

# **PER SCHOLAS**

# Do Direct Financial Supports Impact Our Learners' Key Performance Indicator (KPI) Outcomes?

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# Abstract

Although Per Scholas has offered minor direct financial support for learner emergencies for many years, our stipend program has grown significantly since early 2021 following a grant from <u>SkillUp</u>. This analysis compares the outcomes for learners who are eligible for SkillUp and successfully applied for and received a stipend with those who were eligible for SkillUp but did not receive a stipend. Further, we compare learners who received the stipend with all learners in the course.

**Methods:** We evaluated the differences in graduation, certification, four-month post-graduation job attainment, time to obtain an initial job, and employment in tech for these groups and used multivariable linear regressions to control for potential demographic differences.

**Results:** We found that learners who received stipends were more likely to graduate, certify, attain a job within four months of graduation, and obtain a job more quickly than those who were eligible for stipends but did not receive one. When compared with all learners in the course, those who received the stipends were more likely to graduate and to obtain a job within four months.

**Conclusion & Limitations:** Stipends have a significant, positive impact on learner outcomes, but the structure of the SkillUp program makes selection bias a potential issue. Because learners had to be aware of and apply for SkillUp grants to receive them, these learners demonstrated more effort and, potentially, a higher level of engagement with Per Scholas than those who were eligible for stipends but did not receive them. To address these concerns and other questions about why so many learners who appear to be SkillUp eligible would decide not to apply for funding, we compared learners who received stipends to all enrollees in the same cohorts. In this second round of analysis, stipend recipients still graduated and attained jobs within four months of graduation at significantly higher rates, but the certification and time to job attainment impacts were no longer significant. Still, further analyses are needed to reduce the possible impact of selection bias.



# Introduction

Within the broader workforce development space, stipend support to learners is common. YearUp has offered weekly payments to enrollees of \$150 per week during training and \$220 per week during internships. Smaller peer organizations like EdFarm, <u>MSIMBO</u>, and <u>Kable Academy</u> have provided or continue to offer similar financial support. In addition, the SkillUp \$1,000 stipend program mentioned below, which included Per Scholas, also included 16 other programs in the IT/tech, medical, business, and skills and trades training fields.

Although many studies have evaluated the overall impact of workforce development programs that include stipends, few have studied the isolated impact of financial support payments. Of these analyses, many have found that stipends allow those most at risk of financial difficulties to stay enrolled in and benefit from training. MDRC's 2012 summary of the outcomes of the Employment Retention and Advancement project found that "[e]arnings supplements, tied to job retention and that help to make low-wage work pay, ideally coupled with job coaching, can promote sustained employment and advancement" while "[b]y themselves, counseling and referrals to services to help people stay employed do not appear to increase employment retention and advancement." A 2015 review of research in workforce development found that stipends were particularly important for "low-income parents—especially single parents—...to make it possible to enter and remain in training programs." The significance of cash payments for those who might otherwise be unable to complete career-changing training programs is encouraging and demonstrates the need for further studies.

Per Scholas's workforce development IT-focused courses have always been tuition-free. The nature of the full-time program, however, requires significant economic sacrifices from enrollees who generally do not work during the 12-15 week training program. This lengthy period with minimal income has forced learners to rely on savings, credit card debt, personal loans, and support from friends and family members to cover expenses during training and their subsequent job search.



In January 2021, the Per Scholas Learner Support Team (LST) implemented a formal national structure and Per Scholas received a grant from SkillUp to expand stipends to a large group of learners. These \$1,000 per learner stipends were designed to include those in our entry-level courses who made under \$40,000 in the 12 months before enrollment and did not have a bachelor's degree. The LST decided to limit the eligible courses to IT Support and End-User Desktop Support (EUDS).

In the first three quarters of 2021, the program functioned as intended and learners who were eligible and applied received \$1,000 each. By the end of Q3 2021, however, the LST realized that the remaining SkillUp funds would not cover the number of projected, eligible enrollees in Q4's IT Support and EUDS cohorts. Although the LST was able to find additional funds from other sources, each Q4 recipient got only \$750.

To evaluate the impact of stipends on learners in our own cohorts, we have compared outcomes for eligible learners who did and did not receive direct financial assistance following the implementation of the SkillUp program in early 2021.

### **Methods**

Our dataset is from our Salesforce instance for learners enrolled in 2021 IT Support and EUDS cohorts. This data includes detailed information on enrollee demographics, including race/ethnicity, gender, personal income, household income, educational attainment, household size, age, and birth country, collected from learners just before they enroll in our courses. By using this information, we determined which learners were and were not eligible for the SkillUp stipend based upon eligibility criteria. During the 12-15 week training period and following graduation, we also record learner-level graduation, certification, job attainment, and initial job type information.

We used multivariable linear regression analyses to isolate the impact of stipends on learner outcomes by controlling for multiple other factors known to influence learner



outcomes. These controls included a learner's last annual wage, age at application, annual household income, highest level of educational attainment, gender, race/ethnicity, birth country, learning environment (in-person vs. remote), Per Scholas business line (Customized vs. Market-Driven), and Program Campus (Remote Training or local). We evaluated five learner outcomes: graduation/course completion, certification, job attainment four months after graduation, length of time to initial job attainment following graduation, and employment in tech.

### **Results**

In 2021, 852 learners were eligible to receive stipend support. Of these 852 eligible learners, 406 learners applied for and received stipends. For each regression, a slightly different group of learners both had the necessary data points and met the criteria to be included in the measurement of that KPI. See Appendix A for regression output tables.

