to 2016 Q3. Therefore, the earliest quarter is 9 quarters prior (for those placed in 2015 Q2) and the latest quarter is 10 quarters post (for those placed in 2014 Q1). Because there are relatively few observations at the extreme ends, the timeframe is constrained to the range 8 quarters prior to 8 quarters post.

Below are 6 numerical summaries comparing quarterly earnings <u>prior to placement</u>. First is the furthest in the past, the average quarterly earnings averaged across 5-8 quarters prior to placement (or 2 years prior). Second is the average for 1-4 quarters prior to placement (or the 1 year immediately prior to placement). Third, is the percent change between 2 and 1 years prior. The next set of 3 is similar but using just the single quarter 8 quarters prior, the single quarter 1 quarter prior, and the percent change.

Table 7:

Prior quarterly earnings	Participants with no match	Participants not in Ul	Comparisons not in Ul	Participants in Ul	Comparisons in Ul
5-8 quarters prior to placement	\$40	\$1,870	\$1,850	\$4,010	\$3,480
1-4 quarters prior to placement	\$350	\$1,920	\$1,980	\$2,900	\$3,090
% change from 2y prior to 1y prior	775%	3%	7%	-28%	-11%
8 quarters prior to placement	\$200	\$2,250	\$2,010	\$4,270	\$3,480
1 quarter prior to placement	\$270	\$1,890	\$2,370	\$1,970	\$2,710
% change from 8Q prior to 1Q prior	37%	-16%	18%	-54%	-22%

Quarterly earnings prior to placement by participant and comparison group

The participants and comparison individuals in the not-UI groups have almost identical time courses of quarterly earnings. In the UI groups, the participants start off (8 quarters prior) with higher quarterly earnings than comparisons, but their average earnings fall precipitously to be much lower than the comparisons by 1 quarter prior.

The following set of plots shows the trends graphically. Each graph shows a comparison in bold and, for context, the other groups in gray.





Quarter relative to quarter of placement

Participants start slightly above comparisons and then fall to a lower level before placement. Immediately prior to placement, participants have lower earnings than comparisons, on average, but overall the match between the groups is strong.





Quarterly earnings prior to placement for not-UI groups

Participants and comparisons are almost perfectly matched on prior earnings.



Figure 5: Quarterly earnings prior to placement for the unmatched group



The unmatched group has very low earnings because it is heavily weighted by participants who had no prior earnings and were therefore unmatchable. Although one would expect this to imply that this group would skew younger, the demographics of this group are very similar to the other groups, indicating that it also includes older, long-term unemployed individuals.

EMPLOYMENT RETENTION - PRIOR TO PLACEMENT

The secondary outcome for this study is whether or not an individual is employed in a quarter. Therefore, the metric is the percentage of individuals who are employed in a quarter.

Below are 6 numerical summaries comparing percentage employed prior to placement. First is the furthest in the past, the percentage employed averaged across 5-8 quarters prior to placement (or 2 years prior). Second is the average for 1-4 quarters prior to placement (or the 1 year immediately prior to placement). Third, is the percent change between 2 and 1 years prior. The next set of 3 is similar but using just the single quarter 8 quarters prior, the single quarter 1 quarter prior, and the percent change.

Table 8:

Employment retention prior to placement by participant and comparison group

Prior employed proportion	Participants with no match	Participants not in Ul	Comparisons not in Ul	Participants in Ul	Comparisons in Ul
5-8 quarters prior to placement	6%	55%	46%	73%	77%
1-4 quarters prior to placement	9%	59%	57%	68%	75%
% change from 2y prior to 1y prior	50%	7%	24%	-7%	-3%
8 quarters prior to placement	14%	58%	45%	83%	78%
1 quarter prior to placement	10%	60%	73%	62%	72%
% change from 8Q prior to 1Q prior	-28%	3%	62%	-26%	-8%

The participants and comparison individuals in the not-UI groups have similar time courses of employment, although the comparisons are rising in the proportion employed. In the UI groups, the participants start off (8 quarters prior) with similar level of employment as comparisons, but their employment falls more than the comparisons.

Using all available information on demographics and prior earnings, the study groups are very similar.



EARNINGS - PRIOR TO PLACEMENT BY EARNINGS GROUP

The previous sections grouped individuals based on the comparison strategy, and concluded that the comparison groups are similar to the participant groups. However, of more interest going forward is groupings based on earnings prior to placement.

Earnings prior to placement is defined as "average prior earnings (APE)": the average quarterly earnings for an individual from 8 quarters prior to placement to 1 quarter prior to placement. Individuals are then divided into 3 groups based on the tertiles of average prior earnings. The percentage of individuals in each group who have average prior earnings within each tertile is as follows:

Table 9:

Percentage of individuals falling into each prior earnings group

Average prior earnings	Comparisons	Participants	Overall
APE ≤ \$1,000	30%	40%	32%
\$1,000 < APE < \$3,000	30%	31%	33%
\$3,000 < APE	37%	29%	35%

Overall, these boundary values define tertiles quite precisely. The comparison group is skewed toward higher earnings, and the participant group is skewed toward lower earnings. This is consistent with comparison groups being slightly better off from an earnings perspective than participants prior to placement. The average earnings per group is as follows:

Table 10:

Average prior earnings within each prior earnings group

Average prior earnings	Comparisons	Participants	Overall
APE ≤ \$1,000	\$330	\$290	\$320
\$1,000 < APE < \$3,000	\$1,900	\$1,920	\$1,910
\$3,000 < APE	\$5,520	\$5,850	\$5,590

The average earnings per group are similar for each tertile. The comparison group has slightly lower earnings than the participant group for the two higher tertiles. In combination with the above results, this implies that, although there are more comparison individuals in these groups, this is offset by higher earnings for those in the corresponding participant groups.

In summary, the picture is one of close matching among the groups, as further shown in the following plots.

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Figure 6:

Quarterly earnings prior to placement for the **highest** prior earnings group



Quarter relative to quarter of placement

Overall, the participant group has higher average earnings, but their earnings plummet in the quarters immediately prior to placement.

Figure 7:

Quarterly earnings prior to placement for the middle prior earnings group



The participant and comparison groups have very similar average quarterly earnings prior to placement.



Figure 8:

Quarterly earnings prior to placement for the **lowest** prior earnings group



Quarter relative to quarter of placement

The participant and comparison groups have very similar average quarterly earnings prior to placement.



EARNINGS - POST PLACEMENT

Next, the analysis is expanded to consider what happens post placement. For participants and for comparisons, the average quarterly earnings from 8 quarters prior to placement through 8 quarters post placement is shown both tabularly and graphically. This is repeated for each prior earnings group.

Table 11:

Quarterly earnings over time (overall)

Quarters from quarter of placement	Comparison mean	Comparison N	Participant mean	Participant N	Difference in means
-8	\$2,890	240	\$3,040	74	\$150
-7	\$2,970	704	\$2,690	216	-\$270
-6	\$3,130	1,053	\$2,970	331	-\$170
-5	\$2,790	1,560	\$2,690	496	-\$100
-4	\$2,820	1,865	\$2,580	600	-\$250
-3	\$2,730	1,865	\$2,460	600	-\$270
-2	\$2,680	1,865	\$2,190	600	-\$480
-1	\$2,600	1,865	\$1,750	600	-\$850
0	\$2,880	1,865	\$2,340	600	-\$540
1	\$3,110	1,865	\$4,410	600	\$1.310
2	\$3,240	1,865	\$4,480	600	\$1,240
3	\$3,360	1,865	\$4,540	600	\$1,190
4	\$3,450	1,865	\$4,690	600	\$1,250
5	\$3,560	1,865	\$4,750	600	\$1,190
6	\$3,810	1,822	\$4,850	587	\$1,040
7	\$3,750	1,625	\$4,730	526	\$980
8	\$3,680	1,161	\$4,800	384	\$1,110



Figure 9: Quarterly earnings over time (overall)





Starting from lower average quarterly earnings in the quarters prior to placement, the Skills participants **achieve much higher earnings** post placement than the comparison. Both trends are slightly rising in the post placement period, and there is no apparent convergence in trends.



