



Impact Study of Goodwill San Antonio’s Good Careers Academy Job Training Programs

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What We Studied

In 2018, of the largest 25 metro areas, San Antonio had the topmost percent of residents living in poverty—about 20 percent or one in five. Nearly half of those living in poverty were employed, but nearly all struggled to afford housing and nutrition for themselves and their children (COSA, 2019). To reduce the number of people living in poverty, Goodwill San Antonio has focused on helping those facing the most difficult circumstances acquire marketable skills through its Good Careers Academy program.

During the study period of 2013 to 2019, the Good Careers Academy (GCA) provided short-term, certified vocational training programs in various fields. The main training programs were in medicine (nurse’s aide, medical assistant, pharmacy technician), commercial driving, and office administration. GCA also had smaller programs that led to certification in computer support, apartment maintenance and construction, software development, and supply chain logistics. Training programs lasted between 7 to 29 weeks.

In 2019, Goodwill San Antonio hired the Urban Education Institute (UEI) at The University of Texas at San Antonio (UTSA) to evaluate GCA’s effectiveness in increasing employment rates and earnings. Using wage data collected by the Texas Workforce Commission (TWC) on all employees of employers in the state, researchers were able to compare the change in employment rates and earnings of GCA students who enrolled from 2013 to 2019 to students with similar demographics and prior educational and employment experiences. This report presents the results of that evaluation.

Student Population

GCA serves a unique student population. From 2013 to 2019, a total of 1,214 students signed up for training. Participants were older (average age 34) and typically single (61%), female (63%), and lacking any postsecondary education (91%). All enrollees had earned a high school diploma or its equivalent.

Participants were disproportionately Hispanic and Black. Enrollees were 59% Hispanic, 19% Black, and 14% White.

Fifty-eight percent of students enrolled in one of three medical programs: medical assistant, nurse’s aide, or pharmacy technician. The second most popular program was the commercial driver license program at 23% of all enrollees, followed by the administrative assistant program at 10%. Computer support specialist, apartment maintenance and construction, software development, and supply chain associate programs made up 9% of all GCA enrollees,

combined. Researchers grouped this last set of certifications under “Other” because of its limited sample size as individual programs.

GCA Students Included in Study

Researchers were unable to include all GCA students due to missing data. Researchers were unable to link some GCA students to the state’s longitudinal data system of educational or workforce outcomes. The reason for missing student data may be that these students completed their secondary education prior to the late 1990s, a period before the state improved its data collection system. Their education data could also be missing because they attended school outside of Texas or at a private or home school. Their earnings data would be missing if they were self-employed, employed outside Texas or by the federal government, or unemployed. In the end, 54% of the GCA students could not be included in the study due to missing data. We suspect the primary reasons for missing data is that those excluded were older, self-employed or unemployed prior to GCA enrollment. To the extent those excluded were unemployed or under-employed in self-employed jobs, our estimates of GCA’s effectiveness are understated.

As shown in Table 1, after students with missing data were removed, the GCA study sample became a little younger (average 29 years old), more single (73%), slightly more female (66%), and had less postsecondary education (94%). It also was more Hispanic (65%) and Black (17%).

Once again, most students enrolled in the medical programs (63%), followed by the commercial driver license program (20%), and administrative assistant program (8%). Computer support specialist, apartment maintenance and construction, software development, and supply chain associate programs represented 9% of all enrollees in the study sample.

TABLE 1: GCA STUDENTS INCLUDED IN THE ANALYSIS

	<u>Mean</u>	<u>SD</u>
<i>Demographic Characteristics</i>		
Age	28.85	8.25
Female	0.66	0.47
Black	0.17	0.37
Hispanic	0.65	0.48
White	0.12	0.33
<i>Marital Status</i>		
Married	0.15	0.36
Single	0.73	0.45
<i>Educational Attainment</i>		
High School Diploma or GED	0.94	0.25
Associate Degree	0.06	0.23
<i>Program Participation</i>		
Administrative Assistant	0.08	
Medical Programs	0.63	
Commercial Driver License	0.20	
Other Programs	0.09	
Program Dropout	0.19	
Program Length	179.62	128.94

Note: Observations equaled 779. Medical includes medical assistant, pharmacy technician, and nurse’s aid. Other Programs include computer support specialist, apartment maintenance and construction, software development, and supply chain associate programs.