For graduation/completion, we included 742 learners, 351 of whom received direct support. Within the stipend recipient group, 91% graduated compared to 73% in the non-stipend-recipient group. After controlling for other variables associated with graduation, eligible enrollees who received a stipend were **18% more likely to** graduate than those who did not receive a stipend (Adjusted R<sup>2</sup>= 0.069, F (16, 725) = 4.44, p<.001).

For certification, we included 606 learners, 319 of whom received direct support. Learners in the two course types (IT Support and EUDS) attempted to earn the Google IT Support Professional and/or CompTIA A+ certifications as part of the training. If a learner earned at least one, they are certified. Within the stipend recipient group, 77% certified compared to 66% in the non-stipend-recipient group. After controlling for other variables associated with certification, eligible graduates who received a stipend were **11% more likely to certify** than those who did not receive a stipend (Adjusted R<sup>2</sup>= 0.145, F (16, 589) = 7.43, p< .01).



For **four-month post-graduation job attainment**, we included 376 learners, 169 of whom received direct support. Within the stipend recipient group, 59% obtained jobs within four months compared to 47% in the non-stipend-recipient group. After controlling for other variables associated with job-attainment, eligible graduates who received a stipend were **10% more likely to become employed within four months of graduation** than those who did not receive a stipend (Adjusted R<sup>2</sup>= 0.096, F (16, 359) <= 3.49, p< .05).

For **post-graduation time to job attainment**, we included 280 learners, 154 of whom received direct support. Within the stipend recipient group, the average time to job attainment among those with jobs was 1.2 months compared to 1.8 months in the non-stipend-recipient group. After controlling for other variables associated with time to job attainment, eligible graduates who received a stipend obtained jobs **0.6 months faster** than those who did not receive a stipend (Adjusted R<sup>2</sup>= 0.019, F (14, 265) = 1.39, p < .05).

For **employment in tech**, we included 280 learners, 154 of whom received direct support. Within the stipend recipient group, 83% got jobs in tech compared to 87% in the non-stipend-recipient group. After controlling for other variables associated with time to job attainment, the difference between the stipend and non-stipend groups was not statistically significant.

### **Discussion**

Given the large, positive, and statistically significant differences between the outcomes for those who were eligible and received stipends and those who were eligible but did not receive stipends, continuing the direct financial support program, particularly for those who are likely to experience financial hardship during the course, is imperative. Although we initially believed SkillUp would fund payments in 2022, SkillUp



notified us that they no longer have funds for stipends. Although limited funding remains for some direct learner financial support in New York, Newark, and Boston, we have not confirmed any other funding source to replace/continue the SkillUp program. Currently, the Development team is working with other funders to identify an alternative.

Further research questions remain. For example, the mechanics of the SkillUp grant process may have produced a selection bias by requiring learners to be aware of and apply for the stipend to receive it. Although Per Scholas staff communicated the availability of the stipends to learners multiple times before and during eligible courses, some enrollees may have missed these announcements or falsely believed that they were ineligible. In addition, while the application process was brief, it may have discouraged some learners. Within the group of eligible enrollees, those who were most likely to hear about and apply for the stipend may have been those most engaged in the course. We might anticipate that enhanced engagement could lead to greater success in the job market.

To address these questions and others focused on the high volume of SkillUp-eligible learners who appear not to have applied for stipends, we repeated the regressions with updated data from 2021 and 2022 and compared those who received stipends to all other learners in the cohorts, including those who were ineligible for SkillUp. Results consistently show that learners who received stipends are more likely to graduate and attain a job within four months of graduation when compared to all others in their cohorts. We also included an additional KPI, official enrollment, or remaining in the cohort following the official enrollment date at the beginning of week two of the training course. Learners who received stipends were significantly more likely to reach official enrollment when compared to all others in their cohorts and when compared to just other learners in their cohort who were eligible for but did not receive direct support. The differences in certification rates and time to job attainment were no longer statistically significant when stipend learners were compared to all others. (See Appendices B and C for regression tables).



This further analysis strengthens our confidence in the importance of stipends for official enrollment, graduation, and four-month job attainment while the evidence for certification and average time to job attainment needs replication. Even with these consistent results, we need to engage in additional research to eliminate or decrease the potential for selection bias in our comparison groups.

Additional analysis could also focus on the change from \$1000 per learner to only \$750 during Q4 2021. This change may have lessened the disparity in outcomes between these two groups. If the outcome differences remain significant, the analysis could help us decide whether to implement smaller stipends if our funds per learner are reduced.