Table 12:

Quarterly earnings over time for the **highest** prior earnings group

Quarters from quarter of placement	Comparison mean	Comparison N	Participant mean	Participant N	Difference in means
-8	\$5,710	88	\$7,270	20	\$1,800
-7	\$5,710	252	\$6,920	63	\$700
-6	\$6,290	410	\$7,330	105	\$790
-5	\$5,760	569	\$6,790	141	\$960
-4	\$5,690	692	\$6,600	174	\$960
-3	\$5,500	692	\$6,290	174	\$610
-2	\$5,210	692	\$5,750	174	-\$220
-1	\$4,810	692	\$3,970	174	-\$1,100
0	\$4,820	692	\$3,280	174	-\$1,300
1	\$5,130	692	\$5,450	174	\$750
2	\$5,200	692	\$6,510	174	\$960
3	\$5,370	692	\$6,630	174	\$770
4	\$5,410	692	\$6,930	174	\$960
5	\$5,560	692	\$6,060	174	\$1,270
6	\$5,940	685	\$6,160	173	\$830
7	\$5,670	604	\$6,020	154	\$860
8	\$5,640	440	\$6,190	111	\$820





Figure 10: Quarterly earnings over time for the **highest** prior earnings group

Starting from lower average quarterly earnings in the quarters prior to placement, the Skills participants **achieve much higher earnings** post placement than the comparison. Both trends are slightly rising in the post placement period, and there is no apparent convergence in trends. Quarterly earnings over time for the **middle** prior earnings group

Quarters from quarter of placement	Comparison mean	Comparison N	Participant mean	Participant N	Difference in means
-8	\$1,720	81	1,950	30	\$230
-7	\$2,150	262	2,040	76	-\$110
-6	\$1,780	370	2,040	101	\$260
-5	\$1,830	522	2,010	155	\$170
-4	\$1,940	617	1,770	186	-\$170
-3	\$1,830	617	1,930	186	\$110
-2	\$1,920	617	2,000	186	\$80
-1	\$1,950	617	1,750	186	-\$200
0	\$2,330	617	2,260	186	-\$70
1	\$2,600	617	3,890	186	\$1,300
2	\$2,770	617	3,860	186	\$1,090
3	\$2,910	617	4,110	186	\$1,200
4	\$3,110	617	4,160	186	\$1,050
5	\$3,200	617	4,160	186	\$960
6	\$3,260	602	4,280	180	\$1,020
7	\$3,420	536	4,220	156	\$810
8	\$3,340	355	4,600	110	\$1,270





Figure 11: Quarterly earnings over time for the **middle** prior earnings group

Starting from very similar average quarterly earnings in the quarters prior to placement, the participants **achieve much higher earnings** post placement than the comparison. As with the highest tertile, both trends are slightly rising in the post placement period, and there is no apparent convergence in trends.

Table 14:

Quarterly earnings over time for the **lowest** prior earnings group

Quarters from quarter of placement	Comparison mean	Comparison N	Participant mean	Participant N	Difference in means
-8	\$740	71	\$680	24	-\$60
-7	\$470	190	\$310	77	-\$150
-6	\$240	273	\$270	125	\$30
-5	\$240	469	\$370	200	\$130
-4	\$240	556	\$250	240	\$10
-3	\$280	556	\$230	240	-\$60
-2	\$350	556	\$310	240	-\$50
-1	\$560	556	\$320	240	-\$250
0	\$1,070	556	\$1,540	240	\$470
1	\$1,160	556	\$3,750	240	\$2,590
2	\$1,310	556	\$3,730	240	\$2,420
3	\$1,350	556	\$3,720	240	\$2,370
4	\$1,370	556	\$3,890	240	\$2,520
5	\$1,460	556	\$3,700	240	\$2,240
6	\$1,690	535	\$3,860	234	\$2,170
7	\$1,710	485	\$3,820	216	\$2,110
8	\$1,670	366	\$3,790	163	\$2,120



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Figure 12: Quarterly earnings over time for the **lowest** prior earnings group

Starting from extremely low average quarterly earnings in the quarters prior to placement, the participants achieve dramatically higher earnings post placement compared to the comparison group. After rising to its post placement level, the trend remains flat thereafter.

EARNINGS - TRENDS POST PLACEMENT

The previous analyses showed that there were trends in average quarterly earnings over time for some groups post placement. The trends show a continued, modest rise in earnings during the post placement period with no signs of leveling off up to 8 quarters post placement.

This is an important finding because it stands in stark contrast to some of the evaluation results from the literature, where initial improvements in earnings were not sustained, and in fact decreased over time.

Here, the trends are formalized as the slope of the average earnings trends in the post placement time period from quarters 1 to 8. That is, the quarter-over-quarter increase in earnings, on average, post placement.

Table 15:

Average change in quarterly earnings per quarter by prior earnings group

Average prior earnings	Comparison increase per quarter	Participant increase per quarter
APE ≤ \$1,000	\$80	\$10
\$1,000 < APE < \$3,000	\$110	\$90
\$3,000 < APE	\$90	\$100

For each prior earnings tertile, comparisons show a small rise in average quarterly earnings in the post placement era. Participants show a similar rise, except for the lowest tertile, which is flat. The major change in earnings occurs at placement – the change from prior to placement to post placement is substantial.



EARNINGS - POST PLACEMENT BY AGE GROUP

A similar analysis as above, but rather than by prior earnings group, by age.

Figure 13:

Quarterly earnings over time for those **age 25 or older**



Although participants have lower earnings prior to placement, they have higher earnings post placement than comparisons, on average.



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Figure 14: Quarterly earnings over time for those **under age 25**

Although participants have lower earnings prior to placement, they have higher (and rising) earnings post placement than comparisons, on average.



EARNINGS - KEY COMPARISONS

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The previous analyses showed the trends in average quarterly earnings over time. Next, the earnings trend is converted to a summary measure, and that measure is compared across subgroups.

The summary measure is the difference between post placement earnings and prior to placement earnings. Specifically, the average quarterly earnings post placement minus average quarterly earnings prior to placement. Recall average prior earnings (APE) is the average quarterly earnings prior to placement. Table 16:

Difference between post placement and prior to placement average quarterly earnings by featured variables

Subgroup	Comparison increase in earnings	Participant increase in earnings	Difference
Overall	\$690	\$2,230	\$1,540
APE ≤ \$1,000	\$1,100	\$3,510	\$2,410
\$1,000 < APE ≤ \$3,000	\$1,150	\$2,190	\$1,040
\$3,000 < APE	-\$30	\$510	\$540
Less than 25 years of age 25 years of age or older	\$1,120	\$2,190	\$1,070
	\$490	\$2,240	\$1,750
White or other race	\$660	\$2,250	\$1,590
Black or African American	\$610	\$2,230	\$1,620
Male gender	\$540	\$2,060	\$1,520
Female gender	\$640	\$2,350	\$1,710
Less than Associate's	\$420	\$1,790	\$1,370
Associate's degree or higher	\$830	\$2,960	\$2,130
Other neighborhoods	\$690	\$2,280	\$1,590
Southside neighborhood	\$470	\$2,160	\$1,690
Downtown	\$2,600	\$2,180	-\$420
Exurb	\$790	\$2,510	\$1,720
North	\$440	\$2,310	\$1,870
South	\$470	\$2,160	\$1,690
West	\$630	\$2,080	\$1,450
No match	NA	\$3,770	NA
Not in Ul database	\$900	\$2,670	\$1,770
Ul database	\$590	\$1,570	\$980
Full-time placement Part-time placement	NA	\$2,330 \$1,660	NA
Permanent placement Temporary placement	NA	\$2,330 \$1,660	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	\$1,770 \$2,070 \$2,970 \$3,960	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	\$2,040 \$2,790 \$1,540 \$2,810 \$1,770 \$2,960 \$1,510	NA

Being a Skills participant rather than a comparison individual is associated with a greater increase in post placement quarterly earnings: \$1,540 more per quarter on average. This results holds up across comparisons in general. Both age groups show an increase for participants relative to comparisons, and the older age group does somewhat better than the younger age group. **And Skills appears to do better for those whose prior earnings are low compared to those whose prior earnings are higher.**

For additional subgroup analyses for this outcome, refer to Appendix A.

EMPLOYMENT RETENTION - POST PLACEMENT

The following analyses parallel the post placement earnings analyses above, now for the employment retention outcome.

Table 17:

Employment retention over time (overall). The proportion employed is the number of people employed divided by the total number of people.

