

Nine Year Education Gains: Project QUEST's Impact on Student Success



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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.

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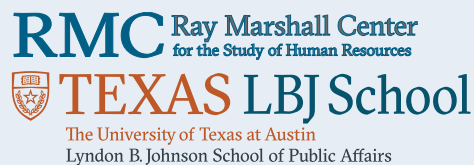


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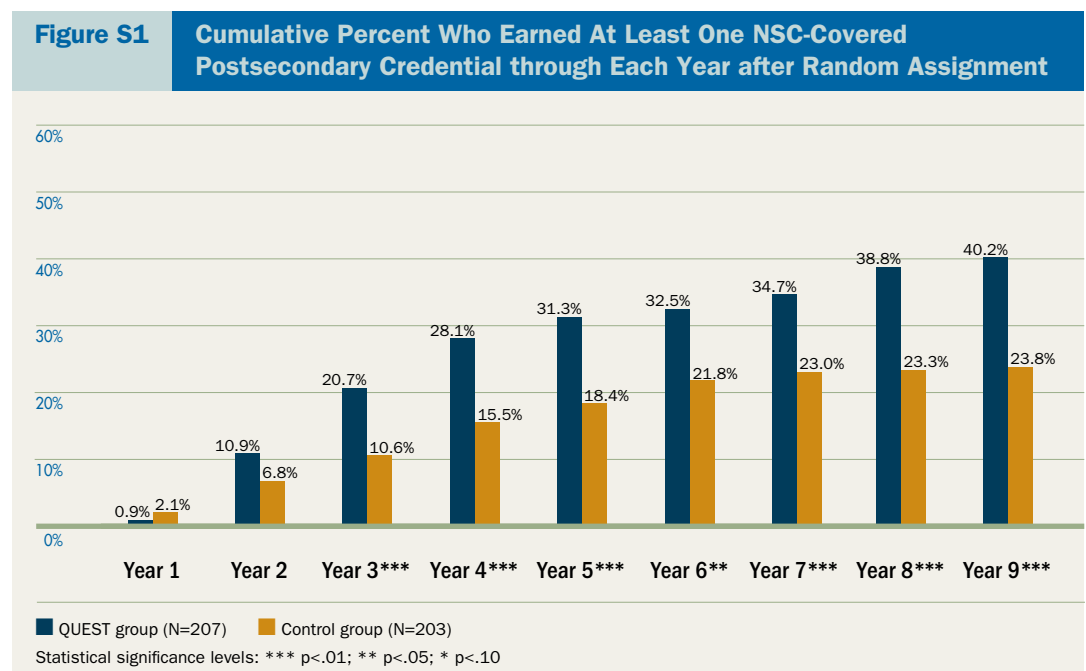
Summary

Project QUEST, located in San Antonio, Texas, provides comprehensive support to help low-income adults earn postsecondary educational credentials and access well-paying jobs in strong sectors of the local economy. Mobility conducted a randomized controlled trial (RCT) study of Project QUEST to assess its impacts on credential attainment and earnings among individuals pursuing health-care careers. With support from Arnold Ventures, we contracted with the Ray Marshall Center at The University of Texas at Austin to examine impacts nine years after study enrollment, using state administrative data on earnings and data from the National Student Clearinghouse (NSC) on postsecondary educational outcomes. Our report, *Nine Year Gains: Project QUEST's Continuing Impact*, documented that the program had the largest sustained earnings impacts ever found in a US workforce development program. In this report, we present Project QUEST's impacts on postsecondary educational outcomes and compare the program's benefits and costs.

