

# **Stepping Up:** Interim Findings on JVS Boston's English for Advancement Show Large Earnings Gains



**Anne Roder and Mark Elliott**  
**Economic Mobility Corporation**

November 2020

## On the Cover: Alketa Briskaj

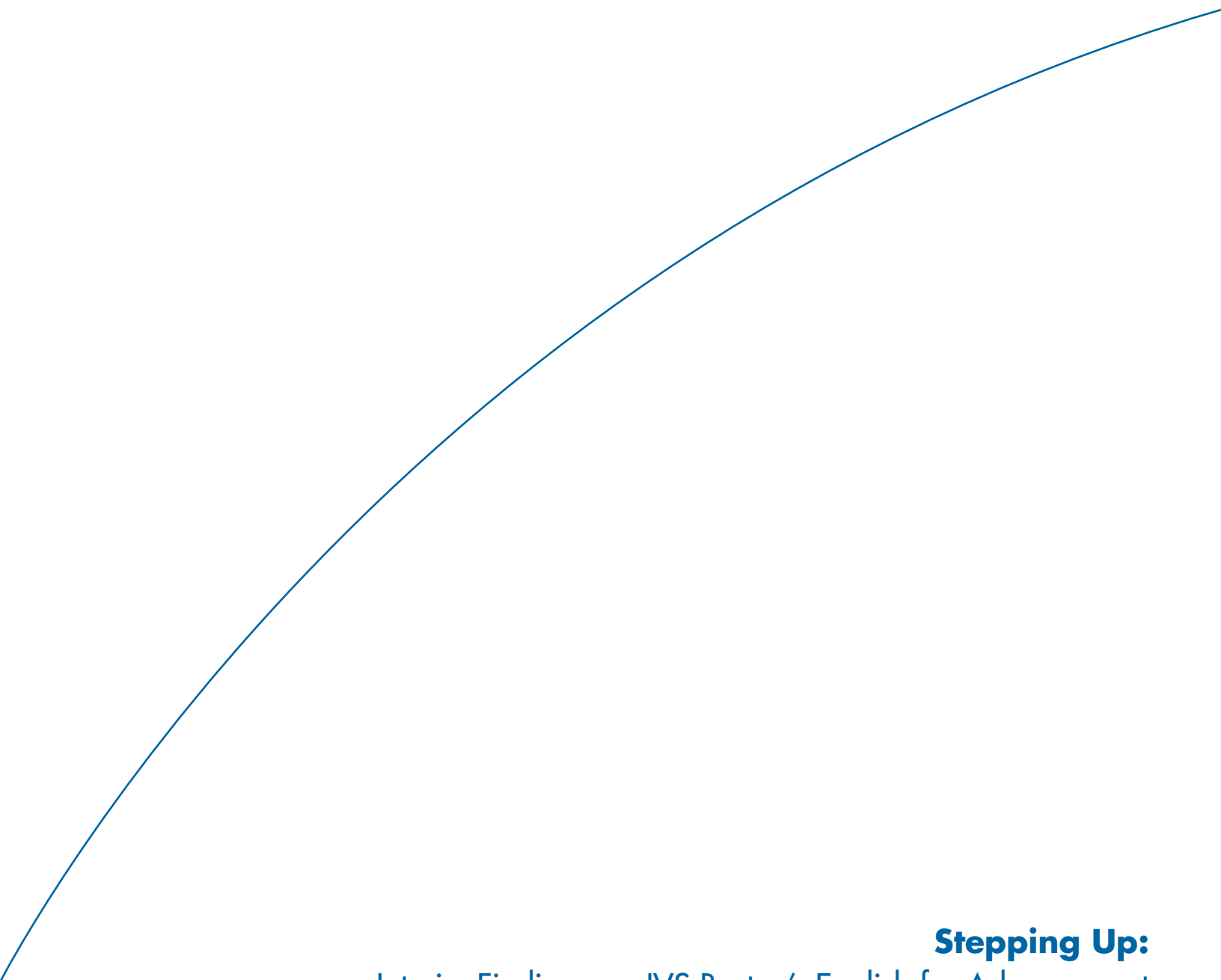
Alketa grew up in Albania, where she married, had a family, and worked as a nurse for 20 years. She and her family emigrated to the United States in 2015. Settling in Everett, a suburb north of Boston, she found a kitchen job at Logan Airport making pizza for \$11.00 per hour. Alketa's dream was to return to the medical field. Unable to speak much English, she enrolled in EfA's East Boston program in October 2016.

In May the following year, JVS helped Alketa land a part-time job at Brigham and Women's Hospital, making \$16.00 per hour as a kitchen production aide. She continued working at the airport and attending EfA classes through June 2018. Soon her English improved sufficiently to enable her to enroll in the Boston Career Institute, where she earned her Registered Medical Assistant certification.

In June 2019, Alketa landed a full-time job as a medical assistant in a medical office at Partners HealthCare (now part of the Mass General Brigham health care system) in Medford, making \$20.00 per hour. The job came with medical and dental insurance and a retirement plan.

Asked about her remarkable journey, Alketa explains, "I work hard. My English was not good. And it's still not good. But I feel comfortable to talk to people. It's completely different from the beginning. I feel really happy."

Cover photograph: Leise Jones <https://leisejones.com/>



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This report is based on the evaluation study being conducted as part of Massachusetts Pathways to Economic Advancement, a collaboration of the Commonwealth of Massachusetts, Jewish Vocational Service (JVS), and Social Finance. The third Pay for Success (PFS) initiative in Massachusetts, and the first in the nation to focus exclusively on workforce development, the project increases access to programs that assist adult English-language learners in making successful transitions to employment, higher-wage jobs, and higher education. Jobs for the Future and Harvard Kennedy School's Government Performance Lab provided technical assistance to project partners. Massachusetts Pathways to Economic Advancement was made possible through a wide range of institutional and individual impact investors. Among others in the project, Merrill Lynch, Pierce, Fenner & Smith Incorporated ("Merrill") acted as placement agent in offering investments to its clients.



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The Economic Mobility Corporation (Mobility) identifies, develops, and evaluates programs and policies that enable disadvantaged individuals to acquire the education, skills, and networks needed to succeed in the labor market so that they can support themselves and their families.

### Mail:

Economic Mobility Corporation, Inc.  
50 Broadway, Suite 1604  
New York, NY 10004

### Telephone:

212.280.6975

### Email:

[info@economicmobilitycorp.org](mailto:info@economicmobilitycorp.org)

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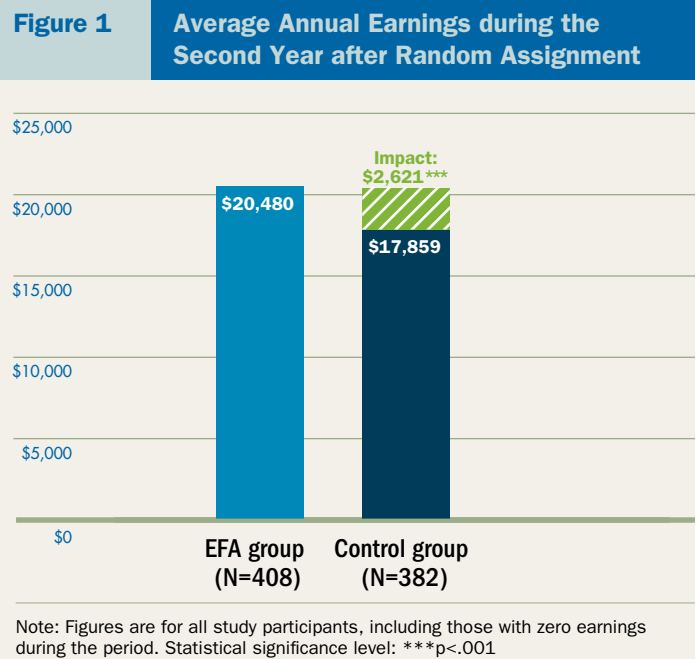


## Summary

English for Advancement (EfA), a program offered by Jewish Vocational Service (JVS) in Boston, provides adult English-language learners with employment-focused language instruction, career coaching, and job placement assistance to help them obtain employment or advance to a better job. EfA is part of the Commonwealth of Massachusetts' Pathways to Economic Advancement project, which seeks to help limited English speakers enter the workforce and progress up the economic ladder by providing English instruction and workforce development services. The project, managed by Social Finance, uses an innovative "Pay for Success" funding model in which private sector investors provide upfront capital to scale promising programs, and the government pays back the investors only if the programs achieve predetermined outcomes. As the project's independent evaluator, Economic Mobility Corporation (Mobility) is conducting a study of EfA that uses a randomized controlled trial design to assess program effectiveness—that is, study participants were randomly assigned to a treatment group that could receive EfA services or to a control group that could not, then their outcomes were compared. In this interim report on the EfA program Mobility presents findings on employment and earnings impacts based on state administrative data for a cohort of nearly 800 study participants who enrolled between September 2016 and December 2017, and whose two-year follow-up period ended by December 2019.

In this report, we document that:

- EfA had a substantial, statistically significant impact on annual earnings in the second year after random assignment—an average difference of \$2,621 (Figure 1). Total earnings impacts over the two years after random assignment averaged \$3,505.
- EfA group members were significantly more likely than control group members to be employed starting in the third quarter after random assignment.
- The EfA group's quarterly earnings grew throughout the second year after random assignment, and at a faster rate than control group members' earnings (15 percent versus 5 percent, respectively).



As the first RCT study of the earnings impacts of a workforce development program for English-language learners, the EfA study findings are important for the adult education and workforce development fields. EfA has proven to be an effective way to integrate language instruction with career services to improve the earnings of English-language learners. Although EfA was implemented during a strong labor market, its design—with rolling enrollment, individualized career coaching, and siting within partner community organizations—and its particularly large earnings effects for unemployed workers make it an important option for states and cities to consider as they develop policies in response to high unemployment.

## Introduction

Nearly one in ten working-age adults in the United States—around 19 million people—have limited English skills.<sup>1</sup> Adult English-language learners have lower education levels and are more likely to live in poverty than their English-proficient counterparts. While male English-language learners participate in the civilian labor force at a slightly higher rate than English-proficient men (75 percent versus 68 percent, respectively), female English-language learners are much less likely than English-proficient women to participate (49 percent versus 60 percent, respectively).<sup>2</sup> Workers with limited English skills are more likely than others to work in lower-paying occupations, often as housekeepers, janitors, groundskeepers, construction laborers, food preparation workers, and drivers.<sup>3</sup>

Workers' limited English skills can lower their productivity as well as their ability to advance to higher-paying jobs that could better enable them to support themselves and their families. Limited English proficiency is a barrier for both low-skilled and high-skilled workers. At all education levels, adult English-language learners earn substantially less than individuals who speak fluent English, ranging from 24 percent less for those without a high school diploma to 39 percent less for those with a high school diploma or some college credits.<sup>4</sup> College-educated immigrants with limited English skills are twice as likely to work in unskilled jobs as those who are English-proficient,<sup>5</sup> and they earn about 30 percent less.<sup>6</sup> In addition to their limited English skills, immigrants often lack professional networks and practical knowledge about the U.S. job search process. Their skills are often underutilized, even when employer demand for skilled workers is high.