Quarters from quarter of placement	Comparison proportion	Comparison N	Participant proportion	Participant N	Difference in proportions
-8	65	240	66	74	1
-7	69	704	59	216	-11
-6	67	1,053	58	331	-9
-5	65	1,560	59	496	-6
-4	67	1,865	58	600	-9
-3	68	1,865	60	600	-7
-2	68	1,865	58	600	-10
-1	72	1,865	55	600	-17
0	69	1,865	90	600	21
1	68	1,865	91	600	23
2	66	1,865	84	600	18
3	66	1,865	80	600	14
4	65	1,865	78	600	13
5	64	1,865	76	600	12
6	65	1,822	77	587	12
7	64	1,625	77	526	14
8	62	1,161	73	384	11

Note: although Skills believes all participants to be placed in employment, only 90% of participants are observed to have quarterly earnings in the quarter of placement. It is not clear why 10% of these individuals do not show up in the wage records. One possible explanation is difficulty in confirming placement. Skills relies on Human Resources of the companies where individuals are to be placed to confirm placement. It is possible that individuals "fall through the cracks" at the confirmation stage. Another possibility is individuals who are employed near the boundary of a quarter may have their earnings reported in a quarter other than what Skills has as the quarter of placement. Or, they may not show up in the wage record for some other reason.





Figure 15: Employment retention over time (overall)

Starting from a lower proportion employed in the quarters prior to placement, the participants achieve a higher proportion employed in the quarters following placement. Then, the trends drop off, but do not converge after the first 2 quarters post placement.
Table 18:

Employment retention over time for the **highest** prior earnings group

Quarters from quarter of placement	Comparison proportion	Comparison N	Participant proportion	Participant N	Difference in proportions
-8	90	88	95	20	5
-7	94	252	90	63	-4
-6	95	410	94	105	0
-5	93	569	92	141	-1
-4	94	692	97	174	3
-3	92	692	95	174	3
-2	91	692	83	174	-8
-1	90	692	76	174	-13
0	86	692	90	174	4
1	83	692	93	174	9
2	81	692	89	174	7
3	80	692	89	174	8
4	80	692	89	174	9
5	79	692	87	174	7
6	80	685	86	173	5
7	78	604	86	154	8
8	75	440	85	111	9





Figure 16: Employment retention over time for the **highest** prior earnings group

Starting from a similar proportion employed in the quarters prior to placement, the participants dip low then achieve a higher proportion employed in the quarters following placement. Then, the trends drop off, but do not converge.

Employment retention over time for the **middle** prior earnings group

Quarters from quarter of placement	Comparison proportion	Comparison N	Participant proportion	Participant N	Difference in proportions
-8	63	81	80	30	17
-7	73	262	70	76	-3
-6	71	370	66	101	-4
-5	73	522	71	155	-2
-4	78	617	72	186	-6
-3	78	617	74	186	-4
-2	75	617	75	186	-1
-1	77	617	73	186	-5
0	73	617	94	186	20
1	75	617	92	186	17
2	74	617	89	186	15
3	74	617	82	186	9
4	72	617	76	186	4
5	71	617	76	186	5
6	70	602	79	180	9
7	70	536	79	156	9
8	69	355	76	110	8





Figure 17: Employment retention over time for the **middle** prior earnings group

Starting from similar proportion employed in the quarters prior to placement, the participants achieve a much higher employment rate immediately post placement than the comparison. Then the gap narrows in the following quarters.

Employment retention over time for the **lowest** prior earnings group

Quarters from quarter of placement	Comparison proportion	Comparison N	Participant proportion	Participant N	Difference in proportions
-8	37	71	25	24	-12
-7	33	190	22	77	-11
-6	21	273	21	125	0
-5	22	469	26	200	5
-4	22	556	20	240	-2
-3	26	556	25	240	-1
-2	32	556	26	240	-5
-1	45	556	26	240	-19
0	41	556	86	240	44
1	42	556	88	240	47
2	40	556	77	240	37
3	40	556	72	240	33
4	38	556	70	240	32
5	37	556	69	240	32
6	39	535	68	234	29
7	38	485	69	216	32
8	39	366	63	163	24





Figure 18: Employment retention over time for the **lowest** prior earnings group

Starting from similar proportion employed in the quarters prior to placement, the participants achieve a much higher employment rate immediately post placement than the comparison. The initial high peak dissipates, but a considerable gap remains in the following quarters.



EMPLOYMENT RETENTION -KEY COMPARISONS

The previous analysis showed the trends in proportion employed over time. Next, the focus is turned to retention in employment during the post placement period and comparisons across subgroups.

The summary measure is a retention outcome calculated as whether or not an individual has earnings in the 4th quarter (year 1 retention) or 8th quarter (year 2 retention) after placement. Table 21:

Year 1 employment retention by featured variables

Subset	Comparison year 1 retention	Participant year 1 retention	Difference
Overall	65	78	13
APE ≤ \$1,000	38	70	32
\$1,000 < APE ≤ \$3,000	72	76	4
\$3,000 < APE	80	89	9
Less than 25 years of age 25 years of age or older	75	82	7
	70	76	6
White or other race	71	76	5
Black or African American	71	78	7
Male gender	67	74	7
Female gender	74	80	6
Less than Associate's	71	77	6
Associate's degree or higher	71	79	8
Other neighborhoods	71	78	7
Southside neighborhood	71	77	6
Downtown	67	100	33
Exurb	69	80	11
North	72	71	-1
South	71	77	6
West	72	79	7
No match	NA	68	NA
Not in Ul database	54	77	23
Ul database	71	80	9
Full-time placement Part-time placement	NA	79 75	NA
Permanent placement Temporary placement	NA	78 76	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	71 79 94 85	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	70 78 76 97 81 100 78	NA

Participants were consistently more likely to be retained in employment one year post placement. This result holds up across comparisons in general. As with the earnings outcome results above, for retention the lowest prior earnings tertile group saw the largest difference: 32 percentage points higher employment retention for participants relative to comparisons.

Table 22:

Year 2 employment retention by featured variables

Subset	Comparison year 2 retention	Participant year 2 retention	Difference
Overall	62	73	11
APE ≤ \$1,000	39	63	24
\$1,000 < APE ≤ \$3,000	69	76	7
\$3,000 < APE	75	85	10
Less than 25 years of age 25 years of age or older	78	77	-1
	68	72	4
White or other race	68	59	-9
Black or African American	69	75	6
Male gender	68	72	4
Female gender	71	70	-1
Less than Associate's	71	72	1
Associate's degree or higher	68	72	4
Other neighborhoods	71	70	-1
Southside neighborhood	69	77	8
Downtown	62	78	16
Exurb	65	68	3
North	73	66	-7
South	69	77	8
West	76	74	-2
No match	NA	51	NA
Not in Ul database	47	73	26
Ul database	70	78	8
Full-time placement Part-time placement	NA	73 73	NA
Permanent placement Temporary placement	NA	73 71	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	71 68 86 79	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	64 69 73 100 100 100 77	NA

At two years post placement, the participants are more likely to be retained in employment. However, this result is not consistent from subgroup to subgroup.

QUARTERS EMPLOYED -KEY COMPARISONS

A different way to measure employment retention is the proportion of quarters that an individual is employed. The 1 and 2 year employment retention outcomes (above) are intuitive, but have weaknesses. For example, an individual who is unemployed in quarters 1, 2, and 3, but employed in quarters 4 would be considered a "success" with respect to 1 year retention (as defined in the analysis above). Conversely, an individual employed in quarters 1, 2, and 3, but unemployed in quarter 4 would not be considered a "success".

Therefore, a different summary measure is considered here: the difference between post placement employment and prior to placement employment. Specifically, the proportion of quarters employed post placement minus proportion of quarters employed prior to placement. This formulation more accurately measures consistency of employment over a 2-year span. The previous examples would have proportions of 0.25 and 0.75, respectively, showing that the second individual has been employed more consistently despite being unemployed at 1 year. Extending beyond these examples, the current formulation considers all 8 quarters post placement minus all 8 quarters prior to placement, and so reflects the change in employment over the full time period.

Comparison groups' employment was mostly static from before to after placement, whereas participant groups saw a rise in the proportion employed. The difference in proportions was 25%-points overall. This result holds up across comparisons in general. Both age groups show an increase for participants relative to comparisons, and the older age group does somewhat better than the younger age group.

For additional subgroup analyses for this outcome, refer to Appendix A.