Researchers tested the statistical equivalence (a Wald test) between the GCA study sample without missing data and the original study population (students with missing and non-missing data). The two groups were found to not be statistically equivalent. Consequently, the findings of this study may be limited to those included in the study population.

How We Analyzed the Data

Researchers identified the effect of GCA on workforce outcomes using a design known as difference-in-differences. As the name suggests, this procedure involves taking the difference between two differences. For example, researchers compared the change in wages earned by GCA students before and after completing a GCA training program (difference 1) to the change in wages over the same time period of a similar group of people (difference 2).

Researchers then calculated the difference between the two wage changes (difference 1 minus difference 2) to produce an estimate of the average effect GCA produced on the earnings of program graduates. Subtracting out the change in wages of the comparison group removed the influence of trends on wages (such as those associated with age, workforce experience, or fluctuations in the economy) that would have occurred if a GCA student had not enrolled in the program.

Comparison Groups

Researchers constructed comparison groups using a method called propensity score matching (PSM). Two comparison groups were used to improve the robustness of the findings and to identify if GCA affected the workforce outcomes of different subgroups differently.

The first comparison group was comprised of GCA students who did not complete their training program. These students were not only statistically identical to GCA graduates after the PSM process (based on demographics and prior educational and employment history), but they also shared the history of voluntary enrollment in the same GCA training programs. The one downside of this group was that its sample size was small, a result of GCA's high completion rate. Having a small sample size limited researchers' ability to explore all the ways GCA may have impacted different subgroups of students differently, which is also why a second comparison group was created.

Researchers were able to use this first comparison group to identify GCA's effect by the training program categories of commercial driver license, medical, administrative assistant, and all others. Students enrolled in the nurse's aide, medical assistant, and pharmacy technician programs had to be combined due to the limited sample sizes of dropouts. As a result, the unique effects of these three individual programs could not be identified.

The second comparison group was comprised of people who were statistically equivalent to GCA graduates based on demographics and prior educational and employment history. Unlike the first comparison group, however, this group was pooled from across Texas. Using this larger comparison group allowed researchers to explore how GCA uniquely impacted subgroups of students who varied by demographics, prior education, and prior earnings. The pool of potential comparison group members was not limited to Bexar County because of missing data that located people's place of employment.

Outcomes of Interest

Researchers examined how GCA affected annual wages earned and the number of quarters employed in a year. The data source – unemployment insurance records filed quarterly by Texas employers – limited measurement to employment by quarters. The number of quarters employed in a year does not vary as much as the number of days employed in a year. As a result, the research team's ability to detect a change in employment was significantly hampered.

Control Variables

In the construction of comparison groups, researchers were able to control for variables that influenced wages outside of enrollment in GCA training programs. These control variables included age, gender, race and ethnicity, marital

status, highest degree earned, training program (in comparison to GCA dropouts), timing, and earnings one year prior to GCA enrollment.

Limitations

The research team conducted this study within a quasi-experimental research design using observational data previously collected by GCA and state agencies. As such, the research design and a rich supply of variables were relied upon to simulate treatment and control groups after the intervention took place.

Unlike a true experiment where researchers randomly assign subjects to treatment and control groups before the intervention takes place, the study's research design is vulnerable to omitted variable bias. For example, researchers could not include measures of each student's grit (perseverance for accomplishing long-term goals) in estimating effects because grit was not measured. If students who completed GCA training disproportionately possessed grit, and if existing control variables were poor proxies for grit, then grit may confound this study's attempt to identify GCA's effect without bias. If this is the case, then not controlling for grit will cause program effects to be overstated, assuming grit makes one a more productive worker. Grit's effect would be conflated with GCA's effect.