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## The Massachusetts Pathways to Economic Advancement Project

Since 2010, the greater Boston metropolitan area's population has been growing quickly, driven largely by new residents who emigrated from a variety of countries. While international students are attracted to the area's institutions of higher education, Greater Boston is also home to about 240,000 working-age adults with limited English skills.<sup>7</sup> In 2014, as part of the Commonwealth of Massachusetts' efforts to prioritize investments in workforce development, it embarked on a Pay for Success (PFS) project focused on adult basic education. PFS projects use an innovative funding model where private sector investors provide the upfront capital to scale promising programs that address chronic social issues. If the programs achieve predetermined outcomes that benefit society and generate value for the government, the government then pays back the investors. Prior to pursuing the PFS project, Massachusetts was investing \$30 million annually in adult basic education and English for Speakers of Other Languages (ESOL) programs that served about 23,000 people. However, another 16,000 people statewide were on waiting lists for these services. For Massachusetts, the PFS project was an opportunity to reduce the waiting lists and help more adults transition to employment, higher education, and higher wage jobs. At the same time, the PFS project

afforded Massachusetts the opportunity to learn about the programs' effectiveness in improving participants' outcomes while only requiring it to pay after they demonstrated success.

Massachusetts selected JVS as the project's service provider and Social Finance, one of the nation's leading PFS financial intermediaries, to manage the project. Descriptions of these project partners are included in the appendix. After two years of planning, the partners launched the \$15 million MA Pathways to Economic Advancement Pay for Success project (MA Pathways). The goal of MA Pathways is to increase employment opportunities for limited English speakers and help them enter the workforce and progress up the economic ladder by providing ESOL and workforce development services. MA Pathways is the nation's first PFS project focused exclusively on workforce development services. Mobility is the project's independent evaluator.

JVS is a nonprofit that assists individuals from diverse communities with finding employment and building careers and partners with employers to hire, develop, and retain productive workforces. Founded in 1938 to help Jewish immigrants and refugees join the U.S. workforce, over the years JVS has expanded to help immigrants from over 65 nations and others in Greater Boston overcome education, job skills, and employment challenges. It is one of the largest providers of adult education and workforce development services in Greater Boston, serving over 16,000 individuals annually. JVS services are targeted to low-income adults who are unemployed, underemployed, or in need of career advancement services. Offerings include a wide range of adult education, training, and employment services, including programs that integrate basic education and English language instruction with preparation for a job, advanced training, postsecondary education, or career advancement.

Through the MA Pathways project, JVS operates four programs designed to help adults with varying levels of English skills and U.S. work experience improve their English and achieve their employment and career goals: Rapid Employment, English for Advancement, Skills Training, and Bridges to College. Target populations and services provided by each program track are summarized in the appendix ([Table A1](#)). A future report, planned for release in 2022, will discuss the final outcomes for all four programs. This report examines interim results on the effectiveness of one of the four programs, English for Advancement (Efa), which provides employment-focused language instruction, career coaching, and job placement assistance to help adult English-language learners obtain employment or advance in their careers.

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## The Efa Evaluation

A randomized controlled trial (RCT) study design was used to evaluate Efa's impacts. The primary research question was whether Efa had a positive impact on earnings two years after study enrollment. Individuals were randomly assigned to a treatment group able to receive Efa services or to a control group unable to receive Efa services. Because individuals were randomly assigned, the two groups

were equivalent at the time of study intake on measured characteristics, such as age, education, English skill level, and prior work experience, and unmeasured characteristics, such as motivation. Therefore, any differences in the outcomes of the two groups can be attributed to the EfA services. When well-conducted, RCTs are considered the strongest way to evaluate program effectiveness.<sup>8</sup> Additional study design details are provided in the appendix. All study participants are included in the analysis, regardless of whether they received services as intended. In this report, we refer to all members of the EfA study treatment group interchangeably as the “EfA participants” or the “EfA group.” The results are based on Massachusetts Department of Unemployment Assistance data on quarterly earnings, as reported by employers through the Commonwealth’s unemployment insurance program.

Between September 2016 and September 2019, JVS enrolled 1,952 individuals in the EfA study, of whom 1,099 were assigned to the EfA treatment group and 853 to the control group. This report presents findings on program impacts for a cohort of 790 EfA study participants who enrolled between September 2016 and December 2017; 408 in the EfA treatment group and 382 in the control group. This cohort’s two-year follow-up period ended by December 2019 and was unaffected by the economic disruption due to the COVID-19 pandemic. We are publishing this interim report for three reasons. First, we believe the results are so impressive that they merit early dissemination, especially since the program model may be of interest to policymakers seeking to address high unemployment rates in their communities. Second, the sample size is substantial; that is, the program had been implemented at a significant scale prior to the pandemic. Finally, while the early cohort’s two-year follow-up period took place during a period of strong economic growth, the remaining cohorts’ two-year outcomes will be affected by the labor market collapse caused by the coronavirus—theirs will be a compelling but very different and separate story to tell.

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### **The EfA Study’s Contribution to Research on Adult Basic Education and Workforce Development**

The Adult Education and Family Literacy Act, Title II of the Workforce Innovation and Opportunity Act, authorizes federal funding to states for adult basic education, including ESOL services. Federal adult basic education funding in 2016 was about \$582 million, and 1.5 million adults received services. Forty-five percent, or 695,930 individuals, were English-language learners.<sup>9</sup> States must match 25 percent of total expenditures to be eligible for federal funding. Different states administer adult basic education services through various agencies, including K-12 education, postsecondary education, and workforce development. States must report on performance, with the primary measure being gains in English skill levels.

Policy advocates promote investment in English-language training contextualized for the workplace as essential for the long-term self-sufficiency of adult English-language learners. However, research literature on the effectiveness of this strategy, and of ESOL programs in general, is remarkably limited. Most studies

of English-language instruction focus on young learners in school settings. Even when studies focus on adult learners, success is typically measured by attainment of language skills rather than employment outcomes. ESOL instruction is diverse, and no one model has consistently proven effective.<sup>10</sup> The only high-quality study of an ESOL program, with an RCT design and low sample attrition, tested whether a single reading intervention was more effective than regular ESOL instruction in improving low-literate adult learners' reading and English language skills.<sup>11</sup>

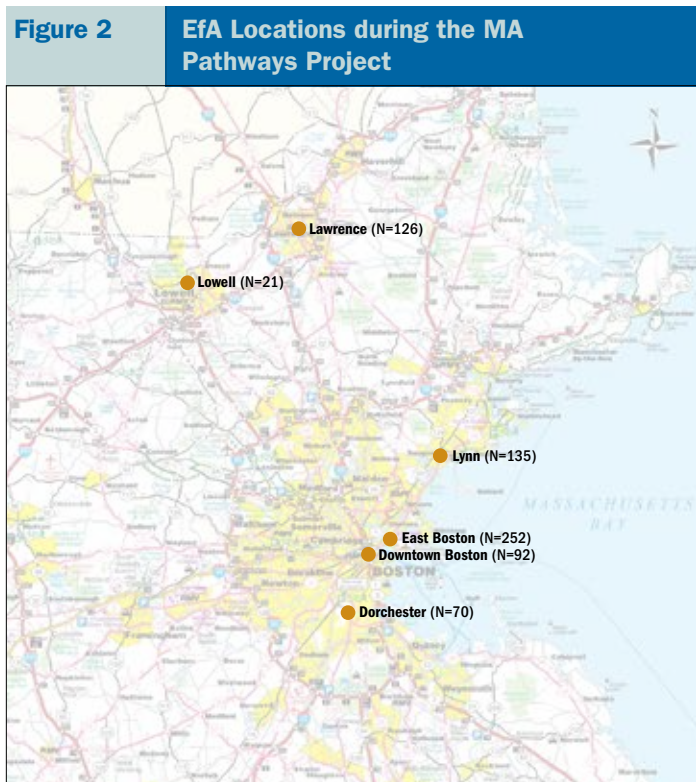
Evidence from the workforce development field includes studies of programs that integrate basic education, job skills training, and employment assistance that are targeted to both native-born Americans with low basic skills and immigrants with limited English skills. The Integrated Basic Education and Skills Training (I-BEST) program combines basic and occupational skills training and offers intensive supports to help adults with low basic skills earn college credentials. An ongoing RCT study of I-BEST found early positive impacts on credits earned and credential attainment but longer-term employment impacts are not yet available.<sup>12</sup> The Center for Employment and Training (CET) program integrates English language, literacy, and math instruction into occupational training and offers job placement assistance. An RCT study of CET's impact on single mothers in the early 1990s, in which most participants were Latina and many had limited English skills, found that the program increased earnings by 22 percent relative to the control group during the 30 months after enrollment.<sup>13</sup>

Reviews of welfare-to-work studies have found that programs offering a mix of education, training, and job placement services performed better than stand-alone adult basic education or ESOL classes. For example, the National Evaluation of Welfare-to-Work Strategies, which studied 11 programs in the mid- to late-1990s, found that a Portland, Oregon program combining education, job training, and job search assistance increased participants' earnings by 25 percent relative to a control group over five years—substantially more than the programs focused only on job search or basic education.<sup>14</sup>

EfA differs from these other programs in a number of ways. The EfA program provides employment-focused English-language instruction that is not connected to occupation-specific skills training. EfA also exclusively serves English-language learners—those for whom English is a second language—who possess varying levels of education and basic skills. Other programs combining workforce development and basic education services that have been rigorously evaluated served only adults with low literacy and job skill levels, and also included native English speakers. The evaluation of EfA is the first RCT study of the earnings impacts of a workforce development program for English-language learners with varying education and basic skill levels.

## The EfA Study Participants

JVS conducted extensive outreach efforts in communities that contain some of the largest concentrations of immigrants in Massachusetts. JVS had previously run EfA but was not doing so when the PFS project began.<sup>15</sup> To bring EfA to scale, JVS contracted with nonprofits located in each of the targeted communities to recruit participants and provide space for JVS staff to hold information sessions, classes, and career coaching meetings. These partner agencies are listed in the appendix (Table A2). JVS operated EfA in six locations, using staggered launches throughout the project's first year. Figure 2 shows each site's geographic location and number of study participants in the early cohort. Classes began in East Boston and Dorchester in September 2016, Lawrence in February 2017, Lynn in March 2017, Downtown Boston in April 2017, and Lowell in August 2017.



Note: N = the total number of study participants in each location included in the analyses in this interim report.

EfA study enrollment took place during a period of economic growth and record low unemployment rates in the greater Boston metropolitan area, ranging from 3.4 percent when study enrollment began to 2.5 percent by the final month of enrollment. Unemployment rates were similarly low in Lynn and Lowell. In Lawrence, the unemployment rate was 8.3 percent when study enrollment began and declined steadily to 4.8 percent by the end of the enrollment period. In addition to declining unemployment levels, Massachusetts increased the minimum wage twice during this period—from \$10.00 to \$11.00 per hour in January 2017, and from \$11.00 to \$12.00 per hour in January 2019. Enrollment in education and training programs,

particularly among low-income adults, typically falls when unemployment is low and jobs are plentiful.<sup>16</sup> This period also saw new federal immigration policies and increased immigration enforcement, factors that have been shown to deter immigrants from seeking services, including those who are in the country legally.<sup>17</sup>

JVS faced significant challenges recruiting students in this climate and invested substantial resources into outreach efforts. These included running newspaper, radio, and social media advertisements, distributing information at community events and via door-to-door to residences and businesses, and hiring full-time staff dedicated to community outreach. JVS met the MA Pathways enrollment goal for EfA despite the challenges.