Table 23:

Quarters employed by featured variables

Subset	Comparison increase in prop Q emp	Participant increase in prop Q emp	Difference
Overall	-3	22	25
APE ≤ \$1,000	10	49	39
\$1,000 < APE ≤ \$3,000	-4	9	13
\$3,000 < APE	-12	-1	11
Less than 25 years of age 25 years of age or older	3	22	19
	-7	22	29
White or other race	-7	22	29
Black or African American	-5	23	28
Male gender	-9	23	32
Female gender	-3	22	25
Less than Associate's	-5	20	25
Associate's degree or higher	-6	28	34
Other neighborhoods	-5	23	28
Southside neighborhood	-6	22	28
Downtown Exurb North South West	7 -5 -6 -4	24 23 23 22 22	17 28 29 28 26
No match	NA	58	NA
Not in UI database	3	25	22
UI database	-5	12	17
Full-time placement Part-time placement	NA	23 21	NA
Permanent placement Temporary placement	NA	22 21	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	21 22 28 21	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	25 24 19 16 24 17 17	NA

UNEMPLOYMENT INSURANCE POST PLACEMENT

As of the writing of this report, the data available on use of public benefits is confined to Unemployment Insurance (UI) for the participants up through Q2 of 2015. First is the overall comparison between prior to placement and post placement time periods.

Table 24:

UI usage by time period

Time period	Participants who had UI
Prior to placement	46%
Post placement	13%

Usage of UI was lower in the post placement period among participants. But next is to consider the change over time. That is, for those who had UI prior to placement, what percentage again had UI post placement, and for those who did not have UI prior to placement, what percentage did have UI post placement?

Table 25:

UI usage post placement by UI usage prior to placement

Prior UI usage	Participants who had UI post placement
Did not have UI prior to placement	9%
Did have UI prior to placement	18%

So, of those who did not have UI prior to placement, 9% eventually went on UI. Of those who did have UI prior to placement, only 18% returned to UI post placement – a drop of 78%-points in public benefit usage for this group. For triangulation, the survey results (see the Interim Report appendix) reported 2% UI for those not on UI prior to placement, and 17% UI for those on UI prior to placement. Not perfect concordance, but certainly similar results.

The limitation in these estimates is the relative paucity of follow-up time in the available UI data. As more time elapses, additional individuals could end up using UI, which would increase the estimates shown here.

INDUSTRY OF EMPLOYMENT

Part of the wage record is the North American Industry Classification System (NAICS) code for each employer. The NAICS code is a 6-digit code that identifies the industry of an employer. The first 2 digits specify 20 broad industry categories. The following table shows the percentage of quarters employed in the top industry categories by group (comparison or participant) and by time period. The top 6 categories are shown. The other 14 categories share the remaining 20-25% (approximately) of the quarters. (Note that Skills collects information on the job and industry that individuals are placed in. That information is used elsewhere in this report. This data is different. These are the industry categories for the employment actually observed from the wage record.)

Table 26:

Percentage of quarters employed in the top 6 NAICS industry categories

Industry (2-digit NAICS)	Comparison prior to placement	Comparison post placement	Participant prior to placement	Participant post placement
Wholesale Trade (NAICS: 42)	12%	11%	13%	10%
Retail Trade (NAICS: 44-45)	14%	12%	16%	12%
Finance and Insurance (NAICS: 52)	4%	4%	6%	17%
Administrative and Support (NAICS: 56)	21%	19%	22%	20%
Health Care and Social Assistance (NAICS: 62)	12%	14%	9%	11%
Accommodation and Food Services (NAICS: 72)	13%	13%	11%	11%
Total	76%	73%	77%	81%

The comparison group and the participant group are very similar in the distribution across the industries. The most marked differences are a) in Retail Trade, where participants were (slightly) less likely to be employed post placement relative to comparisons and b) in Finance and Insurance, where participants saw a substantial increase in employment post placement.

A hypothesized effect of placement services is that they can introduce individuals to new opportunities that they wouldn't have had otherwise – including introduction to new, higher-paying industries. This data lacks the granularity necessary to confirm the hypothesis completely, but it is noteworthy that Skills places participants into a broad range of industries. Further, Skills' participants' job prospects differ from comparisons primarily in achieving access to the higher-paying Finance and Insurance industries.



Conclusions and Discussion

The results of this study show clearly that Skills is having a positive impact on its participants, in excess of what is observed in comparable individuals.

This study includes a set of strong comparison groups with individuals comparable to participants in demographics and prior earnings.

Overall, the impact of Skills was approximately \$1,500 per quarter. The effect was larger among those who had lower earnings prior to placement.

These numbers can be converted to annual numbers for context (APE: average prior earnings, quarterly) as follows:

Table 27:

Skills' impact on earnings overall and by prior earnings group

Subgroup	Annual earnings in excess of comparison	Annual earnings post placement
Overall	\$6,160	\$18,560
APE ≤ \$1,000	\$9,640	\$15,200
\$1,000 < APE ≤ \$3,000	\$4,160	\$16,440
\$3,000 < APE	\$2,160	\$25,480

In interpreting these values, note that even post placement, there are individuals who end up unemployed or underemployed and these zero or low values have not been removed from these averages.

Since individuals enter or leave employment throughout the study period, it is difficult to define a group comprised of only those who retain employment. In order to estimate the annual earnings post placement for those are employed (i.e., to remove the skewing effect of the zeros in the table above), the proportion with no earnings per quarter is estimated. On average, 31% of individuals do not have earnings in a given quarter post placement. Subtracting that many zeros from the calculation of annual earnings post placement yields the following:

Table 28:

Annual earnings post placement (adjusted) overall and by prior earnings group

Subgroup	Annual earnings post placement, adjusted
Overall	\$26,900
APE ≤ \$1,000	\$22,030
\$1,000 < APE ≤ \$3,000	\$23,830
\$3,000 < APE	\$36,930

Compare Skills' impact to those found in the Literature Review section above: Welfare-to-work saw a range of increases of \$658 to \$1,470 per quarter. Job placement assistance programs for UI beneficiaries found an impact of \$300 per quarter. WIA Adult programs had impacts ranging from \$126 to \$883 per quarter. Job Training Partnership Act impacts were \$711 to \$2,000 per quarter. Although none of these programs is exactly the same as Skills' model, in this context Skills' impact of \$1,500 per quarter overall represents performing as well or better than these programs.

In addition, these programs would be expected to cost more, or considerably more, than Skills' model. Skills reports a cost per placement of \$3,600 in 2014 and \$2,865 in 2015. Since there were 526 placements in 2014 and 74 placements in 2015 (see Table 1 above), the weighted average cost per placement for participants is \$3,509.

The formula for return on investment (ROI) is "(benefits minus costs) divided by costs". Monetizing benefits can be challenging, however. First, there may be benefits beyond dollars that are hard to convert into dollars, for example: positive emotions associated with employment retention. Second, even with a clearly defined monetary benefit as calculated in this evaluation, it is not obvious how much time to include in aggregate. Assigning 1 minute of increased earnings to be the benefit is clearly too short, and extrapolating a lifetime of increased earnings to be assigned to the benefit is clearly too long. Here are the ROI based on assigning 1 year and 2 years worth of Skills' impact to the benefit:

Table 29:

Return on investment by years of benefit included

Years of benefit included	ROI
1 Year	76%
2 Years	251%

Limitations: The key limitation in this evaluation is the possible selection effect. It is known that each participant is a job-seeker in the prior to placement time period. The comparison individuals have been chosen to be very close matches with respect to demographics and prior earnings, but there is no way to know the degree to which they are also job-seekers. If there are characteristics of Skills' participants that both drove them to seek out Skills and improve themselves in the job market, it would not be possible to separate that effect from the observed and reported Skills impact.

NEXT STEPS

The current study could be expanded in several ways. Perhaps most obvious would be to continue to follow these individuals over time to expand the follow-up period. It would be of considerable interest to determine the extent to which the observed effects are durable over a longer period of time.

In addition, a deeper analysis could be undertaken to understand the industries that individuals work in and who the Skills' model serves best.



About New Growth



New Growth is a consulting firm headquartered in Cleveland, Ohio, which specializes in workforce development and talent management. A veteran-owned business, New Growth was founded in 2010 on the principle that people are the most important parts of business success and regional growth. With a staff of eight, New Growth enables public and private sector clients to solve their workforce challenges through four types of service:



Workforce Straregy

From sourcing to succession, we design soultions that meet business needs while strengthening and connecting community assests.

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Grant Services

We assemble and manage resources to help clients fulfill strategies, including grants and incentives. \$130 million and counting.



Project Implementation

We lead, support, and execute workforce strategies.



Evaluation and Analytics

We measure and analyze performance to determine impact and guide decisionmaking.

Current and former clients include philanthropies, community-based organizations, education and training institutions, workforce agencies, economic development agencies, chambers of commerce, and corporations.