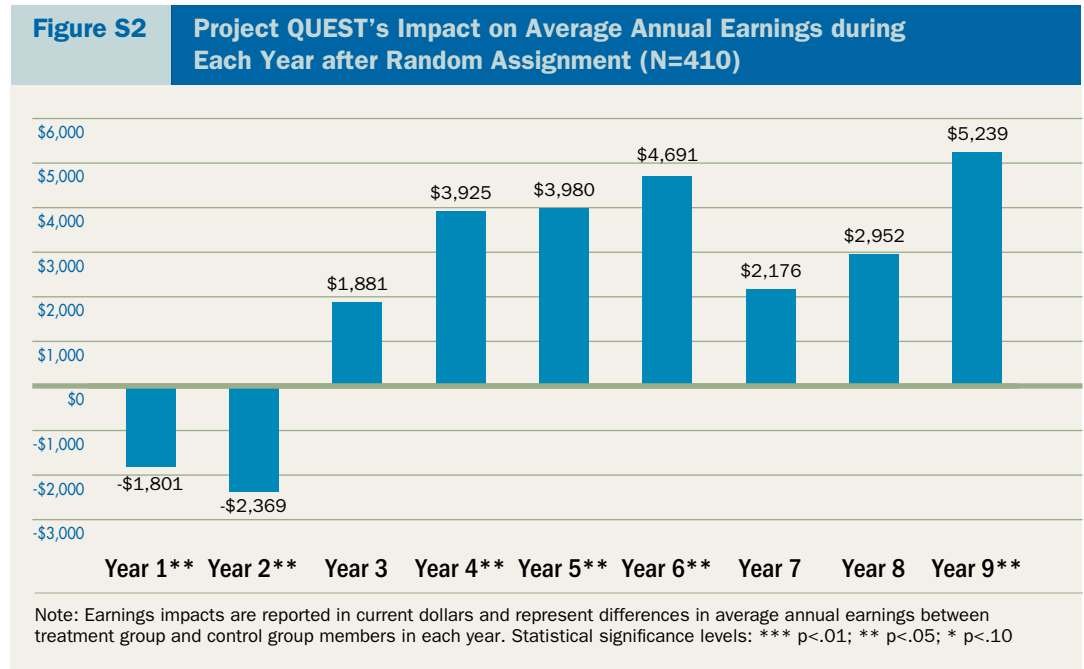
We found that Project QUEST achieved large, sustained educational impacts over the nine years of the study. Specifically, Project QUEST:

- doubled credential attainment after three years.
- increased the percentage of participants earning a credential by 16.4 percentage points by the end of the ninth year.
- more than doubled the attainment of a health-care credential.

As presented in **Figure S1**, Project QUEST's impact on credential attainment grew over the nine years after study enrollment, indicating that Project QUEST set participants on a path to completing postsecondary education long after they stopped receiving program support. These results almost certainly underestimate Project QUEST's impact, because the NSC data did not capture one of the primary health-care certificate programs that Project QUEST supported during the study.



As we previously reported, QUEST participants earned substantially more than control group members in the third through ninth years after random assignment (**Figure S2**). Project QUEST's impact on annual earnings grew to \$5,239 in year nine—a difference that was both statistically significant and the largest of any year.



The Project QUEST model includes comprehensive support to help participants earn credentials and partnerships with colleges and employers to ensure that graduates have the skills to meet employers' needs. The study's results provide strong evidence for both the workforce development and the postsecondary education fields of the benefits of helping low-income adults earn postsecondary educational credentials that have high value in the local labor market.

Introduction

Employers have frequently reported difficulties finding workers to fill middle-skill jobs—that is, jobs that require some postsecondary education or training and involve technical, administrative, or communicative tasks.¹ At the same time, low-wage workers face substantial barriers to completing postsecondary education and training programs that can enable them to access well-paying jobs. In the early 1990s, two community-organizing groups in San Antonio, Texas, Communities Organized for Public Service (COPS) and Metro Alliance, saw that local employers were filling well-paying jobs with workers recruited from outside the metropolitan area, while local residents struggled in low-wage jobs that did not enable them to support their families. In 1992, COPS and Metro Alliance founded Project QUEST to help San Antonio residents gain skills to meet the needs of employers in strong sectors of the local economy. Project QUEST provides comprehensive support and resources to help individuals complete occupational training programs at community colleges and professional training institutes, pass certification exams, and obtain jobs. Project QUEST's services include the following:

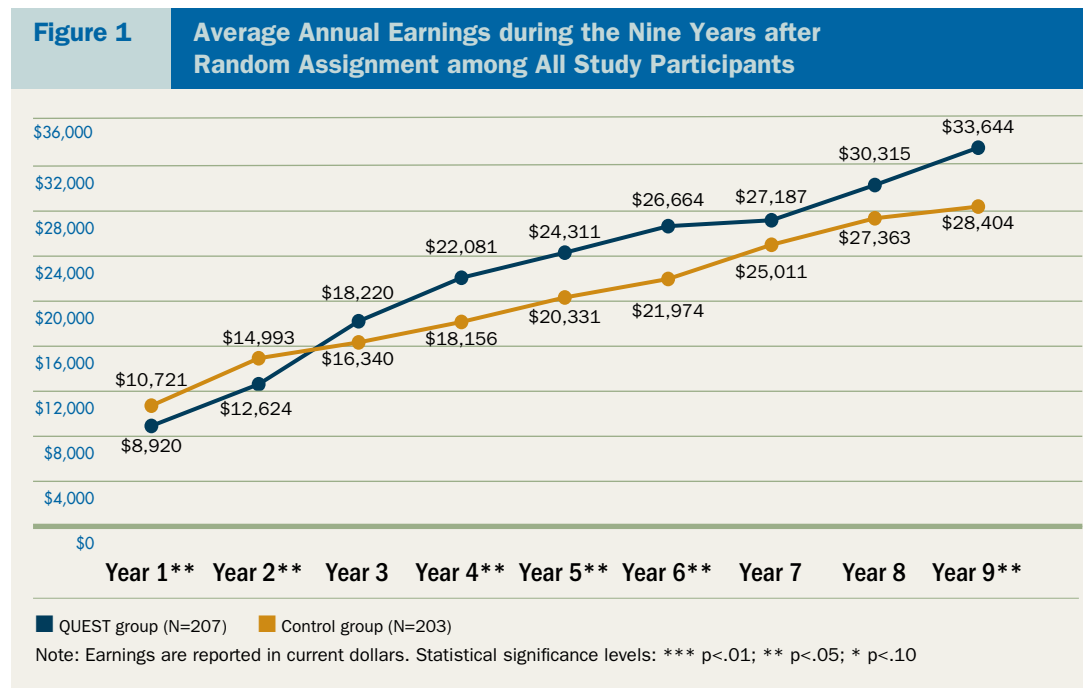
- financial assistance to cover tuition and fees for classes, books, transportation, uniforms, licensing exams, and tutoring²
- remedial instruction in math and reading to help individuals pass college placement tests
- counseling to address personal and academic concerns and provide motivation and emotional support
- referrals to outside agencies for assistance with utility bills, childcare, food, and other services, as well as direct financial assistance with other supports on an as-needed basis
- weekly meetings that focus on life skills, including time management, study skills, critical thinking, and conflict resolution
- job placement assistance, including help with writing résumés and interviewing, as well as referrals to employers that are hiring

In 2005, Project QUEST agreed to take part in an RCT study to assess its impacts on participants' earnings.³ Between April 2006 and October 2008, 410 individuals enrolled in the study, of whom 207 were assigned to the treatment group, which could receive Project QUEST's services, and 203 to the control group, which could not. Because individuals were randomly assigned, at the time of study enrollment the two groups were equivalent on measured characteristics, such as age, prior education, and work experience, and unmeasured characteristics, such as motivation. Therefore, any differences found in their outcomes can be attributed to Project QUEST's services. Additional details regarding the study design and the final sample are provided in the appendix. In this report, we refer to all members of the treatment group as “the QUEST participants” or “the QUEST group.”

In 2017, we reported on Project QUEST's impacts six years after study enrollment, based on surveys completed with study participants.⁴ We found that Project QUEST

had a large impact on participants' annual earnings and that QUEST participants were more likely than control group members to earn vocational certificates or licenses. In 2018, Mobility received support from Arnold Ventures to extend the study to assess Project QUEST's impacts on participants' earnings, educational attainment, and public benefits receipt during the nine years after study enrollment. This phase of the study relies on administrative records, including Texas Workforce Commission data on quarterly earnings and unemployment benefits receipt, and National Student Clearinghouse (NSC) data on postsecondary educational outcomes. Mobility contracted with the Ray Marshall Center at The University of Texas at Austin to access and analyze the data.