#### Appendix A: Regressions Including Only Those Eligible for SkillUp (2021 Data as of March 30, 2022)

#### **Graduation/Completion Regression Summary**

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.298635208							
R Square	0.089182988							
Adjusted R Square	0.069082198							
Standard Error	0.373551408							
Observations	742							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	9.90580204	0.619112627	4.436790349	1.92061E-08			
Residual	725	101.1669742	0.139540654					
Total	741	111.0727763						
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Direk US Direktor Domete New DTT Cie Male Jasmiente das US	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Black, HS Diploma, Remote, Non-RTT, Cis-Male, Immigrated to US	74.64%	0.066164605	11.28021103			0.876247802	0.616453611	0.876247802
Last Annual Wage	0.00%	9.35732E-07		0.709491925	-1.48834E-06	2.1858E-06	-1.48834E-06	2.1858E-06
Age at Application Annual Household Income	-0.17%	0.001755315	-0.990698957		-0.005185095		-0.005185095	0.001707118
Annual Household Income Associate's	-1.57%	3.29104E-07 0.039554451	1.907477528	0.05685365	-1.83521E-08	1.27387E-06 0.061911867	-1.83521E-08 -0.09339801	1.27387E-06 0.061911867
High School Equivalent	-1.57%	0.039554451	-0.398010122 -1.859440885			0.001911867	-0.182478352	0.001911867
Other Education	-8.88%	0.116256746		0.452392155	-0.182478352	0.14083376	-0.182478352	0.14083376
Non Cis-Male	-5.20%	0.030204602	-1.722062626			0.007284711		0.007284711
White	9.64%	0.039397281		0.014675315		0.173718421	0.019025671	0.173718421
Asian	14.51%	0.053063185		0.006398786		0.249280606	0.019023071	0.249280606
Latine	-1.94%	0.039660848	-0.488396646		-0.097234047		-0.097234047	0.058493596
Other Race	-0.22%	0.06308112	-0.034663126		-0.126030058		-0.126030058	0.121656881
Customized/EUDS	-3.43%	0.035576089	-0.965409289	0.33466176	-0.104189941		-0.104189941	0.035498967
Born in US?	1.40%	0.036976815		0.704199512	-0.058550342		-0.058550342	0.086638488
In-Person	0.66%	0.054234942		0.903826421	-0.099920837		-0.099920837	0.113031739
RTT?	0.09%	0.03685507		0.980750851		0.073244932	-0.071465872	0.073244932



#### **Certification Regression Summary**

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.409747517							
R Square	0.167893028							
Adjusted R Square	0.145289103							
Standard Error	0.417890618							
Observations	606							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	20.75362839	1.297101774	7.427605204	5.53694E-16			
Residual	589	102.8585828	0.174632568					
Total	605	123.6122112						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Black, HS Diploma, Remote, Non-RTT, Cis-Male, Immigrated to US	62.66%	0.087336591	7.174662784	2.18784E-12	0.455081546	0.798139634	0.455081546	0.798139634
Wages in Year Before Cohort	0.00%	1.42081E-06	-0.972862972	0.331020766	-4.17274E-06	1.40822E-06	-4.17274E-06	1.40822E-06
Age at Application	0.28%	0.002184695	1.274307222	0.203057094	-0.001506768	0.007074715	-0.001506768	0.007074715
Annual Household Income	0.00%	4.01642E-07	0.339453525	0.734389103	-6.52486E-07	9.25163E-07	-6.52486E-07	9.25163E-07
Associate's	5.57%	0.048478966	1.149032707	0.25100888	-0.03950876	0.150916595	-0.03950876	0.150916595
High School Equivalent	-2.64%	0.061717497	-0.427424457	0.66922641	-0.147592717	0.094833582	-0.147592717	0.094833582
Other Education	-26.46%	0.152053726	-1.740492787	0.082294763	-0.563281894	0.033985068	-0.563281894	0.033985068
Non Cis-Male	-2.77%	0.03785438	-0.730793739	0.465195743	-0.102009738	0.04668225	-0.102009738	0.04668225
White	16.21%	0.047059837	3.443692682	0.000614588	0.069634108	0.254485127	0.069634108	0.254485127
Asian	6.86%	0.06280563	1.091521449	0.275489787	-0.05479655	0.191903936	-0.05479655	0.191903936
Latine	9.74%	0.050339141	1.935539221	0.053402421	-0.001432679	0.196299442	-0.001432679	0.196299442
Other Race	-1.12%	0.079264435	-0.141261645	0.887711548	-0.166872357	0.144478308	-0.166872357	0.144478308
Customized/EUDS (Easier Google IT Support Cert not offered)	-34.34%	0.044778527	-7.669202035	7.19299E-14	-0.431360591	-0.255470557	-0.431360591	-0.255470557
Born in US?	-2.41%	0.046766331	-0.514270036	0.607256103	-0.115899585	0.06779854	-0.115899585	0.06779854
IN-Person	7.88%	0.064682868	1.218351593	0.223578176	-0.048230662	0.205843613	-0.048230662	0.205843613
RTT?	6.50%	0.045822485	1.419236984	0.156358916	-0.024962384	0.155028314	-0.024962384	0.155028314
Direct Support Recipient	11.36%	0.035198621	3.227511265	0.001318077	0.044473863	0.182734031	0.044473863	0.182734031