Staff members of New Growth who contributed to this report are:

Staff Member	Title	Responsibility
Chris Spence	Principal	Overall project management
Brian Schmotzer	Director of Evaluation	Research design, data analysis, writing
Emma Billmyer	Summer on the Cuyahoga Intern	Survey data analysis
Nikki Glazer Stoicoiu	Data Manager and Analyst	GIS mapping, survey administrator

Appendix A – Further Key Comparisons for Outcomes

EARNINGS

Refer to page 33 above. That section shows the change in earnings for various subgroups. Below are three tables that show the same breakdowns for each of the three prior earnings groups.

Table A1:

Difference between post placement and prior to placement quarterly earnings by featured variables for those in the highest prior earnings group

Subgroup	Comparison increase in earnings	Participant increase in earnings	Difference
Overall	-\$30	\$510	\$540
Less than 25 years of age 25 years of age or older	\$280	\$1,570	\$1,290
	-\$190	\$520	\$710
White or other race	\$40	\$610	\$570
Black or African American	-\$160	\$460	\$620
Male gender	-\$20	\$80	\$100
Female gender	-\$220	\$970	\$1,190
Less than Associate's	-\$360	\$290	\$650
Associate's degree or higher	\$50	\$700	\$650
Other neighborhoods	\$10	\$690	\$680
Southside neighborhood	-\$380	\$140	\$520
Downtown	\$1,620	-\$580	-\$2,200
Exurb	\$0	\$230	\$230
North	-\$300	\$930	\$1,230
South	-\$380	\$140	\$520
West	\$320	\$1,220	\$900
No match	NA	\$2,950	NA
Not in UI database	\$420	\$1,020	\$600
UI database	-\$150	\$270	\$420
Full-time placement Part-time placement	NA	\$800 -\$210	NA
Permanent placement Temporary placement	NA	\$660 -\$540	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	-\$40 -\$190 \$800 \$2,140	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	-\$280 \$840 -\$350 \$1,280 -\$140 \$450 \$420	NA

Being a Skills participant rather than a comparison individual is associated with a modest increase in earnings. This result holds up across comparisons in general.

Table A2:

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Difference between post placement and prior to placement quarterly earnings by featured variables for those in the middle prior earnings group

Subgroup	Comparison increase in earnings	Participant increase in earnings	Difference
Overall	\$1,150	\$2,190	\$1,040
Less than 25 years of age 25 years of age or older	\$1,410	\$2,100	\$690
	\$990	\$2,20	\$1,230
White or other race	\$1,540	\$2,140	\$600
Black or African American	\$1,000	\$2,140	\$1,140
Male gender	\$970	\$1,780	\$810
Female gender	\$1,140	\$2,180	\$1,040
Less than Associate's	\$740	\$1,790	\$1,050
Associate's degree or higher	\$1,670	\$2,730	\$1,060
Other neighborhoods	\$1,170	\$2,470	\$1,300
Southside neighborhood	\$940	\$1,940	\$1,000
Downtown	\$2,970	\$1,970	-\$1,000
Exurb	\$1,180	\$3,340	\$2,160
North	\$1,480	\$2,250	\$770
South	\$940	\$1,940	\$1,000
West	\$820	\$2,150	\$1,330
No match	NA	\$2,510	NA
Not in Ul database	\$1,330	\$2,570	\$1,240
Ul database	\$1,070	\$1,920	\$850
Full-time placement Part-time placement	NA	\$2,360 \$1,940	NA
Permanent placement Temporary placement	NA	\$2,230 \$2,010	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	\$1,500 \$2,380 \$3,960 \$4,480	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	\$1,480 \$2,980 \$1,840 \$3,330 \$1,470 NA \$1,260	NA

Being a Skills participant rather than a comparison individual is associated with an increase in earnings. This result holds up across comparisons in general.

Table A3:

Difference between post placement and prior to placement quarterly earnings by featured variables for those in the lowest prior earnings group

Subgroup	Comparison increase in earnings	Participant increase in earnings	Difference
Overall	\$1,100	\$3,510	\$2,410
Less than 25 years of age 25 years of age or older	\$1,370	\$2,420	\$1,050
	\$1,470	\$3,770	\$2,300
White or other race	\$2,380	\$3,790	\$1,410
Black or African American	\$1,360	\$3,500	\$2,140
Male gender	\$1,630	\$3,970	\$2,340
Female gender	\$1,380	\$3,350	\$1,970
Less than Associate's	\$1,170	\$2,770	\$1,600
Associate's degree or higher	\$2,040	\$4,920	\$2,880
Other neighborhoods	\$1,580	\$3,500	\$1,920
Southside neighborhood	\$1,300	\$3,490	\$2,190
Downtown	\$2,700	\$5,030	\$2,330
Exurb	\$2,560	\$4,310	\$1,750
North	\$1,270	\$3,640	\$2,370
South	\$1,300	\$3,490	\$2,190
West	\$850	\$2,610	\$1,760
No match	NA	\$3,870	NA
Not in Ul database	\$840	\$3,420	\$2,580
Ul database	\$1,440	\$3,330	\$1,890
Full-time placement Part-time placement	NA	\$4,030 \$2,840	NA
Permanent placement Temporary placement	NA	\$3,690 \$2,580	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	\$2,760 \$3,320 \$6,150 \$7,000	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	\$3,470 \$4,290 \$2,190 \$5,510 \$3,660 \$10,510 \$2,320	NA

Being a Skills participant rather than a comparison individual is associated with a large increase in earnings. This result holds up across comparisons in general.

QUARTERS EMPLOYED

Refer to page 44 above. That section shows the change in employment for various subgroups. Below are three tables that show the same breakdowns for each of the three prior earnings groups.

Table A4:

Quarters employed by featured variables for those in the highest prior earnings group

Subgroup	Comparison increase in prop Q emp	Participant increase in prop Q emp	Difference
Overall	-12	-1	11
Less than 25 years of age 25 years of age or older	-9	2	11
	-13	-2	11
White or other race	-11	-2	9
Black or African American	-13	-2	11
Male gender	-13	-5	8
Female gender	-12	1	13
Less than Associate's	-13	-2	11
Associate's degree or higher	-12	-2	10
Other neighborhoods	-12	0	12
Southside neighborhood	-13	-4	9
Downtown	2	-17	-19
Exurb	-14	2	16
North	-11	-2	9
South	-13	-4	9
West	-10	3	13
No match	NA	-17	NA
Not in UI database	-12	-2	10
UI database	-12	-1	11
Full-time placement Part-time placement	NA	2 -9	NA
Permanent placement Temporary placement	NA	-1 -8	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	-6 -2 4 1	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	-5 4 -6 -7 -10 0 -6	NA

Comparison groups' employment dropped from before to after placement, whereas participants held steady. The difference in proportions was 11%-points overall. This result holds up across comparisons in general. For the "downtown" subgroup, the comparison group outperforms the participants.

Table A5:

Quarters employed by featured variables for those in the middle prior earnings group

Subgroup	Comparison increase in prop Q emp	Participant increase in prop Q emp	Difference
Overall	-4	9	13
Less than 25 years of age 25 years of age or older	-1	10	11
	-7	9	16
White or other race	-4	7	11
Black or African American	-6	9	15
Male gender	-9	10	19
Female gender	-3	8	11
Less than Associate's	-8	6	14
Associate's degree or higher	-1	16	17
Other neighborhoods	-2	14	16
Southside neighborhood	-10	5	15
Downtown	4	32	28
Exurb	-2	20	22
North	-1	9	10
South	-10	5	15
West	-4	12	16
No match	NA	2	NA
Not in Ul database	1	15	14
Ul database	-6	6	12
Full-time placement Part-time placement	NA	12 6	NA
Permanent placement Temporary placement	NA	9 11	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	6 9 26 15	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	4 11 10 6 20 NA 9	NA

Comparison groups' employment declined from before to after placement, whereas participant groups saw a rise in the proportion employed. The difference in proportions was 13%-points overall. This result holds up across comparisons in general.