In our 2019 report, *Nine Year Gains*, we presented Project QUEST's impacts on annual earnings and other employment outcomes. As shown in **Figure 1**, QUEST participants earned substantially more than control group members in the third through ninth years after random assignment. The earnings differences were statistically significant in years four through six after random assignment. The difference narrowed in year seven but began to grow again in year eight. Project QUEST's impact on annual earnings grew to \$5,239 in year nine—a difference that was both statistically significant and the largest of any year.



This brief presents the study's findings regarding Project QUEST's impacts on college enrollment and completion as well as receipt of unemployment insurance benefits. We also assess Project QUEST's net costs and compare those to its net benefits to determine whether it is worthwhile to society to invest in the QUEST model.

Limitations of the NSC Data

The NSC holds information on enrollment and degree completion for 3,600 post-secondary institutions nationwide, including two- and four-year, public, private nonprofit, and private for-profit institutions. Its data coverage is better for public institutions than private institutions and has improved over time. However, schools have discretion regarding whether or not to report non-degree-seeking students. This last point is important for the study because our review of the data from Project QUEST, from the six-year survey, and from NSC indicates that enrollment in the medical records coder program that Project QUEST supported during the study was not reported to NSC. Therefore, the findings in this brief underestimate Project QUEST's full impact on credential attainment.

The Study Participants and Targeted Postsecondary Programs

During the study enrollment period, Project QUEST sought to recruit individuals who were interested in but not currently attending college classes. This included those who needed to improve their basic reading and math skills before they could enroll in college-level classes as well as those who were ready to enroll. Project QUEST staff conducted a thorough screening of applicants to determine their eligibility, evaluate their aptitudes and interests, and match them to appropriate careers and training. Career counselors worked with applicants to develop an academic plan, which included necessary courses and a timeline for completion. Counselors also helped them develop a budget plan to determine whether they would have enough income to cover their expenses during training.

Applicants presented their plans during an interview, after which staff decided whether or not to recommend them for enrollment. Recommended applicants were submitted for random assignment. Career counselors worked with individuals assigned to the treatment group, either inviting them to attend remedial classes held at Project QUEST or helping them with the college enrollment process. While control group members did not receive any further support from Project QUEST, the intake process provided them with a de facto road map for completing a certificate or degree program at a local community college for their targeted health-care occupation.

As presented in [Table 1](#), most study participants were female, Latino, had a high school diploma, and had children under age 18 at the time of study enrollment. Most (69 percent) were between the ages of 25 and 64—older than traditional college-age students. Forty-five percent had previously attended college but had not attained a degree. While 84 percent had worked in the previous year, average annual earnings among all participants were only \$11,656.

The evaluation focused on individuals who were pursuing training for health-care jobs. Most study participants (85 percent) were seeking to enter non-degree

programs. Sixty percent sought to enroll in licensed vocational nursing certificate programs. A quarter sought to enroll in a medical records coder program at San Antonio College that was new at the time of the study and developed in partnership with Project QUEST. The medical records coder training was a continuing education program for which students earned a certificate of completion but did not earn college credits. Another 15 percent of participants were interested in pursuing programs that would lead to an associate's degree, including registered nursing, and radiography, respiratory therapy, sonography, and surgical technician programs (Figure 2). Table 2 provides information about the course requirements for completing each of the targeted health-care career tracks as well as the type of credential each conferred. Once students completed the remedial and prerequisite classes and entered the career track programs, they were required to attend class full-time. When students completed their coursework and clinical rotations, they were required to pass a national certification exam, and in some cases a state exam as well, to work in their chosen profession.