Individuals interested in EfA attended an information session on the EfA program and the study. They received appointment cards to return for one-on-one interviews. During these interviews, JVS staff completed oral assessments of candidates' English skills while evaluating program eligibility and fit, including readiness to attend class and willingness to work. Candidates were required to have a Social Security card and work authorization documents, the desire to obtain a job or a better job, and the ability to attend available classes. Staff verified that candidates had childcare and transportation arrangements in place so that they could attend class and obtain a job. They reviewed candidates' employment goals to determine if they were realistic given their work experience, English skill level, and availability. Staff also considered the current earnings of those with jobs and whether the program could help them achieve earnings increases.

Staff submitted candidates deemed eligible for the program for enrollment in the study, and a computer program randomly assigned them to the treatment or control groups. Those assigned to the treatment group were invited to EfA classes. Those assigned to the control group did not participate in EfA services but were given a list of other ESOL classes in the community that they could pursue.

As shown in [Table 1](#), nearly three-quarters of EfA study participants were female, with an average age of 40. Just over half had children under age 18 in their household, and 56 percent lived with at least one other adult. A quarter of study participants were receiving SNAP benefits at program intake, and fewer than two percent were receiving cash assistance.

Two-thirds of study participants were legal permanent residents, and about 20 percent were naturalized U.S. citizens. While native-born Americans account for 13 percent of the working-age English-language learner population in the U.S.,<sup>18</sup> only 5 percent of study participants were born in the U.S., nearly all in Puerto Rico. Nearly three-quarters were born in countries in the Caribbean and South or Central America. Two-thirds of study participants spoke Spanish as their primary language; however, the other third spoke more than 40 different languages. There was significant variation in the amount of time study participants had lived in the U.S.: 27 percent had been in the U.S. for a year or less and 26 percent for over 10 years.



<b>Table 1</b>	<b>EfA Study Participants' Characteristics at the Time of Intake (N=790)</b>	
<b>Female</b>		73%
<b>Average age</b>		40
<b>Household</b>		
Single adult		25%
Two or more adults, no children under 18		24%
Single adult with child(ren) under 18		19%
Two or more adults and child(ren) under 18		32%
<b>Sources of income</b>		
Own employment		48%
Other household members' earnings		36%
SNAP		25%
TAFDC (cash assistance)		<2%
<b>Citizenship/resident alien status</b>		
Legal permanent resident		67%
Refugee, asylee, humanitarian parolee		9%
Naturalized U.S. citizen		19%
U.S.-born citizen		5%
<b>Region of birth</b>		
Caribbean		41%
South or Central America		32%
Africa		14%
Asia		7%
Other (North America, Europe, Middle East)		7%
<b>Years in the U.S.</b>		
1 year or less		27%
1.1 to 5 years		30%
5.1 to 10 years		17%
More than 10 years		26%
<b>English Level</b>		
Low		42%
Low-intermediate		18%
Intermediate		23%
High-intermediate		17%
<b>Highest degree earned</b>		
None		17%
High school diploma or equivalent		44%
Vocational certificate		8%
College degree		31%
<b>Earned highest degree outside of the U.S.</b>		90%
<b>U.S. employment experience</b>		
Employed full-time at intake		28%
Employed part-time at intake		20%
Had prior U.S. employment, but not at intake		28%
Never employed in the U.S.		24%

EfA served a diverse group in terms of skill levels, as indicated by their education levels and JVS's English skill assessments. Forty-two percent were assessed as having low English skills, and the remainder varied from low-intermediate to high-intermediate skill levels.<sup>19</sup> While about half possessed a high school diploma or equivalent degree, 17 percent had no degree, and 31 percent had a college degree. Ninety-percent of study participants earned their highest degree outside the U.S., often a significant barrier to immigrants when seeking jobs in their profession in the U.S.<sup>20</sup> The group was nearly evenly divided between those who were employed at the time of study intake and those who were not. Nearly a quarter of study participants had never been employed in the U.S. The diversity of the population posed program design challenges, requiring services tailored to individuals' skill levels and needs.

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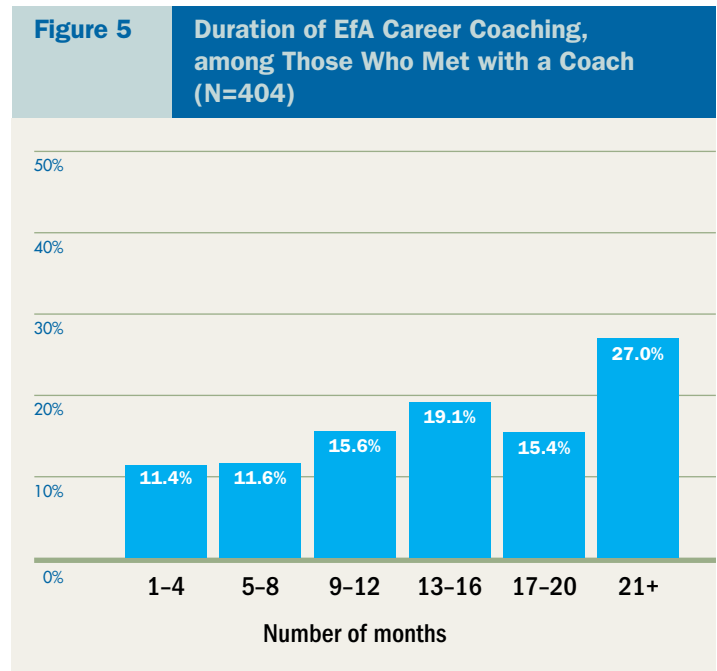
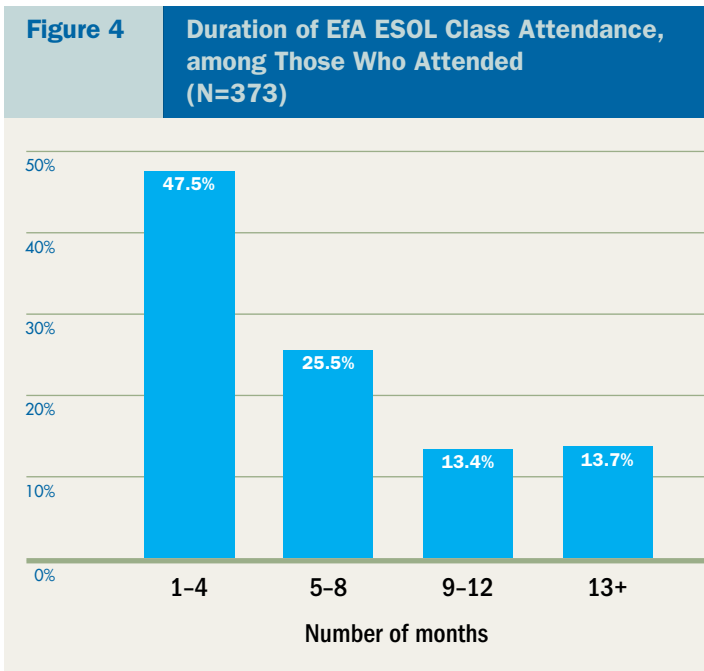
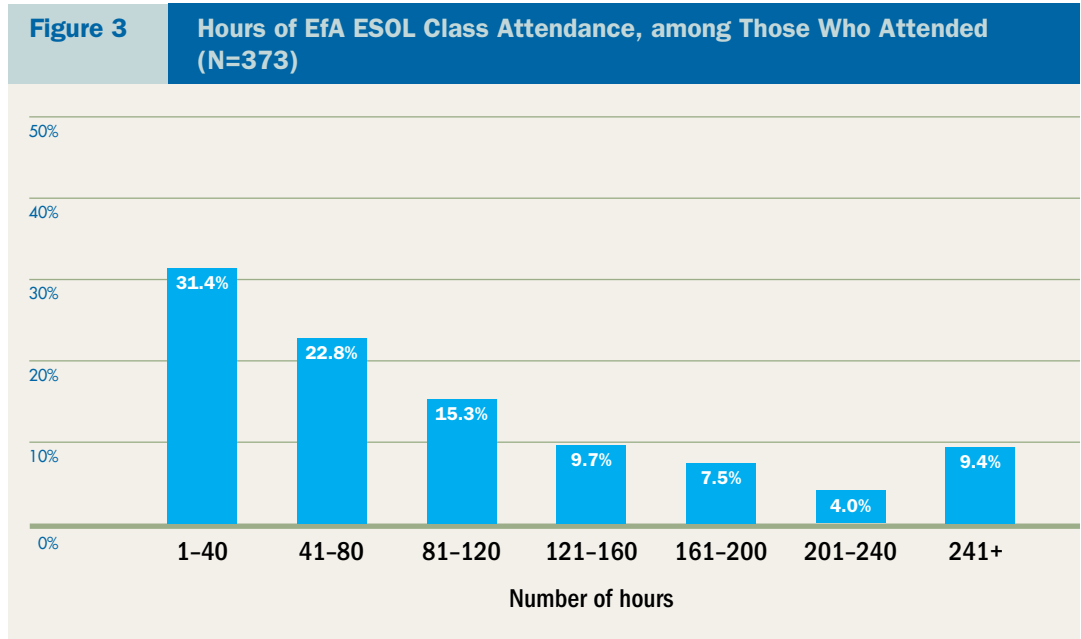
## The EfA Program

EfA's employment-focused ESOL classes incorporated instruction that addressed skills needed to find and succeed in a job, including interviewing skills and communication in the workplace. The classes admitted students monthly, were open-enrollment, and were offered up to nine hours per week over two or three days. When the program reached sufficient scale at a location, students were divided into classes by English level. The curriculum was segmented into four-month cycles. Students completed assessments at the beginning and end of each cycle to evaluate their progress. The assessments included questions asked during job interviews, and students were evaluated on their comprehension of the questions, the content of their answers, and whether they could be understood. The program held end-of-cycle celebrations to recognize students' progress. End-of-cycle check-ins provided an opportunity for students and staff to reassess goals and decide whether students would return for the next cycle and/or start looking for a job.

Career coaches began working with participants during the first week of class. Coaches helped participants set short- and long-term employment goals, develop a resume, and practice for interviews. The level of ongoing contact depended on participants' goals. Some started their job search immediately while others attended class for a time before beginning to search. Coaches checked in with participants at the end of cycles to review their goals and progress. Career coaches shared job leads with participants and also taught them how to search for jobs independently. Coaches shared job leads with each other and worked as a team to place participants. Some coaches primarily worked with participants who had been in the program for a year, reaching out to confirm if they were working and then either helping them obtain a job or discussing how to pursue promotions or wage upgrades.

EfA participants were expected to attend the ESOL classes for anywhere from two to 12 months, depending on their goals and needs, and to receive up to two years of job retention and advancement assistance from a career coach. Nearly all EfA group participants (91 percent) attended at least one ESOL class, and 99 percent met with a career coach at least once. Among those who attended EfA ESOL

classes, the average number of hours attended was 104; the median was 72. The number of hours attended varied widely, as shown in [Figure 3](#). On average, EfA participants attended ESOL classes over a six-month period. Just under half attended classes for one to four months and another quarter for five to eight months ([Figure 4](#)). EfA participants on average met with a career coach over a period of 14 months. While the length of career coaching varied, 61 percent met with a coach for more than a year ([Figure 5](#)).