Table A6:

Quarters employed by featured variables for those in the lowest prior earnings group

Subgroup	Comparison increase in prop Q emp	Participant increase in prop Q emp	Difference
Overall	10	49	39
Less than 25 years of age 25 years of age or older	17	38	21
	9	52	43
White or other race	13	52	39
Black or African American	12	50	38
Male gender	9	55	46
Female gender	12	47	35
Less than Associate's	12	45	33
Associate's degree or higher	8	60	52
Other neighborhoods	9	48	39
Southside neighborhood	14	50	36
Downtown	16	61	45
Exurb	17	47	30
North	0	56	56
South	14	50	36
West	6	42	36
No match	NA	65	NA
Not in Ul database	10	43	33
Ul database	11	44	33
Full-time placement Part-time placement	NA	51 46	NA
Permanent placement Temporary placement	NA	50 44	NA
Placed wage ≤ \$10.50/h \$10.50/h < Placed wage < \$13.00 \$13.00 ≤ Placed wage < \$15.00 \$15.00 ≤ Placed wage	NA	43 49 73 66	NA
Aviation/Transportation/Security Business/Financial Services Food Services Healthcare Manufacturing Non-Profit/Government Retail	NA	52 53 41 70 57 68 37	NA

Comparison groups' employment increased from before to after placement; however, participant saw an even larger rise in the proportion employed. The difference in proportions was 39%-points overall. This result holds up across comparisons in general.

Appendix B – Interim Report





Executive Summary

INTRODUCTION

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Skills for Chicagoland's Future (Skills) creates demand-driven solutions for employers to get the un- and under-employed back to work. Skills contracted with New Growth Group, LLC (New Growth) in June 2015 to evaluate this process. New Growth is an independent, private consulting company located in Cleveland, Ohio. New Growth's expertise is in workforce development, and program evaluation is a core competency.

The evaluation activities are centered around the research question:

How do employment outcomes and use of public benefits for unand under-employed job seekers that Skills places compare to outcomes for other similar job seekers?

This question will be answered through a comparative analysis (available mid-2017), where the outcomes of individuals that Skills placed are compared to the outcomes of a set of individuals who did not interact with Skills but are as similar as possible in other respects. Data for outcomes such as earnings and use of public benefits will come from administrative sources: Illinois Department of Employment Security (IDES) and Illinois Department of Human Services (IDHS).

For this report, New Growth also conducted a survey of individuals placed by Skills. The purpose of the survey is to provide preliminary evidence of Skills' impact and confirm the directionality of effect that is expected from the comparative analysis. The analysis of the survey data is the focus of this report.







PARTICIPANTS

Participants in this study are those individuals placed from Q1 of 2014 through Q2 of 2015. There are 1197 such individuals in the Skills database. Of those, 600 are identifiable in the state wage database at IDES (i.e., the combination of name and social security number from the Skills database matches an individual in the IDES database). Therefore, these 600 will be the focus of the comparative analysis. Comparing these 600 individuals to the 597 who are not identifiable in the state wage database finds the two groups to be similar demographically: age, race, gender, education, and location (at the zip code level). This gives a degree of confidence that results derived from the group of 600 will be generalizable to all Skills participants.

The starting point for this study was data taken from the Skills database. Although not a point of inquiry for the study, it is worth noting that based on New Growth's experience, Skills' database is organized, complete, and comprehensible to a degree infrequently seen in real world databases.

SURVEY

Of those participants who had contact information, 326 individuals completed the survey for a 29% response rate. The survey was conducted in Q1 of 2016, so participants were contacted between 9 months and 24 months after their interaction with Skills. In this setting a 29% response rate is excellent.

Those who responded to the survey were compared to those who did not, and the two groups were found to be very similar demographically: age, race, gender, education, and location (at the zip code level).





PRE-SKILLS

Prior to working with Skills, 64% of survey respondents were unemployed and the remaining 36% had a job but were considered underemployed. Among those with a job, 40% had a wage less than \$11 per hour and only 45% worked at least 40 hours per week. Rates of public benefit usage among the unemployed were 30% for unemployment insurance, 45% for SNAP, and 10% for TANF.

POST-SKILLS

At the time of the survey, the results showed a discernable positive change with 63% now employed and the remaining 37% unemployed. Among those with a job, only 20% had a wage less than \$11 per hour and 67% worked at least 40 hours per week. Rates of public benefit usage among those who were unemployed pre-Skills had fallen to 11% for unemployment insurance, 28% for SNAP, and 4% for TANF.

SUMMARY OF SKILLS' IMPACT

The following 3 figures show how the survey respondents' outcomes change from pre-Skills to post-Skills.

Employment outcomes were substantially improved post-Skills



Figure 1:

Percent of all survey respondents pre-Skills and post-Skills who were a) employed, and among those currently employed b) in a job with paid time off, and c) in a job with health benefits

There was a modest improvement in wages and hours worked per week



Figure 2:

Average hourly wage and hours worked per week pre-Skills and post-Skills for those who are employed. The improvements correspond to an approximate \$6,500 increase in yearly income.

Those unemployed pre-Skills saw a substantial reduction in usage of public benefits



Figure 3:

Percent of survey respondents who received a) unemployment insurance, b) SNAP, and c) TANF benefits pre-Skills and post-Skills





From the time before working with Skills to the time of the survey, the respondents improved markedly across the outcomes measured on the survey. In fact, 182 of 326 respondents (56%) saw improvement on at least one outcome.

Although the literature is broad, recent review articles can provide context for these results. King (2008)¹ reports on a workforce initiative of on-the-job training and job search assistance that improved earnings by \$1,200 to \$1,600 per year. Wimer and Bloom (2014)² describe an initiative of tailored training and direct connection to jobs that improved earnings by 29% (similar to the increase in the present study). Of course, these initiatives are not directly comparable to Skills' model because of the extensive training offered. Nevertheless, they give a sense of scale for the size of effects to be found in successful initiatives.

ADDITIONAL KEY RESULTS

In addition to questions about employment and benefits, the survey included qualitative questions about stability and outlook.

Among the respondents,

- 65% said they wouldn't have found a job without Skills
- 74% found Skills helpful or very helpful in getting a job
- 24% find housing more stable since working with Skills
- 28% feel their financial situation more stable since working with Skills
- 57% feel very hopeful about the future

NEXT STEPS

The keys to the final report are to build a comparison group and to access administrative data. The comparison group strategy is being executed with IDES, and data from their database is flowing. Completing a data sharing agreement with IDHS is the next highest priority. When data arrives from all sources, the comparative analysis of outcomes will be completed. The final report is scheduled to be finished in mid-2017.

¹ Does Workforce Development Work? King, Christopher. Workforce Narrative Project. Annie E. Casey Foundation. January 2008 (p. 8).

² Boosting the Life Chances of Young Men of Color: Evidence from Promising Programs. Wimer, Christopher; Bloom, Dan. MDRC. June 2014 (p. 7).





After Skills



Wages improved from \$13 to \$15 per hour



Hours worked per week increased from 33 to 37 hours

\$**6,500**

Annual Income Increase



From the time before working with Skills to the time of the survey, the respondents improved their wages from \$13 to \$15 per hour and their hours worked per week from 33 to 37 hours on average. These improvements correspond to an approximate \$6,500 increase in yearly income on average.

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Background

Skills for Chicagoland's Future (Skills) creates demand-driven solutions for employers to get the un- and under-employed back to work. Skills has contracted with New Growth Group, LLC (New Growth) to evaluate this process.





EVALUATION PLAN

The design of the evaluation plan is guided by the needs of the core research question:

How do employment outcomes and use of public benefits for un- and under-employed job seekers that Skills places compare to outcomes for other similar job seekers?

The key elements of this research question are:

a) the outcomes that are to be measured and b) the construction of a comparison group.

Outcomes:

The primary employment outcome is quarterly earnings. This data is being obtained through the Illinois Department of Employment Security (IDES). Use of public benefits outcomes are receipt of unemployment insurance benefits (also from IDES), receipt of Supplemental Nutrition Assistance Program (SNAP) benefits, and receipt of Temporary Assistance for Needy Families (TANF) benefits. SNAP and TANF data comes from the Illinois Department of Human Services (IDHS).

Comparison Strategy:

Due to the complexity of the available data, several comparison groups are being constructed, with the ultimate goal of triangulating the effect of Skills across several comparisons. For each participant in this study, a comparison individual is identified from the IDES system that most closely matches the characteristics of the participant. The closeness of the match is driven by available data, and includes demographics, location, prior earnings, and prior use of public benefits.

Therefore, the evaluation of the impact of Skills is a multifaceted endeavor. In addition to the primary evaluation strategy driven by administrative datasets, a survey was administered to augment the available information.

INTERIM REPORT CONTENTS

The interim report defines those individuals considered to be participants. Participants fall into two groups based on whether or not they are found in the state wage database. Separately, participants fall into two groups based on whether or not they responded to the survey.

The first portion of the interim report gives early results on participants, including comparing the demographics of participants who have earnings data available to those who do not. The second, much larger, portion of the interim report focuses on the results of the survey. First is a description of the respondents and a comparison to non-respondents. Then, what can be learned about Skills' impact according to data that was collected directly from the people served by Skills.