#### Four-Month Post-Graduation Job Attainment Regression Summary

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.366989048							
R Square	0.134680962							
Adjusted R Square	0.096115211							
Standard Error	0.475451926							
Observations	376							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	12.63099668	0.789437293	3.49224268	7.75069E-06			
Residual	359	81.15357779	0.226054534					
Total	375	93.78457447						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Black, HS Diploma, Remote, Non-RTT, Cis-Male, Immigrated to US	0.68%	0.129148336	0.052875503	0.957860513	-0.247153551	0.260811118	-0.247153551	0.260811118
Last Annual Wage	0.00%	1.84716E-06	2.09545362	0.036830723	2.38025E-07	7.50326E-06	2.38025E-07	7.50326E-06
Wages in Year Before Cohort	0.00%	2.24935E-06	0.680579862	0.496576065	-2.89269E-06	5.95441E-06	-2.89269E-06	5.95441E-06
Age at Application	0.15%	0.003251913	0.473430998	0.636193471	-0.004855635	0.007934748	-0.004855635	0.007934748
Annual Household Income	0.00%	5.24654E-07	1.608863176	0.108525254	-1.87685E-07	1.87588E-06	-1.87685E-07	1.87588E-06
Associate's	-2.38%	0.070940045	-0.334814819	0.737960317	-0.163262042	0.115758485	-0.163262042	0.115758485
High School Equivalent	-2.08%	0.092435147	-0.225420082	0.821780757	-0.202619138	0.160945661	-0.202619138	0.160945661
Other Education	-11.55%	0.222931154	-0.518027351	0.604758278	-0.55389949	0.32293062	-0.55389949	0.32293062
White	5.15%	0.067980102	0.758006163	0.448944584	-0.082159921	0.185218594	-0.082159921	0.185218594
Asian	0.55%	0.087816408	0.062324299	0.950339263	-0.16722612	0.178172313	-0.16722612	0.178172313
Latine	13.62%	0.072667019	1.874533131	0.061668791	-0.006689784	0.279123253	-0.006689784	0.279123253
Other Race	-22.23%	0.125597525	-1.770235059	0.077536654	-0.469336473	0.024662189	-0.469336473	0.024662189
Customized/EUDS	4.59%	0.065165512	0.703993131	0.481893426	-0.082278029	0.174030175	-0.082278029	0.174030175
Born in US?	9.84%	0.066768888	1.47443715	0.141240297	-0.032860761	0.229753819	-0.032860761	0.229753819
RTT?	-12.91%	0.069436216	-1.859876609	0.0637207	-0.265695636	0.007410047	-0.265695636	0.007410047
Direct Support Recipient	10.16%	0.050927538	1.994384218	0.04686595	0.001415291	0.201722867	0.001415291	0.201722867



#### Average Time (Months) to Job Attainment Regression Summary

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.366989048							
R Square	0.134680962							
Adjusted R Square	0.096115211							
Standard Error	0.475451926							
Observations	376							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	12.63099668	0.789437293	3.49224268	7.75069E-06			
Residual	359	81.15357779	0.226054534					
Total	375	93.78457447						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Black, HS Diploma, Remote, Non-RTT, Cis-Male, Immigrated to US	0.68%	0.129148336	0.052875503		-0.247153551			0.260811118
Last Annual Wage	0.00%	1.84716E-06		0.036830723	2.38025E-07	7.50326E-06	2.38025E-07	7.50326E-06
Wages in Year Before Cohort	0.00%	2.24935E-06	0.680579862		-2.89269E-06	5.95441E-06	-2.89269E-06	5.95441E-06
Age at Application	0.15%	0.003251913	0.473430998		-0.004855635			0.007934748
Annual Household Income	0.00%	5.24654E-07	1.608863176	0.108525254	-1.87685E-07		-1.87685E-07	1.87588E-06
Associate's	-2.38%	0.070940045	-0.334814819	0.737960317	-0.163262042	0.115758485	-0.163262042	0.115758485
High School Equivalent	-2.08%	0.092435147	-0.225420082	0.821780757	-0.202619138	0.160945661	-0.202619138	0.160945661
Other Education	-11.55%	0.222931154	-0.518027351	0.604758278	-0.55389949	0.32293062	-0.55389949	0.32293062
White	5.15%	0.067980102	0.758006163	0.448944584	-0.082159921	0.185218594	-0.082159921	0.185218594
Asian	0.55%	0.087816408	0.062324299	0.950339263	-0.16722612	0.178172313	-0.16722612	0.178172313
Latine	13.62%	0.072667019	1.874533131	0.061668791	-0.006689784	0.279123253	-0.006689784	0.279123253
Other Race	-22.23%	0.125597525	-1.770235059	0.077536654	-0.469336473	0.024662189	-0.469336473	0.024662189
Customized/EUDS	4.59%	0.065165512	0.703993131	0.481893426	-0.082278029	0.174030175	-0.082278029	0.174030175
Born in US?	9.84%	0.066768888	1.47443715	0.141240297	-0.032860761	0.229753819	-0.032860761	0.229753819
RTT?	-12.91%	0.069436216	-1.859876609	0.0637207	-0.265695636	0.007410047	-0.265695636	0.007410047
Direct Support Recipient	10.16%	0.050927538	1.994384218	0.04686595	0.001415291	0.201722867	0.001415291	0.201722867
Certified	27.50%	0.060874168	4.517807977	8.49112E-06	0.155303032	0.39473257	0.155303032	0.39473257