EfA group members were significantly more likely than control group members to attend ESOL classes during the two years after study enrollment. According to data from the MA Department of Elementary and Secondary Education, Adult and Community Learning Services (ACLS) unit, 16.8 percent of the 382 control group members attended ESOL classes during the two-year follow-up period (Table 2). A similar percentage of EfA group members—14.5 percent—also attended ESOL classes outside of EfA during this period. Control group members who attended ESOL classes did so for an average of 228 hours—greater than the average for EfA group members who attended EfA or other ESOL classes. However, because nearly all EfA group members attended some ESOL classes, the average hours of ESOL classes attended among all study participants was greater for the EfA group than for the control group.

**Table 2** ESOL Class Attendance among All Study Participants

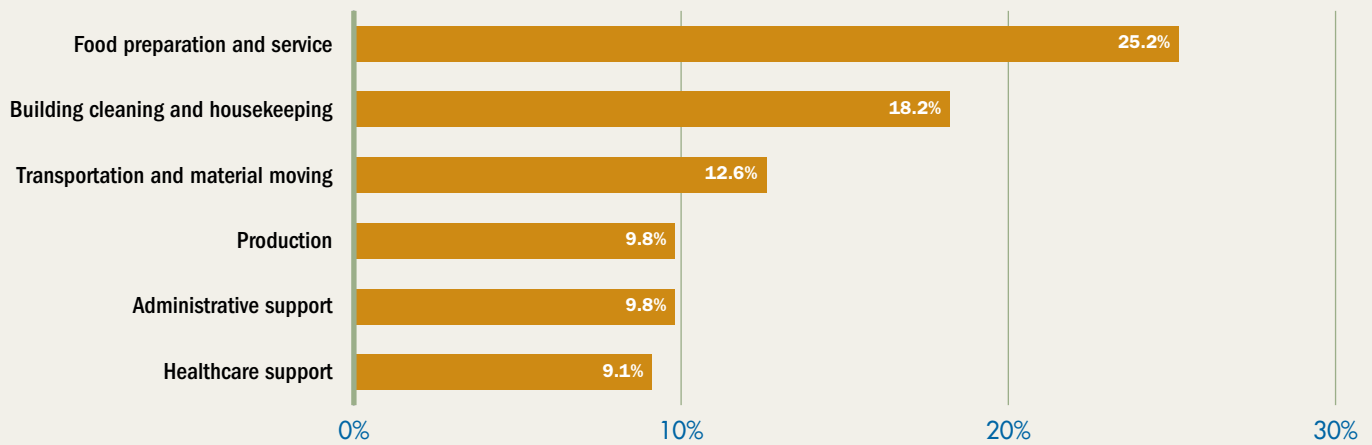
	EfA Group (N=408)	Control Group (N=382)
Percent who attended EfA ESOL classes	91.4%	0%
Percent who attended ESOL classes outside of EfA	14.5%	16.8%
Percent who attended any ESOL classes	91.4%^	16.8%
Average ESOL class hours among those who attended	134	228
Average ESOL class hours among all, including those with zero attendance	123	38

<sup>^</sup>Note: ACLS provided the aggregate numbers of EfA group and control group members who attended ESOL classes. We do not know which EfA participants attended ESOL classes at other agencies. We provide a conservative estimate of overall ESOL attendance by assuming that all EfA participants who attended ESOL classes elsewhere also attended EfA classes. If some had not attended EfA classes, then the percent of EfA group members who attended any ESOL classes would be greater than 91.4 percent.

JVS reported that 91 percent of EfA group members met the program’s enrollment criteria—participating for at least 11 days—and 65 percent of those enrolled obtained new jobs. EfA participants who were unemployed at study intake were more likely than those who were working to obtain new jobs after enrolling in EfA (76 percent versus 54 percent, respectively). EfA’s post-program employment rate is about double that of other ESOL programs in Greater Boston, where only about a third of participants are employed after program exit.<sup>21</sup> As shown in Figure 6, EfA participants obtained work in a variety of occupations, the most common of which were in food preparation and service, building cleaning and housekeeping, and transportation and material moving, primarily as packers and stockers. Starting wages averaged just under \$13.00 per hour, and two-thirds of those placed worked 30 or more hours per week.

On average, EfA participants obtained their first new job five months after enrollment. Thirty-seven percent of those who obtained jobs continued to attend ESOL classes for a month or more after starting their first job. Career coaches maintained contact with nearly all (99 percent) of those placed after they began their first job.

**Figure 6** Primary Occupations in Which EfA Participants Obtained Jobs (N=242)



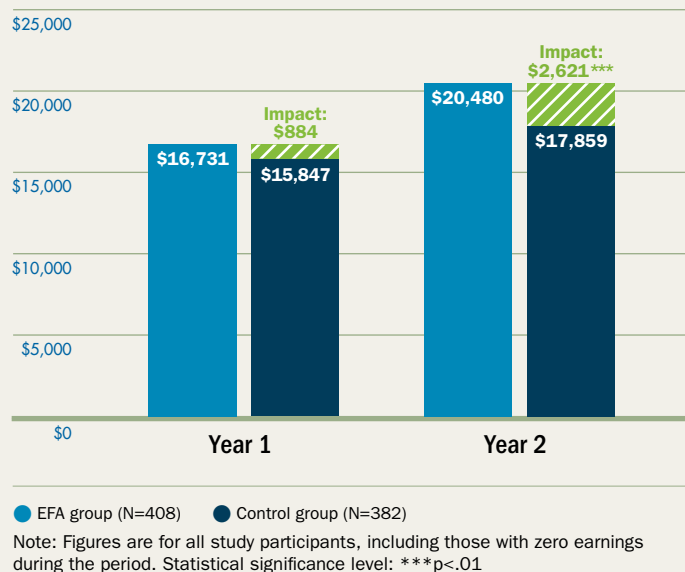
### EfA’s Impacts on Employment and Earnings

Unlike nearly all ESOL programs, which focus on language proficiency, EfA’s goal is to help adult English-language learners obtain employment or advance to a better job. The primary measure of the program’s success was increased earnings from work during the second year after study enrollment. In **Figure 7**, we present EfA’s earnings impacts during each of the two years after random assignment for the early cohort of study participants. We estimate impacts for all EfA group and control group members, including those who had zero earnings during the period. EfA had a large, statistically significant impact on annual earnings in the second year

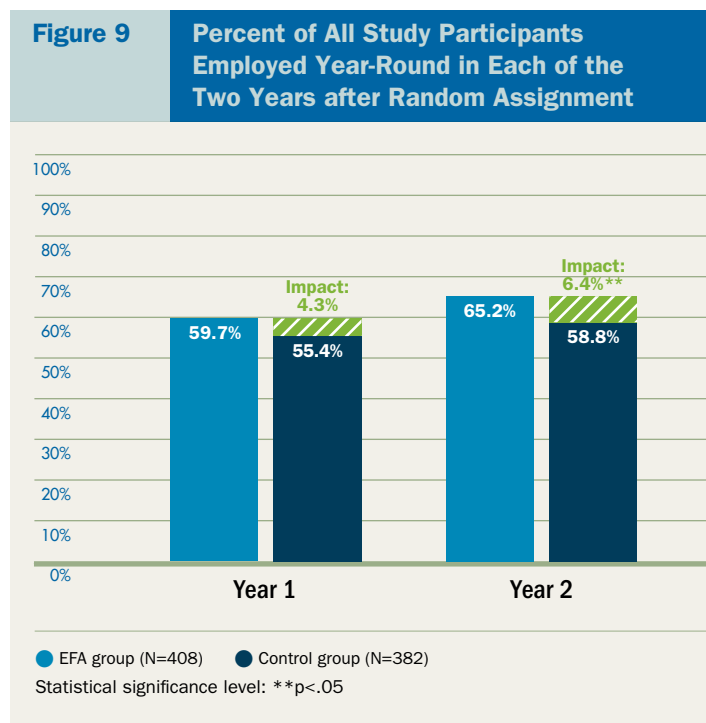
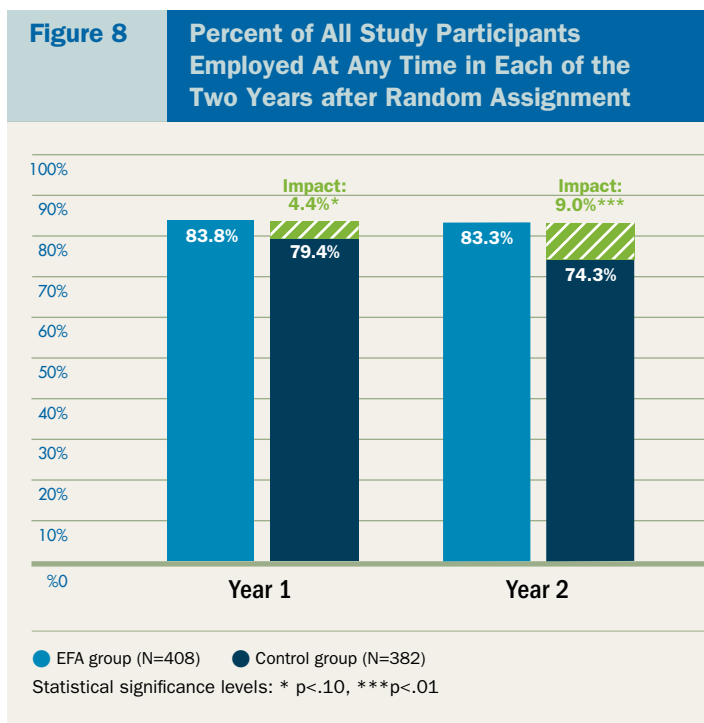
after random assignment—an average difference of \$2,621. Studies of education and training programs often find significant, negative impacts on earnings while students reduce or forego working in order to attend classes. While EfA’s impact in the first year after random assignment, when most participants were attending ESOL classes for some part of the year, was not statistically significant, it was positive, and the program’s total impact on earnings over the two years averaged \$3,505—a statistically significant difference.<sup>22</sup> The EfA earnings impacts are impressive because only a small number of workforce development programs have ever demonstrated an earnings impact in an RCT study.

At least part of the EfA program’s impact on earnings was due to the fact that the EfA group worked more than the control group. EfA group members were significantly more likely to be employed at any time during the year in both the first and second years after random assignment.