DEFINITION OF PARTICIPANTS

Individuals who have been placed by Skills are the target group under study. For the purposes of this report, the sample is restricted to those who were placed by Skills between the first quarter of 2014 and the second quarter of 2015, totaling 1197 participants. Because state wage record data is a key source of outcomes data for this study, participants are categorized by who can be found in the state wage system (i.e., those who have social security numbers available in the Skills database). Based on these criteria, there are 600 participants with earnings data available and 597 participants without available earnings data.

Quarter of placement	Number of participants with earnings data	Number of participants without earnings data
2014 Q1	104	43
2014 Q2	165	28
2014 Q3	115	15
2014 Q4	142	47
2015 Q1	61	145
2015 Q2	13	309
Total	600	597

The number of individuals that Skills placed per quarter increased significantly over time, from less than 150 to more than 300. However, starting in 2015, Skills stopped requesting SSNs from those it placed. Therefore, the number of participants with earnings data available per quarter dwindles over time.

COMPARISON OF PARTICIPANT GROUPS

Because half of the participants will not have earnings data available, it is important to investigate group differences between the two groups.

Demographic	Participants with earnings data (n=600)	Participants without earnings data (n=597)
Male gender	38%	41%
Black or African American	80%	73%
Associate's degree or higher education	38%	32%
24 years of age or older	80%	66%
Average age (standard deviation)	33 (11)	29 (10)

The participant groups are similar, demographically. The correspondence is not perfect, but the differences are not large enough to endanger the validity of the conclusions of the final report.



Additionally, the geographic comparison of participant groups, based on the home zip-code listed in the Skills database:



Geographically, the participant groups are concentrated in the same areas.



Survey Results

The remainder of this report is devoted to analyzing the results of the survey.

SURVEY ADMINISTRATION

The survey was constructed to be administrable either electronically or over the phone. All individuals placed by Skills with contact information available were contacted for the survey. In mid-February 2016 the electronic version of the survey was sent out via email, and it remained open for completion until mid-March. Subsequently, phone surveying began for any individuals who had not completed the electronic version. Multiple attempts were made to contact each individual for the following month. Since the last quarter of placement for inclusion in this study is 2015 Q2, the survey occurred 9 months or more after individuals were placed by Skills.

SURVEY RESPONDENTS

All 1197 placed individuals were eligible to be contacted to participate in the survey, but only 1109 had contact information available. Of those who were contacted, 326 responded to the survey for a response rate of 29%.

The response rate was similar between the participant groups: 127/600=21% for those with earnings data available compared to 199/597=33% for those without earnings data available.

COMPARISON OF RESPONDENTS AND NON-RESPONDENTS

Although a response rate of 29% is very strong for a survey of this type, it is worthwhile to consider the differences between the respondents and non-respondents. Although 88 individuals were not contactable (1197 total minus 1109 with contact information), they are included here as non-respondents.

Demographic	Respondents (n=326)	Non-respondents (n=871)
Male gender	37%	40%
Black or African American	74%	78%
Associate's degree or higher education	37%	34%
24 years of age or older	80%	71%
Average age (standard deviation)	33 (11)	31 (10)

Demographically, those who responded to the survey are very similar to those who did not.



6'



Additionally, the geographic comparison of respondents and non-respondents, based on home zip-code:



Geographically, respondents and non-respondents are concentrated in the same areas. Since there are more non-respondents than respondents the map for respondents is less dense and widespread.

In addition, the respondents can be compared to the non-respondents with respect to the timing of their placement by Skills. Since the survey occurred in Q1 of 2016, it is interesting to note whether or not the response rate was appreciably lower for those who worked with Skills in 2014 rather than 2015.

Quarter of placement	Number of respondents	Number of non-respondents
2014 Q1	21	126
2014 Q2	46	147
2014 Q3	25	105
2014 Q4	27	172
2015 Q1	99	107
2015 Q2	108	214
Total	326	871

As expected, the response rate is lower, further removed in time (trending from 14% in Q1 of 2014 to 33% in Q2 of 2015). Overall, however, there is reasonable response from all time periods.

SURVEY RESPONDENTS DEMOGRAPHICS

The first set of questions on the survey asks about demographics. Gender, race, education, and age can be found in the previous table; additional demographics in the following table:

Demographic	Respondents (n=326)
Military veteran	6%
Disability	4%
Household size	
1	34%
2	22%
3	20%
4	16%
5+	8%
Marital status	
Single/never married	69%
Married	22%
Separated/divorced	7%
Widowed	1%
Dependents	
0	39%
1	29%
2	17%
3	10%
4+	5%



SURVEY RESPONDENTS PRE-SKILLS

The next set of questions on the survey asks employment questions from the period before the individual worked with Skills.

The first question assesses the state of employment before working with Skills:

Underemployed (117 out of 326)		Unemployed (209 out of 326)	
Employed part time	15%	Never been employed to that point 9%	
Employed in a seasonal or temporary job	4%	Unemployed for at least 6 months 32%	
Employed full time	17%	Unemployed for less than 6 months 23%	
Total	36%	Total 64%	

Employed pre-Skills is labeled as "underemployed" to emphasize the population that Skills works with.

For those who were employed, questions were asked about their employment (the average wage was \$13/hour and the average hours worked per week was 33 hours):

Employment variables	Underemployed (n=117)
Wage (\$/hour)	
<\$11	40%
\$11-15	20%
\$15-20	33%
\$20+	7%
Average wage (\$/hour)	\$13/hour
Hours worked per week	
<20	8%
20-39	47%
40+	45%
Average hours worked per week	33 hours/week
Paid time off	20%
Health benefits	34%

For both underemployed and unemployed, questions were asked about their use of public benefits:

Public benefits	Underemployed (n=117)	Unemployed (n=209)
Receive unemployment insurance benefits	6%	30%
Receive SNAP benefits	16%	45%
Receive TANF benefits	5%	10%

SURVEY RESPONDENTS POST-SKILLS

The next set of questions asks about what has happened in the period after the individual was placed by Skills.

- Recall that all of these individuals were placed in employment by Skills, but 9 months or more would have passed between placement and survey, so not all would necessarily be employed by the time this survey occurred (i.e., some otherwise expected values are not 100%).
- In each table to follow, the columns represent 2 separate groups: those who were a) underemployed and b) unemployed before working with Skills. The values in the table show the outcomes after working with Skills for each of those 2 separate groups.

Post-Skills employment outcomes:

Overall, for all individuals, post-Skills employment was 63%. This is an improvement relative to the 36% who were employed pre-Skills. The post-Skills average wage was \$15/hour, and the post-Skills average hours worked per week was 37 hours. These are improvements relative to pre-Skills averages of \$13/hour wage and 33 hours worked per week, respectively. These changes are graphically depicted in Figures 1 and 2 on pages 73 and 74.

In addition to the overall numbers, the table below provides information about post-Skills employment outcomes for subgroups who were underemployed pre-Skills and who were unemployed pre-Skills.

Employment outcomes post-Skills	lf underemployed pre-Skills	lf unemployed pre-Skills	Overall
Employed	78%	58%	63%
Wage (\$/hour)			
<\$11	18%	25%	22%
\$11-15	39%	36%	38%
\$15-20	32%	32%	32%
\$20+	11%	7%	9%
Average wage (\$/hour)	\$15/hour	\$15/hour	\$15/hour
Hours worked per week			
<20	0%	3%	2%
20-39	36%	23%	29%
40+	64%	73%	69%
Average hours worked per week	37 hours/week	37 hours/week	37 hours/week

For example, of those who were employed pre-Skills, 78% were employed at the time of the survey. Of those who were unemployed pre-Skills, 58% were employed at the time of the survey. The wages and hours worked per week values are calculated based on those who are employed (post-Skills).

In net, Skills helped individuals obtain employment with paid time off (PTO) and health benefits. Overall, for those employed post-Skills, 54% had PTO and 62% received health benefits. These are improvements over the corresponding pre-Skills rates of 20% for PTO and 34% for health benefits. These changes are graphically depicted in Figure 1 on page 73.



Post-Skills employment outcomes (continued):

The set of tables below provides additional information about post-Skills outcomes among subgroups who did not have PTO and/or health benefits and who did have them pre-Skills. Those who did *not have PTO or health benefits* saw double digit increases in receipt of these benefits post-Skills. For example, among individuals who were unemployed pre-Skills, 36% obtained employment with PTO. It is noteworthy that people who were working, but underemployed pre-Skills experienced increases in receipt of benefits post-Skills. For example, among individuals who were underemployed and not receiving health benefits pre-Skills, 32% obtained employment with health benefits.