#### Attained a Job in Technology Regression Summary

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.261526874							
R Square	0.068396306							
Adjusted R Square	0.019179507							
Standard Error	1.806595948							
Observations	280							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	14	63.49936485	4.535668918	1.389694318	0.157625837			
Residual	265	864.9040637	3.26378892					
Total	279	928.4034286						
				-				
		Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
HS Diploma, Remote, Non-RTT, Cis-Male, Immigrated to US	3.01	0.618751665	4.872014205	1.90315E-06	1.796271923	4.232861877	1.796271923	4.232861877
Last Annual Wage	0.00	8.67675E-06	-0.807281383		-2.40887E-05	1.00796E-05	-2.40887E-05	1.00796E-05
Wages in Year Before Cohort	0.00	1.0223E-05			-3.03962E-05	9.8611E-06	-3.03962E-05	9.8611E-06
Age at Application	0.00	0.014503471		0.971980277	-0.028046788	0.029066612	-0.028046788	0.029066612
Annual Household Income	0.00	2.16548E-06		0.542098964	-5.58561E-06	2.94186E-06	-5.58561E-06	2.94186E-06
Associate's	0.04	0.307499206		0.896276752	-0.565326527	0.645578459	-0.565326527	0.645578459
High School Equivalent	0.01	0.405646014	0.034935496	0.972157477	-0.784527822	0.812870711	-0.784527822	0.812870711
Other Education	0.80	1.095751665	0.732784455	0.464337572	-1.354537337	2.960436909	-1.354537337	2.960436909
Non Cis-Male	0.12	0.245691399	0.507459589	0.612254444	-0.359077167	0.608434079	-0.359077167	0.608434079
Customized/EUDS	-0.44	0.291524835	-1.492921661	0.136647292	-1.009223396	0.138775914	-1.009223396	0.138775914
Born in US?	-0.31	0.29473434	-1.042642544	0.298064113	-0.887621592	0.273016468	-0.887621592	0.273016468
IN-Person	-0.19	0.41429506	-0.462018861	0.644446866	-1.007140994	0.62431673	-1.007140994	0.62431673
RTT?	-0.09	0.332426156	-0.262717065	0.792972791	-0.741866593	0.567198544	-0.741866593	0.567198544
Direct Support Recipient	-0.57	0.229670463	-2.474994037	0.01394987	-1.020644129	-0.116221926	-1.020644129	-0.116221926
Certified	-0.62	0.306415411	-2.017983673	0.044600616	-1.221659845	-0.015022748	-1.221659845	-0.015022748



#### Appendix B: Regressions Including Only Those Eligible for SkillUp (2021-22 Data as of June 1, 2022)

#### **Official Enrollment Regression Summary**

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.22904837							
R Square	0.052463156							
Adjusted R Square	0.037272184							
Standard Error	0.210419684							
Observations	1015							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	2.446592128	0.152912008	3.453574765	4.88867E-06			
Residual	998	44.18789063	0.044276444					
Total	1014	46.63448276						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept (Other Education, Cis-Male, Black, MDT, Immigrated to US, Remote, non-RTT, non-DSR)	92.19%	0.055306154	16.66906836	3.1806E-55	0.813372377	1.030431761	0.813372377	1.03043176
Associate's	-6.26%	0.043909714	-1.426747921	0.15396533	-0.148814051	0.023517864	-0.148814051	0.023517864
HSD/GED	-5.26%	0.041973744	-1.252274809	0.210763126	-0.134929581	0.029804256	-0.134929581	0.02980425
Last Annual Wage (Ks)	0.04%	0.000463216	0.806427961	0.420188252	-0.000535439	0.001282541	-0.000535439	0.00128254
Age at Application	0.03%	0.000842201	0.385467999	0.699972855	-0.001328047	0.00197733	-0.001328047	0.0019773
AHHI in Ks	0.02%	0.000187002	1.075741091	0.282303051	-0.000165796	0.000568127	-0.000165796	0.00056812
Wages in Year Before Cohort (Ks)	0.01%	0.000571731	0.262156885	0.793254592	-0.00097205	0.001271816	-0.00097205	0.00127181
Non Cis-Male	1.37%	0.014542	0.942148186	0.346344777	-0.014835686	0.042237124	-0.014835686	0.042237124
White	2.64%	0.018536387	1.426681539	0.153984467	-0.009929244	0.062820287	-0.009929244	0.06282028
Asian	1.70%	0.025115451	0.676652409	0.498783312	-0.03229072	0.066279581	-0.03229072	0.06627958
Latine	3.19%	0.018656638	1.710729235	0.087441874	-0.004694283	0.068527196	-0.004694283	0.06852719
Other Race	-2.61%	0.029229782	-0.893602162	0.371750222	-0.083478679	0.031239086	-0.083478679	0.03123908
Customized/EUDS	-4.03%	0.016705883	-2.413932546	0.015960541	-0.073109562	-0.007544188	-0.073109562	-0.00754418
Born in US?	1.05%	0.017813793	0.588096834	0.556600351	-0.024480551	0.045433021	-0.024480551	0.04543302
In-Person	1.09%	0.018933028	0.576128943	0.564657926	-0.026245245	0.048060976	-0.026245245	0.04806097
RTT?	1.01%	0.018343747	0.553037634	0.580361495	-0.025851956	0.046141521	-0.025851956	0.04614152
Direct Support Recipient	7.61%	0.01358093	E 603534406	2.71627E-08	0.049450754	0.102751662	0.049450754	0.10275166



# Appendix C: Regressions Including All Learners in SkillUp Cohorts Regardless of SkillUp Eligibility (2021-22 Data as of June 1, 2022)