**Figure 7** Average Annual Earnings during Each of the Two Years after Random Assignment among All Study Participants

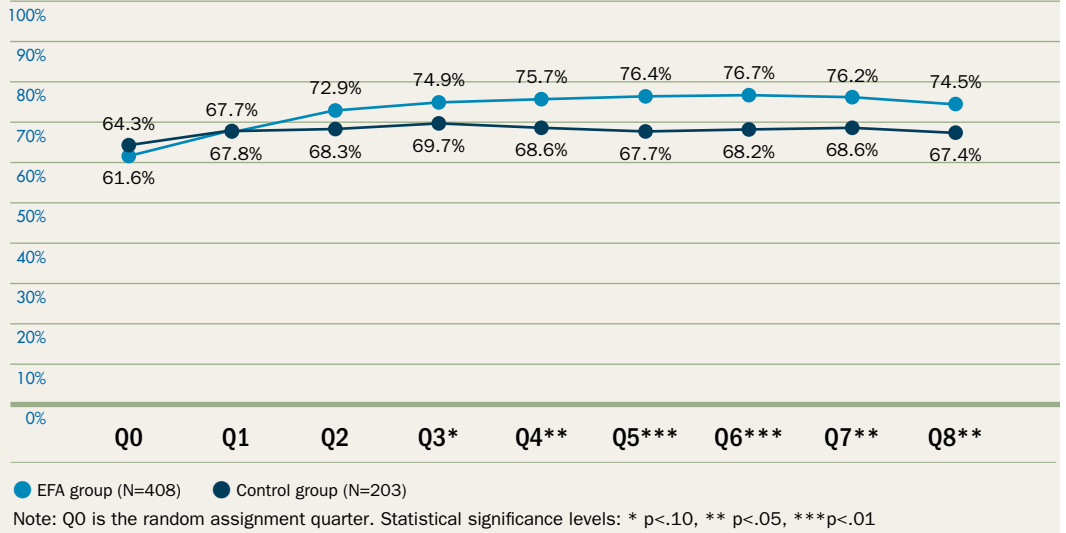


The impact grew from 4.4 percentage points in the first year to 9 percentage points in the second year (Figure 8). We also examined whether study participants were employed year-round—that is, whether they worked at some time during all four quarters of each year. We found that EfA group members were significantly more likely than control group members to be employed year-round in the second year after random assignment—a 6.4 percentage point difference (Figure 9).

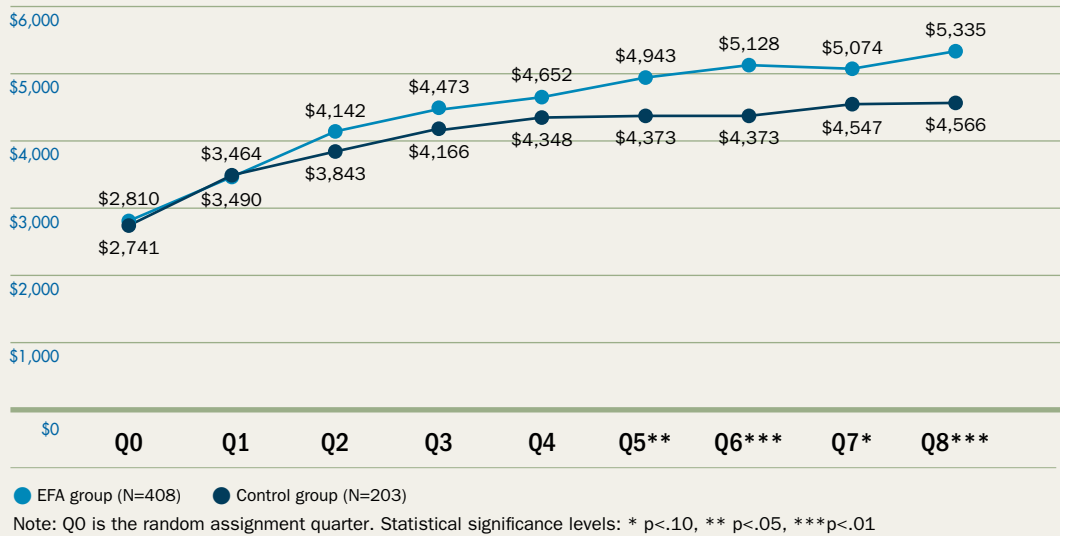


Figures 10 and 11 present quarterly employment rates and earnings during the quarter of random assignment (Q0) and the eight quarters following the random assignment quarter. As shown in Figure 10, quarterly employment rates increased for both the EfA group and the control group during the first three quarters after the random assignment quarter but they increased more so for the EfA group. From the fourth through eighth quarters, EfA group members were consistently more likely to be employed than control group members, by about 7 to 9 percentage points. While employment rates for both groups remained steady after the fourth quarter, earnings grew for the EfA group at a faster rate (Figure 11). From the fourth to the eighth quarter after random assignment, earnings grew by 15 percent for the EfA group compared to 5 percent for the control group. The fact that quarterly earnings impacts grew through most quarters of the second year is important to note because studies of workforce development programs often find that earnings impacts diminish over time.<sup>23</sup> Longer-term follow-up is needed to learn whether EfA's positive impacts are sustained after the second year.

**Figure 10** Percent of All Study Participants Employed during Each Quarter after Random Assignment



**Figure 11** Average Quarterly Earnings during the Two Years after Random Assignment among All Study Participants



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## Earnings Impacts for Subgroups

We examined whether EfA was effective for different groups of English-language learners based on demographics, education, and U.S. work experience. This analysis is exploratory as the study was not designed to ensure that sample sizes across subgroups would be large enough to detect effects of a policy-relevant size. While our ability to detect significant impacts across subgroups will improve once data are available for the full study sample, the effects of the pandemic may make it difficult to draw conclusions regarding subgroups across the pre- and post-pandemic periods. Therefore, we present the results for the early cohort.

Figures 12 through 15 present the differences in earnings between the EfA group and the control group (“EfA’s impact”) during the second year after random assignment. We found that EfA’s earnings impacts were similar for female and male participants (Figure 12). Only the impact among females was statistically significant because of the larger sample size. Impacts were large and statistically significant among those ages 25 to 44 (Figure 13). Impacts were greater for those with a high school diploma or no degree; however, differences between these groups and those who had a college degree were not statistically significant (Figure 14). The program had greater impacts for participants with intermediate-level English skills than for those with low English skills (Figure 15). The difference in impacts between those with high-intermediate skills and those with low skills was statistically significant.

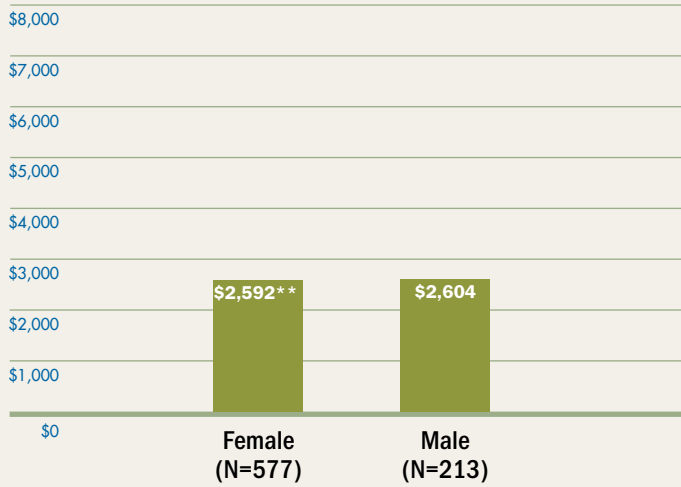
Earnings impacts were significantly greater for participants who had prior U.S. work experience, but were unemployed at study intake, than for those who were employed or those with no U.S. work experience (Figure 16). While those employed at study intake had higher earnings in the second year after random assignment than those who were not employed at intake, earnings impacts for workers who were unemployed at intake were 11 times greater than for those who were employed.

To help better understand the differences in earnings impacts by employment status at intake, Figure 17 presents the percent of study participants who were employed year-round in the second year after random assignment—that is, they worked at some time during all four quarters of the year. For those who were unemployed at intake but had prior U.S. work experience, EfA increased the likelihood of being employed year-round by 16.8 percentage points. Individuals in both the EfA group and the control group who were employed at intake had the highest rates of year-round employment, while those who had no U.S. work experience had the lowest rates. EfA did not have significant impacts on year-round employment for either of these groups.

As noted in the introduction, the MA Pathways project includes four program tracks designed to serve English-language learners with varying levels of language skills and work experience. Rapid Employment is intended to help those with no U.S. work experience and low-level language skills to quickly find employment. EfA helps unemployed or underemployed job seekers with low- to intermediate-level language skills

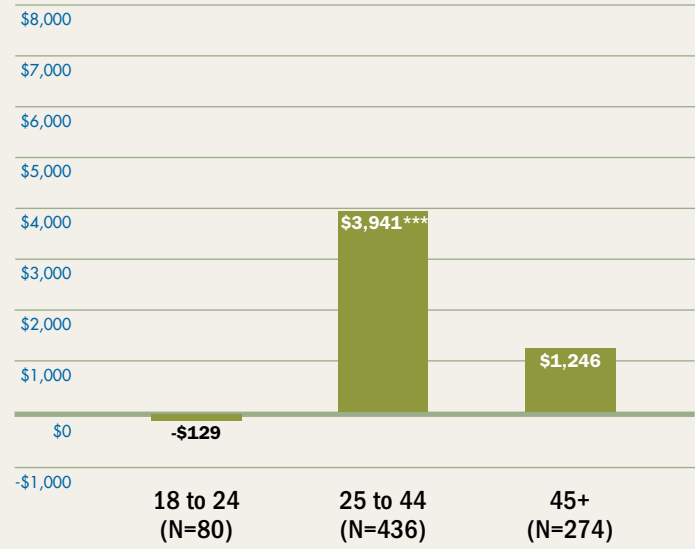


**Figure 12** EfA's Impact on Average Annual Earnings Two Years after Random Assignment, by Gender



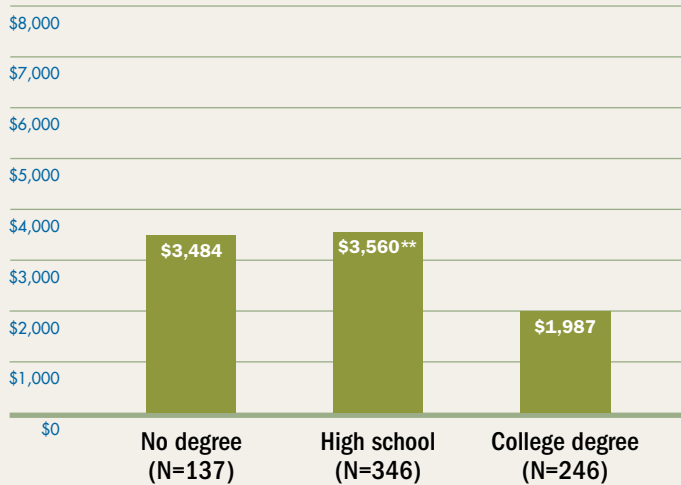
Within group significance level: \*\*p<.05

**Figure 13** EfA's Impact on Average Annual Earnings Two Years after Random Assignment, by Age



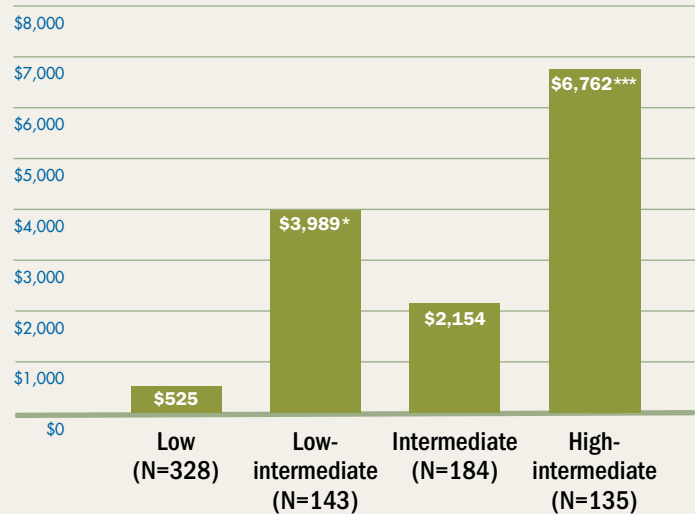
Within group significance level: \*\*\*p<.01