Among those who **did not** have each employment benefit pre-Skills:

Employment benefits post-Skills	lf underemployed pre-Skills	lf unemployed pre-Skills
Paid time off	26%	36%
Health benefits	32%	35%

Among people who did already have benefits pre-Skills, there were drops in benefit receipt. For example, among employed individuals who had PTO pre-Skills, 60% had PTO post-Skills. Similarly, among employed individuals with health benefits, 74% had health benefits post-Skills.

Among those who **did** have each employment benefit pre-Skills:

Employment benefits post-Skills	If underemployed pre-Skills	lf unemployed pre-Skills
Paid time off	60%	NA
Health benefits	74%	NA

In the net calculation, the effects of the decreases among those with benefits pre-Skills are more than compensated by the effects of the increases among those without benefits pre-Skills, which results in net increases in benefit receipt (again, see Figure 1).
Post-Skills public benefit outcomes:

Overall across all respondents, receipt of unemployment insurance, SNAP, and TANF benefits dropped post-Skills. The largest changes were among individuals who were unemployed pre-Skills. Individuals who were employed pre-Skills saw little or no changes in benefit receipt. Post-Skills, among those who were employed pre-Skills, 0% received unemployment insurance benefits (compared to 6% pre-Skills), 19% received SNAP (compared to 16% pre-Skills), and 5% received TANF (compared to 5% pre-Skills). Post-Skills, among those who were unemployed pre-Skills, 11% received unemployment insurance benefits (compared to 30% pre-Skills), 28% received SNAP (compared to 45% pre-Skills), and 4% received TANF (compared to 10% pre-Skills). These changes are seen graphically in Figure 3 on page 75.

The set of tables below provides additional information about post-Skills public benefit outcomes among subgroups who were *public benefit recipients* pre-Skills and who were *not public benefit recipients* pre-Skills. Those who did not receive public benefits pre-Skills saw small increases in receipt of these benefits post-Skills. For example, among individuals who were unemployed pre-Skills and did not receive SNAP, 9% received SNAP post-Skills.

Public benefits post-Skills	lf underemployed pre-Skills	lf unemployed pre-Skills
Receive unemployment insurance benefits	0%	3%
Receive SNAP benefits	9%	11%
Receive TANF benefits	2%	1%

Among those who **did not** have each public benefit pre-Skills:

Among those who did receive public benefits pre-Skills there were large drops in benefit receipt. For example, among underemployed individuals who received SNAP pre-Skills, only 74% received SNAP post-Skills. Unemployed public benefit recipients saw the largest decreases. Only 27%, 48%, and 35% of public benefit recipients that were unemployed pre-Skills continued to receive unemployment insurance, SNAP, and TANF, respectively, post-Skills.

Among those who **did** have each public benefit pre-Skills:

Public benefits post-Skills	lf underemployed pre-Skills	lf unemployed pre-Skills
Receive unemployment insurance benefits	0%	27%
Receive SNAP benefits	74%	48%
Receive TANF benefits	80%	35%

In the net calculation, the effects of the increases among those without the benefits pre-Skills are more than compensated by the effects of the decreases among those with the benefits pre-Skills, which results in net decreases in benefit receipt (again, see Figure 3).



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SUMMARY OF SKILLS' IMPACT

The following sequence of figures highlights the impact that Skills is having on the individuals it serves.

Figure 1:

Percent of all survey respondents pre-Skills and post-Skills who were a) employed, and among those currently employed b) in a job with paid time off, and c) in a job with health benefits



Employment outcomes were substantially improved post-Skills relative to pre-Skills.



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Figure 2:

Average hourly wage and hours worked per week pre-Skills and post-Skills for those who are employed



There was modest improvement in wages (from \$13/hour to \$15/hour on average) and in hours worked per week (from 33 to 37) post-Skills relative to pre-Skills. Combining these improvements implies an increase in yearly earnings of approximately \$6,500, on average. (Calculation: (\$15/hour * 37 hours/week * 52 weeks/year) – (\$13/hour * 33 hours/ week * 52 weeks/year) = \$6,500/year)



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Figure 3:

Percent of survey respondents who received a) unemployment insurance, b) SNAP, and c) TANF benefits pre-Skills and post-Skills



Among those who were employed pre-Skills, there was a modest reduction in those who were receiving unemployment insurance benefits post-Skills, but the rates of SNAP and TANF usage remained similar to pre-Skills levels. On the other hand, among those who were unemployed pre-Skills, there was a substantial reduction in the usage of public benefits.





Another way to measure impact is by counting the number of individuals who have improved an outcome from pre-Skills to post-Skills. Some individuals will see their outcome get worse, so the metric of interest is the net number of individuals who benefited.

Outcome	Number who improved	Number who worsened	Net number benefited
Employment	121	24	97
Paid time off	41	5	36
Health benefits	23	4	17
Wages	142	38	104
Hours worked per week	120	107	13
UI benefits	7	5	2
SNAP	53	20	33
TANF	14	3	11

As expected, not all individuals saw improvements in their outcomes from pre-Skills to post-Skills. But as this table shows, a substantial number of the 326 survey respondents saw improvement. In fact, 182 or 56% of respondents improved on at least one outcome.

Note: the table does not include the individuals who stayed the same from pre-Skills to post-Skills.

Note: for some individuals, a reduction in hours worked per week may not be considered "worse", so the net number benefited may be undercounted for that outcome.



OTHER SURVEY RESPONSES

Several questions on the survey were intended to give a qualitative assessment of the impact of Skills by measuring respondent opinions on 3 or 5 point Likert scales. Note that the intermediate categories for the 5 point Likert scales were implied rather than specified on the survey (hence the lack of headers below).

Helpfulness of Skills:

	Very helpful				Not helpful	
How helpful was Skills in getting you a job?	64%	10%	13%	5%	9%	
		Νο		Yes		
Do you think you would have found that job or a similar job without working with Skills?		65%		65% 35%		

Housing:

	Very stable				Very unstable
How do you feel about your current housing situation?	43%	19%	23%	12%	4%
	Мо	e stable	About the sa	ime Le	ess stable
Compared to your housing situation before you worked with Skills, how would you say your housing situation is now?		24%	66%		10%

Finances:

	Very stable				Very unstable
How do you feel about your current financial situation?	28%	17%	33%	14%	8%
	Mor	e stable	About the sa	ime L	ess stable
Compared to your financial situation before you worked with Skills, how would you say your financial situation is now?		28%	59%		13%

Outlook:

	Very hopeful				Very unhopeful
How do you feel about the future?	57%	17%	18%	5%	4%
	More	hopeful	About the sa	me	Less hopeful
Compared to before you worked with Skills, how would you say you feel about the future?	35%		58%		7%

In summary, the survey respondents generally felt that Skills was helpful in getting them a job, their stability and outlook was overall positive, and more felt their stability and outlook were improved rather than worsened compared to before working with Skills.

MISSING RESPONSE VALUES

Throughout a survey, it is expected that individuals will skip or choose not to answer some items resulting in a missing value in the data. This survey was no exception. Overall the rate of missing values was low for each survey item. Almost all rates were less than 10% and the majority were less than 5%. With missing value rates this low, it is expected that there would be no appreciable change in the results shown throughout the report, even if these missing values were somehow recoverable.

NEXT STEPS

The focus of the interim report is on the survey results. The focus of the final report will be on the participants, the comparison groups, and the administrative data. It is expected that the interim report will be subsumed into the final report, and the survey results will validate, strengthen, and perhaps deepen the understanding gained from the administrative data results.

Over the next months, several lines of effort will come together to enable the completion of the final report:

- Comparison groups: The construction of comparison groups with IDES is the highest priority. New Growth is working with IDES to complete this task.
- Unemployment insurance benefits: During construction of comparison groups, IDES will send UI benefits data for comparison group individuals as well as participants.
- Earnings data: IDES has already transmitted quarterly earnings data for participants. Next will be to send data for the comparison individuals.
- SNAP and TANF data: A data sharing agreement with IDHS is being pursued via two methods. One is as a signatory to a large agreement between IDHS and DCEO (Department of Commerce and Economic Opportunity), and the other is a direct agreement between IDHS and New Growth.

When these agreements and processes are complete, a full set of administrative data for participants and comparison group individuals will be in hand. By mid-2017 the data will be analyzed and the final report written.