#### **Official Enrollment Regression Summary**

SUMMARY OUTPUT								
Description Of History								
Regression Statistics Multiple R	0.225060315							
R Square	0.050652145							
Adjusted R Square	0.030032143							
Standard Error	0.215516591							
Observations	1432							
Observations	1432							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	15	3.509111308	0.233940754	5.036681241	8.79483E-10			
Residual	1416	65.76951998	0.046447401					
Total	1431	69.27863128						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept (SU Ineligible, No BA+, Cis-Male, Black, MDT, Immigrated to US, Remote, non-RTT, non-DSR)	86.26%	0.040852638	21.11369952	3.00536E-86	0.782412128	0.942688526	0.782412128	0.942688526
Age at Application	-0.09%	0.000685698	-1.268210601	0.204931222	-0.002214702	0.000475484	-0.002214702	0.000475484
AHHI in Ks	0.03%	0.000147905	2.080648071	0.037645532	1.76017E-05	0.000597873	1.76017E-05	0.000597873
Last Annual Wage (Ks)	0.05%	0.000321412	1.664680108	0.096197827	-9.54468E-05	0.001165545	-9.54468E-05	0.001165545
SU Eligible (>=\$40K and >Bachelor's)	3.34%	0.028419924	1.17502436	0.240182517	-0.022355577	0.089143782	-0.022355577	0.089143782
Bachelor's +	5.74%	0.029804543	1.92480919	0.054453378	-0.001097747	0.115833863	-0.001097747	0.115833863
Non Cis-Male	1.38%	0.012257245	1.123683687	0.261337704	-0.010271044	0.037817576	-0.010271044	0.037817576
White	2.98%	0.015849678	1.88052628	0.060241485	-0.001285638	0.06089711	-0.001285638	0.06089711
Asian	1.33%	0.018923762	0.702821453	0.482282552	-0.023821597	0.050421649	-0.023821597	0.050421649
Latine	2.61%	0.016939097	1.537962078	0.124281302	-0.007176734	0.059280113	-0.007176734	0.059280113
Other Race	-2.20%	0.025599476	-0.858182761	0.390936789	-0.072186005	0.028247946	-0.072186005	0.028247946
Customized/EUDS	-4.96%	0.013987339	-3.546579209	0.000402992	-0.077045337	-0.022169071	-0.077045337	-0.022169071
Born in US?	1.75%	0.014373366	1.217817485	0.223496228	-0.010691243	0.045699515	-0.010691243	0.045699515
In-Person	1.28%	0.016298619	0.785892649	0.432061867	-0.01916307	0.044781	-0.01916307	0.044781
RTT?	0.14%	0.01577948	0.087466205	0.930313314	-0.029573499	0.032333841	-0.029573499	0.032333841
Direct Support Recipient	7.67%	0.012531336	6.120953685	1.2021E-09	0.052121748	0.101285705	0.052121748	0.101285705



#### Graduation/Completion Regression Summary

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.28070838							
R Square	0.078797195							
Adjusted R Square	0.065047899							
Standard Error	0.353620213							
Observations	1089							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	11.46633045	0.716645653	5.730998666	4.61521E-12			
Residual	1072	134.0506576	0.125047255					
Total	1088	145.5169881						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%			Upper 95.0%
Intercept (SU Ineligible, No BA+, Cis-Male, Black, MDT, Immigrated to US, Remote, non-RTT, non-DSR)	68.70%	0.087987382	7.80849513	1.37166E-14	0.514402018	0.859696073	0.514402018	0.859696073
Age at Application	-0.15%	0.001321836	-1.166324808	0.243742551	-0.004135371	0.00105199	-0.004135371	0.00105199
AHHI in Ks	0.02%	0.000271672		0.373076702	-0.000290983	0.000775155		0.000775155
Last Annual Wage (Ks)	-0.02%	0.000634361	-0.375165534	0.707611574	-0.001482721	0.00100674	-0.001482721	0.00100674
Wages in Year Before Cohort (Ks)	-0.12%	0.000850581	-1.397617595	0.162517084	-0.002857781	0.000480206	-0.002857781	0.000480206
SU Eligible (>=\$40K and >Bachelor's)	6.23%	0.065406064	0.952430415	0.341093435	-0.066043705	0.190633154	-0.066043705	0.190633154
Bachelor's +	20.63%	0.06708326	3.074998663	0.002158321	0.074651545	0.337910326	0.074651545	0.337910326
Non Cis-Male	-3.25%	0.023189039	-1.399676054	0.161899657	-0.077958198	0.013043912	-0.077958198	0.013043912
White	8.38%	0.030649412	2.732541479	0.006388101	0.023611146	0.143890436	0.023611146	0.143890436
Asian	9.10%	0.036247878	2.511065304	0.012182957	0.01989595	0.162145626	0.01989595	0.162145626
Latine	-2.48%	0.03184257	-0.779977222	0.435576455	-0.087317315	0.037644355	-0.087317315	0.037644355
Other Race	1.42%	0.048214857	0.295080065	0.767989856	-0.080378955	0.108833441	-0.080378955	0.108833441
Customized/EUDS	-0.97%	0.027529389	-0.352627208	0.724437255	-0.063725211	0.044309988	-0.063725211	0.044309988
Born in US?	5.53%	0.027244036	2.031546707	0.042445834	0.001889846	0.108805216	0.001889846	0.108805216
In-Person	-1.96%	0.036733679	-0.532289294	0.594635948	-0.09163101	0.052525123	-0.09163101	0.052525123
RTT?	0.71%	0.030128829	0.234835182	0.814381507	-0.052042859	0.066193477	-0.052042859	0.066193477
Direct Support Recipient	16.81%	0.023566135	7.134363987	1 7070/E 10	0 101000400	0.214370372	0.121888402	0.214370372