Of course, there may also be other lurking factors that bias effect sizes downward. Because these omitted variables are unobserved, their confounding effects cannot be dismissed, only mitigated through research design, a rich supply of observed variables, and a sound theoretical framework.

The analysis that used workers similar to GCA students but from across Texas may be biased by wage trends that are unique to Bexar County, where GCA students resided. Though no plausible trend was identified, its existence cannot be entirely ruled out. Moreover, the overall direction of this potential bias is unknown. Finally, as mentioned earlier, researchers tested the statistical equivalence (a Wald test) between GCA students who could be linked to their education and workforce data and those who could not and were therefore excluded from the study. Because the two groups were not statistically equivalent, the findings of this study may be limited to the study sample.

What We Discovered

GCA enrollees achieved exceptionally high completion rates. About 81% of GCA enrollees successfully completed GCA training programs within less than a year of enrollment. In contrast, career school and community college enrollees who intended to earn a certificate during the study period completed their certificate programs within two years at rates equal to 56.6% and 17.1%, respectively.

Completion rates varied by training program. Students enrolled in GCA's three medical programs had a completion rate of 83%. The administrative assistant program had a completion rate of 63%. The commercial driver license program had a completion rate of 92%. The smallest programs – apartment maintenance, construction, software development, and supply chain associate – had a combined completion rate of 87%.

Black students had the highest expected probability of completion with a rate of 86.1%. Hispanic and White students had expected completion rates equal to 83.2% and 74.7%.

On average, GCA completion rates increased as the length of programs decreased. However, longer programs were associated with greater wage gains. Also, the more students earned before GCA training, the less likely they were to drop out.

Relative to individuals who did not complete their training programs, GCA completers saw a gain in annual wages four years following enrollment above non-completers by \$6,321.

Additionally, students who completed their training programs increased their annual earnings in the third year from enrollment by 32% and in their fourth year by 73% compared to similar students who did not enroll in GCA.

Moreover, GCA's effect on wage growth varied by field of study. GCA graduates experienced an increase earnings relative to their quasi-control group of non-participants that ranged from 21% to 94% depending on field of study. For example, the average effect produced by GCA on earnings four year following enrollment equaled \$3,314 for administrative assistant participants, \$7,952 for medical program participants, and \$18,161 for commercial driver license participants.

Discussion/Policy Recommendations

The leadership of Goodwill of San Antonio has a case to make for expanding Good Careers Academy's role in the San Antonio education ecosystem. GCA improved the earnings of its students who were studied and did so with above average effects for students with the greatest need. Furthermore, GCA served a population underrepresented in other training programs.

GCA served older adults (average age 34) earning wages below the poverty line (\$11,020 per year) prior to enrollment. Despite the challenging economic circumstances of these nontraditional students, an extraordinary share—8 out of 10 students—completed their training programs. Most importantly, students who completed their training (compared to similar students who did not) earned 73% more income four years after enrollment due to GCA.

Finally, GCA's program proved to be cost efficient. At \$2,500 per participant, the evidence suggests that GCA produces results no less than more costly job training programs in San Antonio (Roder & Elliott, 2019). The commissioning of this research study demonstrates that Goodwill of San Antonio is committed to the continuous improvement of its programs. In that spirit, the UEI offers two recommendations for program improvements.

First, GCA should continue to study the local labor market to identify high demand jobs that pay a living wage to ensure that its students are steered into jobs that will allow them to reach self-sufficiency. Second, GCA should improve its program application system to collect essential data fields that will allow for ongoing monitoring of program effectiveness.

A more detailed presentation of methodology, data, and findings of this study can be found at the UEI's website: uei.utsa.edu.

References

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