**Figure 14** EfA's Impact on Average Annual Earnings Two Years after Random Assignment, by Education Level

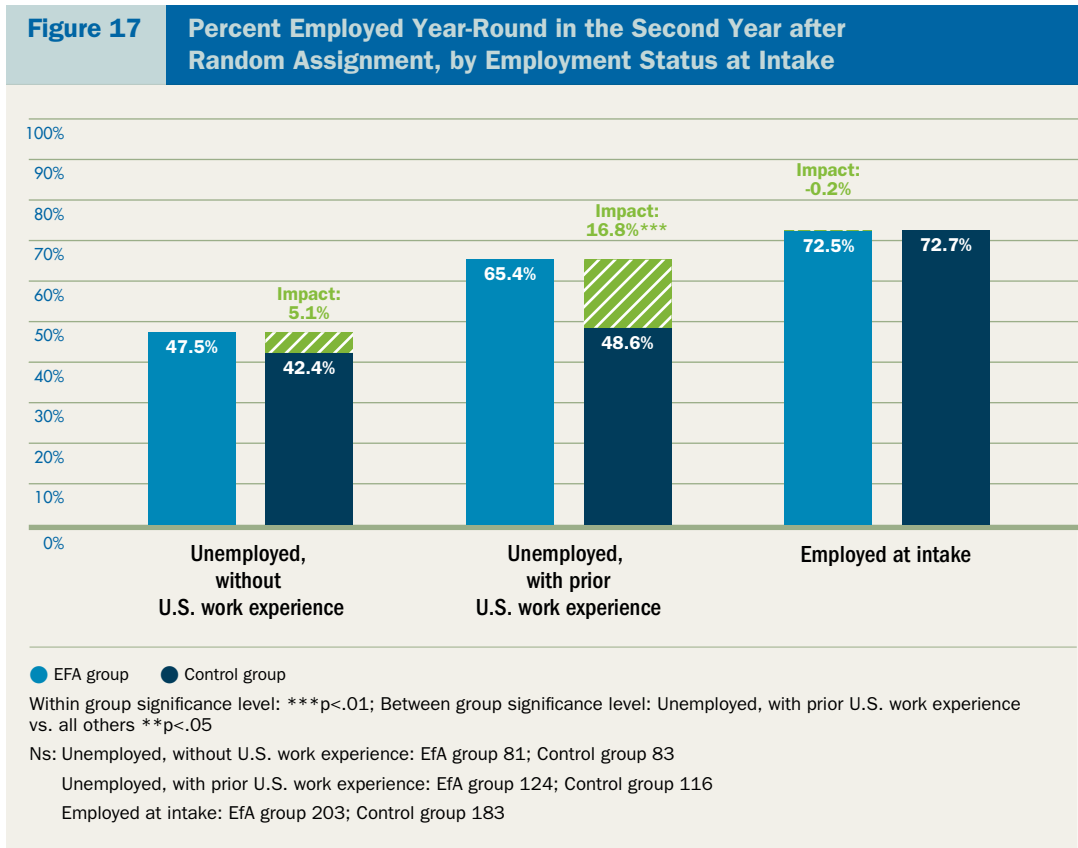
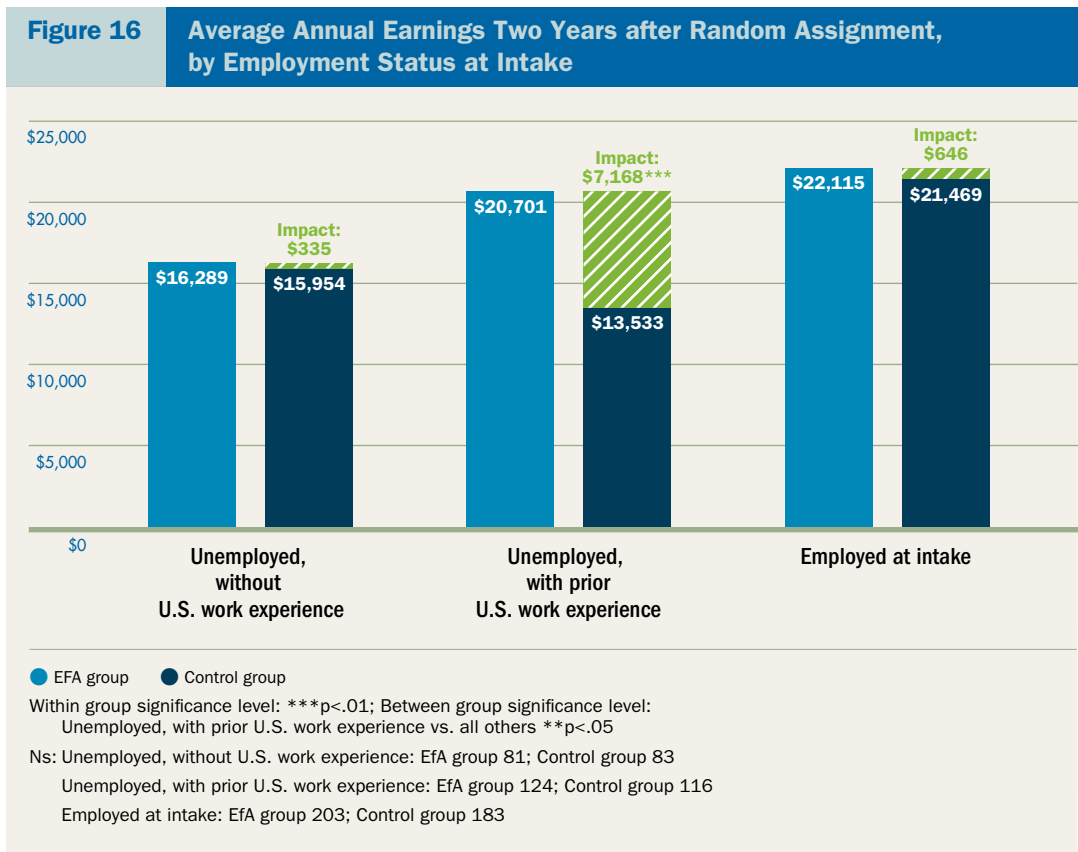


Within group significance level: \*\*p<.05; Vocational certificate not shown due to small sample size

**Figure 15** EfA's Impact on Average Annual Earnings Two Years after Random Assignment, by English Skills Level

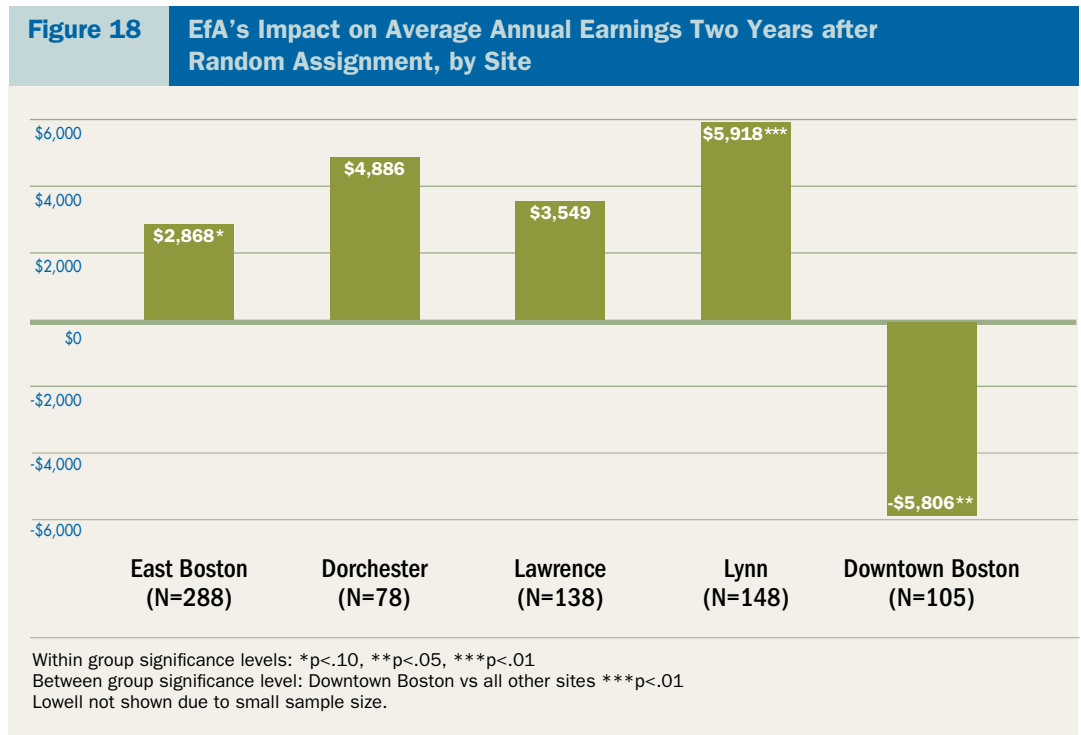


Within group significance levels: \*p<.10, \*\*\*p<.01  
Between group significance level: High vs. low \*\*p<.05



obtain a job or a better job. The occupational skills training and college bridge programs seek to help individuals with greater language skills and U.S. work experience gain the skills needed to access higher-wage jobs. While comparable impact data for the other MA Pathways program tracks are not available, the EfA study results lend support to the project’s tiered design. Employed individuals seeking better-paying jobs may need interventions that include job skills training or postsecondary education. Individuals with no U.S. work experience, and those with the lowest-level English proficiency, may need more intensive interventions and additional supports to access and retain jobs offering better pay and consistent work.

We also examined differences in earnings impacts across the EfA locations, after accounting for differences in the characteristics of study participants at each site. For the most part, the sample sizes are too small at this point to draw conclusions about the program’s effectiveness within and across the six locations. As shown in **Figure 18**, the earnings impacts were large and positive across several sites but, with the small sample sizes at some sites, they were not necessarily statistically significant. The differences in impacts across East Boston, Dorchester, Lawrence, and Lynn were not significant and one cannot conclude that the program was more or less effective across these sites. The exception is that the impacts in the downtown Boston location were negative, and the differences in impacts between this site and the other four sites were statistically significant. The negative impact at downtown Boston was a result of both the EfA group having a lower employment



rate than the control group, and the control group having high average earnings relative not only to the downtown EfA group but also to the control groups at other locations. There were no clear differences in program participation levels that might help explain the differences across the sites. It is possible that EfA group members in downtown Boston chose to take advantage of other education and training opportunities to improve their skills. It is also possible that control group members were able to find other available workforce programs in the downtown area. However, we do not have data to explore these hypotheses. The findings support greater investment in employment-focused ESOL training in locations outside the city center, where services are typically limited.<sup>24</sup>

### EfA Costs

EfA's costs per participant when it was fully operating across the six locations averaged approximately \$5,007 in 2019 dollars. This included costs for JVS outreach staff, instructors, and career coaches, as well as marketing costs and subcontracts with community agencies for participant recruitment and space for EfA service delivery. EfA's average costs were greater than for other adult education programs in Massachusetts, which averaged about \$2,925 per student in 2019 dollars.<sup>25</sup> The higher costs were due in part to EfA students receiving support from both an ESOL instructor and a career coach. JVS employed one coach for every three ESOL classes.