#### **Certification Regression Summary**

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.324307773							
R Square	0.105175532							
Adjusted R Square	0.09026179							
Standard Error	0.440523537							
Observations	916							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	15	20.5285185	1.3685679	7.05225675	9.48822E-15			
Residual	900	174.6548876	0.194060986					
Total	915	195.1834061						
		Standard Error	t Stat	P-value	Lower 95%	Upper 95%		Upper 95.0%
Intercept (SU Ineligible, No BA+, Cis-Male, Black, MDT, Immigrated to US, Remote, non-RTT, non-DSR)	54.68%	0.114752703	4.764761581	2.2035E-06	0.321555233	0.771983306		
AHHI in Ks	0.08%	0.000374269		0.028291743	8.76385E-05	0.001556722		0.001556722
Last Annual Wage (Ks)	0.02%	0.000834025		0.839553042	-0.00146795	0.00180577	-0.00146795	0.00180577
Wages in Year Before Cohort (Ks)	-0.30%	0.001176934	-2.520187579	0.011901216	-0.005275948	-0.00065624	-0.005275948	-0.00065624
SU Eligible (>=\$40K and >Bachelor's)	13.77%	0.095634638	1.439608953	0.150325784	-0.050016378	0.325369342	-0.050016378	
Bachelor's +	21.60%	0.098076249	2.202290617	0.02789772	0.02350763	0.408477175	0.02350763	0.408477175
Non Cis-Male	-5.43%	0.031521602	-1.723512415	0.085139347	-0.116192274	0.007536529	-0.116192274	0.007536529
White	15.74%	0.040456749	3.891145821	0.000107128	0.078022559	0.23682366	0.078022559	0.23682366
Asian	3.81%	0.047767417	0.796827915	0.425761129	-0.05568608	0.131810903	-0.05568608	0.131810903
Latine	3.94%	0.044216813	0.891133967	0.37309547	-0.04737696	0.126183168	-0.04737696	0.126183168
Other Race	-8.76%	0.065990524	-1.327694554	0.184615681	-0.217128483	0.041897963	-0.217128483	0.041897963
Customized/EUDS	-19.73%	0.037293876	-5.290113404	1.53581E-07	-0.270481915	-0.124095746	-0.270481915	-0.124095746
Born in US?	-1.29%	0.037103771	-0.34843448	0.727595399	-0.085748217	0.059891751	-0.085748217	0.059891751
In-Person	-0.76%	0.049708493	-0.153084508	0.878365947	-0.105167655	0.089948454	-0.105167655	0.089948454
RTT?	13.25%	0.040559802	3.266841856	0.001128684	0.052899656	0.212105259	0.052899656	0.212105259
Direct Support Recipient	2.38%	0.032098843	0.741358764	0.458669336	-0.039200537	0.086794054	-0.039200537	0.086794054



#### Four-Month Post-Graduation Job Attainment Regression Summary

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.300274396							
R Square	0.090164713							
Adjusted R Square	0.063404851							
Standard Error	0.478187467							
Observations	561							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	12.32733239	0.770458274	3.369401338	1.07206E-05			
Residual	544	124.3928102	0.228663254					
Total	560	136.7201426						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept (SU Ineligible, No BA+, Cis-Male, Black, MDT, Immigrated to US, Remote, non-RTT, not certified, non-DSR)	0.34%	0.168993104	0.020084446	0.983983372	-0.328564824	0.335353089	-0.328564824	0.335353089
AHHI in Ks	0.02%	0.000540776	0.350998882	0.725725075	-0.000872454	0.001252077	-0.000872454	0.001252077
Last Annual Wage (Ks)	0.16%	0.001196789	1.337371551	0.181660277	-0.000750342	0.003951444	-0.000750342	0.003951444
Wages in Year Before Cohort (Ks)	0.14%	0.001701447	0.851955472	0.3946137	-0.001892654	0.004791769	-0.001892654	0.004791769
SU Eligible (>=\$40K and >Bachelor's)	12.37%	0.142761317	0.866304564	0.386705078	-0.156756176	0.404105737	-0.156756176	0.404105737
Bachelor's +	26.66%	0.146148166	1.824184294	0.068672636	-0.020482671	0.55368505	-0.020482671	0.55368505
Non Cis-Male	5.77%	0.044258415	1.304453759	0.192630515	-0.029205268	0.144671379	-0.029205268	0.144671379
White	9.19%	0.057998856	1.58519397	0.113503369	-0.021989707	0.205868579	-0.021989707	0.205868579
Asian	3.38%	0.065249054	0.518627688	0.604231288	-0.094330991	0.162010924	-0.094330991	0.162010924
Latine	5.80%	0.061592261	0.941878006	0.346673171	-0.062975397	0.179000189	-0.062975397	0.179000189
Other Race	4.04%	0.101014243	0.4003362	0.689066071	-0.157986087	0.238865403	-0.157986087	0.238865403
Customized/EUDS	7.73%	0.054112923	1.42903785	0.153567305	-0.028966457	0.183625288	-0.028966457	0.183625288
Born in US?	13.08%	0.051757188	2.527209384	0.011779501	0.02913283	0.232469671	0.02913283	0.232469671
In-Person	9.01%	0.09315479	0.966748436	0.334099388	-0.092929905	0.2730444	-0.092929905	0.2730444
RTT?	-10.56%	0.055491667	-1.903538816	0.057497743	-0.214634729	0.003373644	-0.214634729	0.003373644
Certified?	20.92%	0.051720985	4.045126417	5.98622E-05	0.107620616	0.310815229	0.107620616	0.310815229
Direct Support Recipient	9.16%	0.045687457	2.003874026	0.045578885	0.001806468	0.181297348	0.001806468	0.181297348