A comparison of EfA's costs and benefits must consider the cost of services received by control group members. As reported earlier in the report, 16.8 percent of control group members received ESOL services during the two years after study enrollment. We do not have information about whether control group members received career coaching or job placement services similar to those offered by EfA. Given that most ESOL programs do not provide employment assistance and that English-language learners face barriers to accessing public workforce services, we expect that few control group members received the individualized career coaching that EfA participants received. As shown in [Table 3](#), because 14.5 percent of EfA group members also received ESOL services outside of EfA, the net cost per participant of EfA, \$4,940, is only slightly lower than the gross cost. EfA's net earnings benefit over the two years after study enrollment in 2019 dollars was \$3,580. If the program's earnings impacts are sustained, EfA's net earnings benefit could exceed its net costs by the third year after enrollment.

**Table 3** Average Net Costs of EfA in 2019 Dollars

	EfA group	Control group	Net
Average EfA costs	\$5,007	\$0	\$5,007
Average ESOL costs (not including EfA)	\$423	\$490	-\$67
Total costs	\$5,430	\$490	\$4,940

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## Conclusions

With English for Advancement (EfA), JVS has developed a low-cost and effective way to integrate language instruction with career services to improve the labor market outcomes of English-language learners. EfA increased the proportion of job seekers who obtained employment and had positive earnings impacts that grew over the eight quarters after study enrollment. The model is worthy of wider utilization since many who enroll in ESOL classes are motivated by a desire to improve their job prospects. The Commonwealth of Massachusetts also benefited from increased employment and earnings that translated into higher tax revenue and larger contributions to the unemployment insurance system.

JVS demonstrated significant impacts in the tightest labor market in a decade, during which unemployment rates dropped to historic lows, particularly in the Boston metropolitan area. Key findings regarding EfA's impacts for the early cohort of study participants include:

- EfA significantly increased annual earnings in the second year after study enrollment by \$2,621—or 15 percent—relative to the control group, and by \$3,505 over two years.
- EfA significantly increased employment rates starting in the third quarter after study enrollment and continuing through the eighth quarter.
- While quarterly employment rates remained steady for both groups during the second year after study enrollment, the EfA group's earnings continued to grow, and at a faster rate than control group members' earnings.

As noted in the introduction, there are no other RCT studies of the earnings impacts of integrated ESOL and employment services for English-language learners. Occupational skills training programs that have succeeded in RCT studies have demonstrated earnings gains of 26 to 35 percent relative to the control group in the second year after study enrollment.<sup>26</sup> These programs were more intensive than EfA—requiring full-time attendance over several weeks—and often helped participants earn certifications needed to obtain well-paying jobs. EfA is less intensive in terms of class hours, and many EfA participants obtained jobs in food preparation, cleaning, and transportation—not unlike the limited English proficient population generally. However, the findings demonstrate that EfA increased the percentage of those who were employed at all and the consistency of employment over the year. The results suggest that JVS's decades of experience in working with immigrant communities, developing and delivering innovative curricula, and cultivating deep and extensive relationships with employers were important to EfA's success.

Other key observations regarding the findings for the early cohort of EfA participants include:

- EfA's design—with rolling enrollment, individualized career coaching, and siting within partner community organizations—lends itself to rapid expansion and is especially useful in communities with large immigrant populations.
- While EfA's overall earnings impacts are impressive, they could be considerably larger if future programming focused on the groups who benefitted the most, including unemployed individuals with some prior U.S. work experience and individuals with more than the lowest level of English-language proficiency. The evidence also suggests that EfA is particularly effective in communities outside the city center, where ESOL services are limited.
- The study provides evidence to support the Pay for Success funding model as an effective strategy to finance and scale innovative approaches to government-funded services.

We cannot know what EfA's impact will be for the cohort of study participants whose two-year follow-up period will be affected by the economic slowdown caused by the COVID-19 pandemic. JVS is working to reengage participants in remote ESOL classes and career coaching, providing an opportunity for them to build their skills until the hiring environment improves. We will publish a report on EfA's two-year impacts for the full sample of study participants in late 2022. That report will explore differences in the employment and earnings outcomes of the pre- and post-pandemic cohorts as well as whether and how EfA's impacts change from the pre- to post-COVID periods.

## Endnotes

1. Wilson, Jill. *Investing in English Skills: The Limited English Proficient Workforce in U.S. Metropolitan Areas*. Washington, DC: Brookings Institution, 2014.
2. Batalova, Jeanne and Jie Zong. *Language Diversity and English Proficiency in the United States*. Migration Policy Institute, November 11, 2016. <https://www.migrationpolicy.org/article/language-diversity-and-english-proficiency-united-states>
3. Wilson, *Investing in English Skills*.
4. Wilson, *Investing in English Skills*.
5. Batalova, Jeanne and Michael Fix with Peter A. Creticos. *Uneven Progress: The Employment Pathways of Skilled Immigrants in the United States*. Washington, DC: Migration Policy Institute, October 2008.
6. Wilson, *Investing in English Skills*.
7. Modestino, Alicia Sasser, et al. *The ROI of ESOL: The Economic and Social Return on Investment for ESOL Programs in Greater Boston*. Boston, MA: The Boston Foundation, December 2019.
8. Milner, Justin and Kelly Walsh. *Measuring Success in Pay for Success: Randomized Controlled Trials as the Starting Point*. Washington, DC: Urban Institute, August 2016.
9. "Adult Basic Education Grant Program Factsheet," U.S. Department of Education, September 2017. <https://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/factsheet/adult-education-basic-grant.pdf>
10. Shaffer, Barry. *Strengthening State Adult Education Policies for English as a Second Language Populations*, Working Poor Families Project, 2014. [www.workingpoorfamilies.org](http://www.workingpoorfamilies.org).
11. See Condelli, L., et al. *The Impact of a Reading Intervention for Low-Literate Adult ESL Learners* (NCEE 2011-4003). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, December 2010. This study found no significant differences in the gains experienced by the "Sam and Pat" group and the regular ESOL group.
12. Martinson, Karin, et al. *Washington State's Integrated Basic Education and Skills Training (I-BEST) Program in Three Colleges: Implementation and Early Impact Report*, OPRE Report #2018-87. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, September 2018.
13. Burghardt, John, et al. *Evaluation of the Minority Female Single Parent Demonstration: Volume I*. Princeton, NJ: Mathematica Policy Research, Inc, October 1992.
14. Wrigley, Heide, et al. *The Language of Opportunity: Expanding Employment Prospects for Adults with Limited English Skills*. Washington, DC: Center for Law and Social Policy (CLASP), August 2003.
15. The earlier version of EfA sought to place people in jobs, skills training, or college, but the PFS version of EfA focused on helping English-language learners obtain jobs or advance to better jobs.
16. Johnson, Nate. *The Unemployment-Enrollment Link*, August 27, 2015. <https://www.insidehighered.com/views/2015/08/27/unemployment-rate-community-college-enrollments-and-tough-choices-essay>
17. O'Shea, Tim and Cristobal Ramón. *Immigrants and Public Benefits: What Does the Research Say?* Washington, DC: Bipartisan Policy Center, November 2018.
18. Wilson, *Investing in English Skills*.
19. JVS staff conducted a verbal assessment of program applicants' English skills during intake interviews. Staff rated applicants on 5-point scales for how much they understood and how much they responded. The categories JVS used correspond to standard Student Performance Levels (SPL), ranging from Low=SPL 0 to High Intermediate=SPL5-6.
20. Batalova and Zong, *Language Diversity and English Proficiency in the United States*.
21. Modestino, *The ROI of ESOL*.
22. Details regarding impact estimates, standard errors, and p-values are included in **Table A4** in the appendix.
23. See, for example, Hamilton, Gayle, et al. *National Evaluation of Welfare-to-Work Strategies: How Effective Are Different Welfare-to-Work Approaches? Five-Year Adult and Child Impacts for Eleven Programs*. Washington, DC: U.S. Department of Health and Human Services and U.S. Department of Education, December 2001; *Job Training Partnership Act: Long-Term Earnings and Employment Outcomes*. Washington, DC: U.S. General Accounting Office, March 1996; Cummings, Danielle and Dan Bloom. *Can Subsidized Employment Programs Help Disadvantaged Job Seekers? A Synthesis of Findings from Evaluations of 13 Programs*. OPRE Report #2020-23. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, February 2020.
24. Modestino, *The ROI of ESOL*.
25. Costs are based on Mobility's calculations using MA Adult and Community Learning Services 2020 data on the cost per seat for Adult Basic Education and ESOL services across all providers except JVS. Average costs were adjusted to 2019 dollars to be comparable to the EfA cost figures.
26. See Maguire, Sheila, et al. *Tuning In to Local Labor Markets: Findings from the Sectoral Employment Impact Study*. Philadelphia, PA: Public/Private Ventures, July 2010; Hendra, Richard, et al. *Encouraging Evidence on a Sector-Focused Advancement Strategy: Two-Year Impacts from the WorkAdvance Demonstration*. New York: MDRC, August 2016.

## Appendix

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### MA Pathways to Economic Advancement Project Partners

**Commonwealth of Massachusetts.** The Executive Office for Administration and Finance serves as lead agency and outcomes payor for the Massachusetts Pathways to Economic Advancement Project. The Executive Office of Labor and Workforce Development and Executive Office of Education provide administrative data and ongoing support to inform outcomes measurement for the project.

**Jewish Vocational Service (JVS)** is a 501(c)(3) nonprofit, nonsectarian organization founded in 1938. JVS serves more than 16,000 individuals annually, and is one of the largest community-based providers of adult education and workforce development services in Greater Boston. JVS's mission is to empower individuals from diverse communities to find employment and build careers, while partnering with employers to hire, develop, and retain productive workforces. In support of this mission, JVS provides a wide range of adult education, vocational training, job readiness, career counseling, and job placement services, as well as related supportive services.

**Social Finance** is a 501(c)(3) nonprofit organization dedicated to mobilizing capital to drive social progress. Social Finance uses a set of innovative financing strategies called Pay for Success to design and manage public-private partnerships that measurably improve lives. To date, Social Finance has mobilized more than \$150 million of capital to address a wide range of social issues in areas such as workforce development, education, health, and criminal justice. Social Finance's sister organization, Social Finance UK, pioneered the first Social Impact Bond in 2010. Learn more at [socialfinance.org](http://socialfinance.org).

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### MA Pathways to Economic Advancement Program Tracks

As noted in the introduction, English for Advancement, or EfA, is one of four contextualized ESOL programs that JVS operates as part of the MA Pathways to Economic Advancement project. A future report will present findings on the final outcomes for all four programs. [Table A1](#) provides an overview of the four program tracks, including primary services offered, expected duration of participation, target populations, and targeted outcomes and PFS enrollments. The program tracks were designed to serve participants with varying levels of English skills and U.S. work experience, with Rapid Employment serving individuals with the lowest levels of English skills and work experience and Bridges to College serving those with the highest levels.

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### EfA's Community Partners

[Table A2](#) lists the community nonprofit organizations with which JVS contracted for recruitment services and/or space in the EfA locations outside of downtown Boston. The downtown Boston program is located at JVS headquarters.



<b>Table A1 Summary of Program Tracks in the MA Pathways Project</b>				
	<b>Rapid Employment</b>	<b>English for Advancement</b>	<b>Skills Training</b>	<b>Bridges to College</b>
<b>Primary intervention</b>	Vocational ESOL classes Job readiness Career coach assistance with job search	Vocational ESOL classes Job readiness Career coach assistance with job search	Contextualized ESOL, computer, and customer service classes for Certified Nursing Assistant and Room Attendant jobs  Career coach job search assistance	Pre-college English, math, science, and computer classes contextualized to college partner programs  Academic coaching
<b>Expected class duration</b>	Open entry/exit, 4 to 12 weeks	Open entry/exit, 2 to 12 months	CNA: 14 weeks Room Attendant: 6 weeks	23 weeks
<b>Target population</b>	Refugees, recent immigrants  Low English skills  Limited U.S. work experience and education	Low-to-intermediate English skills  Unemployed or in low-skill or part-time jobs	Intermediate English skills  Have U.S. work experience but lack vocational skills	High-intermediate English skills  High school diploma or equivalent  Qualify for financial aid
<b>Target outcome</b>	Enrollment  Average annual earnings in the second year post-enrollment	Enrollment  Average annual earnings in the second year post-randomization minus control group earnings	Enrollment  Average annual earnings two years post-enrollment minus average annual earnings two years pre-enrollment	Enrollment  Proportion who earn 12+ college credits and up to 3 remedial credits during the two years post-program
<b>Target PFS enrollment</b>	360	1,000	230	120

<b>Table A2 EfA Community Partners for Each Location</b>	
<b>East Boston</b>	East Boston Neighborhood Health Center
<b>Dorchester</b>	Lena Park Community Development Corporation
	St. Mark Community Education Program
<b>Lynn</b>	Lynn Housing Authority and Neighborhood Development
	Lynn Economic Opportunity Inc.
<b>Lawrence</b>	Lawrence Community Works
<b>Lowell</b>	Coalition for a Better Acre
	Cambodian Mutual Assistance Association
	International Institute of New England

## Study Design and Sample

Mobility used a randomized controlled trial, or RCT, design to evaluate EfA and assess its impacts on individuals' outcomes. To examine program impacts, this report relies on administrative earnings data from the Massachusetts Department of Unemployment Assistance (DUA) for the two years before the quarter of random assignment through the two years after that quarter. Employers report employee earnings to DUA for purposes of administering the unemployment assistance program. While state administrative earnings records are less expensive to collect and are considered more reliable than self-reported data from surveys, they do not cover all types of employment. Specifically, the DUA data does not include earnings for the self-employed, independent contractors (reported on a Form 1099), most federal government employees, those in informal work, or those who worked outside of Massachusetts.

We also rely on data provided by JVS on study participants' characteristics at the time of intake and the services treatment group members received. We used the intake data to compare the characteristics of treatment and control group members, to control for any differences in characteristics between the groups in the analysis of program impacts, and to examine impacts across subgroups.

JVS staff completed the EfA program's intake and screening process to identify eligible candidates and obtained their written consent to take part in the study. EfA staff entered eligible candidates' data into a customized database that used a random number generation function to assign participants to the treatment or control group. Individuals were blocked according to the EfA location where they were expected to receive services and randomization was completed within each block. Staff invited those assigned to the treatment group to receive EfA services. Staff informed those assigned to the control group that they could not participate in EfA and sent them a list of other ESOL programs in the community that they could pursue.

From the start of enrollment in September 2016 through November 30, 2017, 50 percent of participants were randomly assigned to the treatment group and 50 percent to the control group. To increase the likelihood that JVS would meet the PFS enrollment goal for EfA, the PFS partners decided to change the randomization ratio so that a greater portion of individuals would be assigned to the treatment group. From December 1, 2017 through the end of enrollment in September 2019, eligible applicants were assigned to the treatment group on a 1.5:1 basis. Because the randomization ratio varies between cohorts enrolled before and after December 1, 2017, it was necessary to weight the data in all analyses to ensure that the reported results equally represented the treatment group and control group participants for each time period. The weight assigned to each treatment group participant was 1. The weight assigned to each control group participant was equal to the number of treatment group participants divided by the number of control group participants in each cohort.

**Table A3** presents the baseline characteristics of the 408 EfA treatment group members and 382 control group members included in this report. The results demonstrate that the groups were well-balanced; that is, there were no significant differences between the treatment and control groups in any of the characteristics.

## Receipt of Other JVS Services

At its downtown Boston headquarters, JVS offers over 35 programs to help individuals build skills, find employment, and advance in their careers. While control group members were not able to receive EfA services, they could apply for other JVS services, as could members of the EfA group. JVS records indicate that 1.8 percent of control group members and 1.7 percent of EfA group members received non-EfA services from JVS during their two-year follow-up periods.

**Table A3** Comparison of EfA Treatment Group and Control Group Members Enrolled from September 1, 2016 through December 31, 2017

	EfA Group (N=408)	Control Group (N=382)	Difference	p-value
<b>Female</b>	74.0%	71.7%	2.3%	0.472
<b>Age</b>				0.280
Age 18 to 24	11.8%	8.6%	3.2%	
Age 25 to 44	55.4%	55.2%	0.2%	
Age 45 or older	32.8%	36.2%	-3.4%	
<b>Race/Ethnicity</b>				0.576
Hispanic or Latino	68.6%	69.4%	-0.8%	
White (not Hispanic/Latino)	5.4%	6.6%	-1.2%	
Black (not Hispanic/Latino)	13.2%	12.9%	0.4%	
Asian (not Hispanic/Latino)	5.9%	6.7%	-0.8%	
None, or other race specified (not Hispanic/Latino)	6.9%	4.4%	2.5%	
<b>Highest Degree Earned</b>				0.712
None	17.4%	17.5%	-0.1%	
High school diploma or equivalent	52.9%	50.3%	2.7%	
Any college degree	29.7%	32.2%	-2.5%	
<b>English Level</b>				0.942
Low	40.9%	42.4%	-1.4%	
Low-intermediate	17.9%	18.2%	-0.3%	
Intermediate	23.3%	23.1%	0.2%	
High-intermediate	17.9%	16.3%	1.6%	
<b>Citizenship/Resident Alien Status</b>				0.827
U.S. citizen	24.8%	23.1%	1.7%	
Legal permanent resident	66.2%	67.0%	-0.8%	
Other (e.g., refugee, asylee, parolee)	9.1%	9.9%	-0.8%	
<b>Years Resided in the U.S.</b>				0.647
1 year or less	25.3%	28.4%	-3.1%	
1.1 to 5 years	29.9%	30.9%	-1.0%	
5.1 to 10 years	17.2%	16.3%	0.9%	
More than 10 years	27.7%	24.5%	3.2%	

**Table A3** (continued) Comparison of EfA Treatment Group and Control Group Members Enrolled from September 1, 2016 through December 31, 2017

	EfA Group (N=408)	Control Group (N=382)	Difference	p-value
<b>Employment status</b>				0.914
Employed full-time	28.7%	27.2%	1.5%	
Employed part-time	20.3%	20.6%	-0.3%	
Had prior U.S. employment, but not at intake	31.1%	30.4%	0.7%	
Never employed in the U.S.	19.9%	21.7%	-1.9%	
<b>Parent of child under age 18</b>	54.8%	57.9%	-3.1%	0.400
<b>Average earnings during the two years prior to random assignment</b>	\$15,939	\$16,284	-\$345	0.825
<b>Other sources of income</b>				
SNAP	24.5%	25.5%	-1.0%	0.745
Other household members' earnings	35.8%	37.0%	-1.3%	0.717
<b>Site</b>				0.999
East Boston	36.5%	36.5%	0.0%	
Dorchester	9.6%	10.1%	-0.5%	
Lawrence	17.4%	17.6%	-0.2%	
Lynn	18.9%	18.6%	0.2%	
Downtown Boston	13.2%	13.1%	0.1%	
Lowell	4.4%	4.0%	0.4%	
<b>Quarter of random assignment</b>				0.999
2016q3	11.3%	11.3%	-0.1%	
2016q4	10.8%	10.8%	0.0%	
2017q1	18.4%	17.3%	1.1%	
2017q2	22.8%	23.7%	-0.9%	
2017q3	24.0%	24.5%	-0.5%	
2017q4	12.8%	12.4%	0.3%	

Notes: Statistics based on Mobility analysis of JVS program intake data. Data are weighted to account for the change in the randomization ratio made on December 1, 2017. P-values based on Pearson chi-squared tests for index variables and Wald tests for continuous variables.

## Analysis

The study uses an intent-to-treat analysis framework to assess program impacts; that is, we examined differences in the outcomes of all participants randomly assigned to the EfA treatment group, regardless of whether or not they received the intended services, and to the control group. The study estimates average impacts over all individuals in the study sample. All sample members are treated equally regardless of program location. To improve the precision of the impact estimates, we used multivariate regression

analysis to estimate program impacts, and we report regression-adjusted results. The regression models included a binary variable for being a treatment group member, the site and quarter of random assignment, and the explanatory variables included in Table A3. The full subgroup analysis included gender, age, race, citizenship/resident alien status, highest degree earned, English skill level, years of U.S. residence, employment status at intake, and whether participants had children under age 18. **Table A4** provides the impact estimates with standard errors and p-values.

**Table A4** Regression-Adjusted Impact Estimates with Standard Errors and P-values

	Impact	Std. Err.	p-value
<b>Average Earnings</b>			
Year 1	\$884	\$793	0.265
Year 2	\$2,621***	\$980	0.008
Years 1 and 2 combined	\$3,505**	\$1,631	0.032
Q0	\$69	\$150	0.643
Q1	-\$25	\$193	0.897
Q2	\$299	\$218	0.171
Q3	\$307	\$241	0.203
Q4	\$304	\$251	0.227
Q5	\$570**	\$254	0.025
Q6	\$755***	\$267	0.005
Q7	\$527*	\$276	0.056
Q8	\$769***	\$285	0.007
<b>Percent Employed at Any Time during the Period</b>			
Year 1	4.4%*	0.024	0.070
Year 2	9.0%***	0.027	0.001
Q0	-2.7%	0.027	0.331
Q1	-2.7%	0.027	0.331
Q2	-0.1%	0.027	0.960
Q3	4.6%	0.029	0.115
Q4	5.2%*	0.029	0.078
Q5	7.1%**	0.029	0.015
Q6	8.7%***	0.029	0.003
Q7	8.5%***	0.029	0.003
Q8	7.6%***	0.029	0.009
<b>Percent Employed in All Four Quarters of the Year</b>			
Year 1	4.2%	0.031	0.170
Year 2	6.4%**	0.032	0.045

Notes: Statistics based on Mobility analysis of DUA earnings data. Data are weighted to account for the change in the randomization ratio made on December 1, 2017. Statistical significance levels: \*\*\*p<.01, \*\*p<.05, \*p<.10



**M O B I L I T Y**

Economic Mobility Corporation, Inc.  
50 Broadway, Suite 1604  
New York, NY 10004  
212.280.6975

[www.economicmobilitycorp.org](http://www.economicmobilitycorp.org)