#### Average Time (Months) to Job Attainment Regression Summary

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.21258454							
R Square	0.045192187							
Adjusted R Square	0.013758184							
Standard Error	2.416658388							
Observations	503							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	134.3427357	8.396420981	1.437684786	0.119279564			
Residual	486	2838.355555	5.840237767					
Total	502	2972.69829						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept (SU Ineligible, No BA+, Cis-Male, Black, MDT, Immigrated to US, Remote, non-RTT, not certified, non-DSR)	3.44	0.938764729	3.665722018	0.000273818	1.596711925	5.285789147	1.596711925	5.285789147
AHHI in Ks	0.00	0.00257286	0.447044342	0.655042199	-0.003905121	0.006205486	-0.003905121	0.006205486
Last Annual Wage (Ks)	0.00	0.006310708		0.738240016	-0.01028949	0.01450979	-0.01028949	0.01450979
Wages in Year Before Cohort (Ks)	-0.02	0.008992259	-2.037680803		-0.03599186	-0.000654849	-0.03599186	
SU Eligible (>=\$40K and >Bachelor's)	-0.38	0.787918825	-0.487397989	0.62619609	-1.932178007	1.164117905	-1.932178007	1.164117905
Bachelor's +	-0.86	0.805089636	-1.07079402	0.284793536	-2.443971313	0.719800978	-2.443971313	0.719800978
Non Cis-Male	-0.14	0.236720057	-0.608286983	0.543281321	-0.60911483	0.321127372	-0.60911483	0.321127372
White	0.03	0.292495724	0.108584075	0.913577208	-0.542951943	0.606472698	-0.542951943	0.606472698
Asian	-0.18	0.343875233	-0.512346441	0.608641322	-0.851848969	0.499482466	-0.851848969	0.499482466
Latine	-0.12	0.318874343	-0.362052731	0.717469996	-0.741991866	0.511093213	-0.741991866	0.511093213
Other Race	0.01	0.524463465	0.0139153	0.988903266	-1.023197735	1.037793868	-1.023197735	1.037793868
Customized/EUDS	0.06	0.289377238	0.211786401	0.832362464	-0.507298779	0.629871106	-0.507298779	0.629871106
Born in US?	-0.48	0.27857124	-1.717304777	0.086560559	-1.025744421	0.068960978	-1.025744421	0.068960978
In-Person	-0.64	0.402609527	-1.577563347	0.115316604	-1.426212251	0.155928184	-1.426212251	0.155928184
RTT?	0.54	0.309074149	1.760145729	0.079012115	-0.063271015	1.151302101	-0.063271015	1.151302101
Certified?	-0.54	0.294231768	-1.850988083	0.064777789	-1.122742897	0.033503904	-1.122742897	0.033503904
Direct Support Recipient	-0.38	0.245875554	-1.554580494	0.120696941	-0.865343687	0.100877006	-0.865343687	0.100877006



#### Attained a Job in Technology Regression Summary

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.256813082							
R Square	0.065952959							
Adjusted R Square	0.035202439							
Standard Error	0.373549046							
Observations	503							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	16	4.788473293	0.299279581	2.144775418	0.006087039			
Residual	486	67.81590046	0.13953889					
Total	502	72.60437376						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept (SU Ineligible, No BA+, Cis-Male, Black, MDT, Immigrated to US, Remote, non-RTT, not certified, non-DSR)	83.32%	0.145107257	5.741668376	1.65341E-08	0.548042712	1.118272781	0.548042712	1.118272781
AHHI in Ks	0.06%	0.000397694	1.405405309	0.160539701	-0.00022249	0.001340332	-0.00022249	0.001340332
Last Annual Wage (Ks)	-0.10%	0.000975462	-1.023562565	0.30655114	-0.002915091	0.000918197	-0.002915091	0.000918197
Wages in Year Before Cohort (Ks)	-0.10%	0.001389956	-0.716799727	0.473842004	-0.003727386	0.001734746	-0.003727386	0.001734746
SU Eligible (>=\$40K and >Bachelor's)	-16.63%	0.121790621	-1.365425473	0.172751007	-0.405597191	0.073005159	-0.405597191	0.073005159
Bachelor's +	-18.29%	0.124444757	-1.469748671	0.142276876	-0.427418689	0.061613657	-0.427418689	0.061613657
Non Cis-Male	-4.93%	0.036590422	-1.346867215	0.178650709	-0.121177394	0.022612514	-0.121177394	0.022612514
White	0.73%	0.045211809	0.161716398	0.871596398	-0.081523257	0.096146239	-0.081523257	0.096146239
Asian	10.99%	0.053153671				0.214386874		0.214386874
Latine	0.13%	0.04928922	0.026434248	0.978921829	-0.095543354	0.098149201	-0.095543354	0.098149201
Other Race	-2.75%	0.081067654	-0.339224645	0.734587034	-0.186786509	0.131786216	-0.186786509	0.131786216
Customized/EUDS	15.04%	0.044729777				0.238253488		
Born in US?	6.71%	0.043059467		0.119697792	-0.017485178			
In-Person	9.97%	0.062232381				0.221964279		0.221964279
RTT?	-1.68%	0.047774379			-0.110666487			
Certified?	12.34%	0.045480154			0.034028755			0.21275277
Direct Support Recipient	-6.53%	0.038005611	-1.717453355	0.086533404	-0.139948462	0.009402733	-0.139948462	0.009402733