Table 1 Study Participants' Characteristics at Program Entry (N=410)

Female	88.3%
Latino	74.1%
African American	13.9%
White	9.5%
Age 18 to 24	30.7%
Age 25 to 64	69.3%
Had any children under age 18	71.2%
Married	27.6%
Had a GED	25.1%
Had a high school diploma	70.2%
Had a college degree	4.6%
Had previously attended college but did not earn a degree	44.9%
Was employed at any time in the past year	84.4%
Average annual earnings in the past year	\$11,656

Figure 2 Study Participants' Intended Health-Care Occupation at Program Entry (N=410)

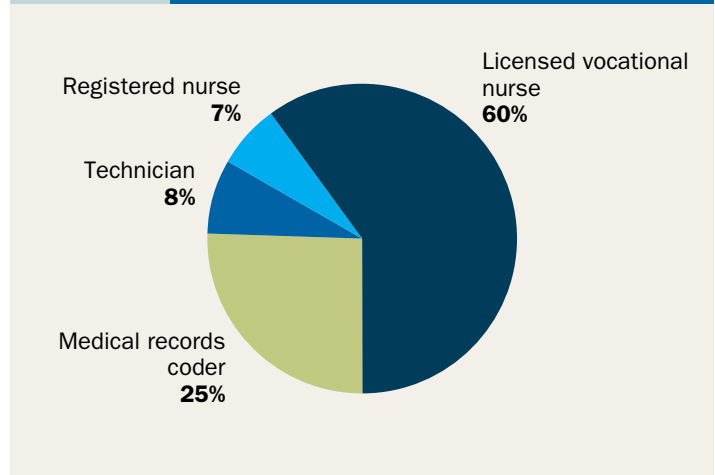


Table 2 Program Requirements and Credentials Earned for Project QUEST's Targeted Health-Care Career Tracks

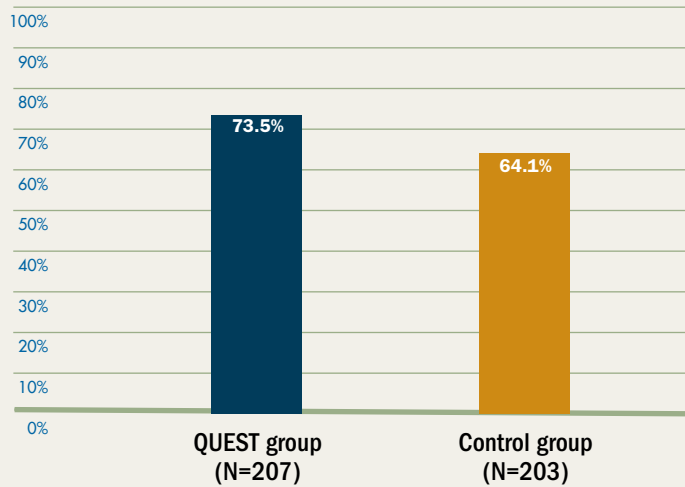
Track	Number of study participants	Program requirements	Credential
Medical records coder	101	7-month program	Continuing education certificate of completion
Licensed vocational nurse	243	1-year program with 3 prerequisite classes	Certificate level 2
Registered nurse	30	2-year program with 7 prerequisite classes	Associate of applied science
Radiography, respiratory therapy, and sonography technicians	26	2-year programs with 3 prerequisite classes	Associate of applied science
Surgical technician	10	1-year program with 6 prerequisite classes	Associate of applied science

Project QUEST's Impacts on Postsecondary Educational Attainment

Project QUEST significantly increased college enrollment.

Project QUEST increased enrollment in NSC-covered college degree and certificate programs. QUEST participants were significantly more likely than control group members to be enrolled in college at any time during the nine years after random assignment—a 9.4 percentage point difference ([Figure 3](#)). As we discuss later in the report, this underestimates Project QUEST's impact on enrollment, due to the omission of the medical records coder program from the NSC data, which represented a quarter of the study sample. As shown in [Figure 4](#), Project QUEST had a significant, positive impact on college enrollment in the first three years after random assignment. QUEST participants were also significantly more likely than control group members to be enrolled in college full-time during the first two years after random assignment ([Figure 5](#)). Research has shown that community college students who attend school full-time for at least a semester are more likely than those who do not to earn a postsecondary certificate or degree.⁵

Figure 3 Percent Who Ever Enrolled in NSC-Covered Postsecondary Education during the Nine Years after Random Assignment



Statistical significance levels: ** p<.05

Figure 4 Percent Enrolled in NSC-Covered Postsecondary Education during Each Year after Random Assignment

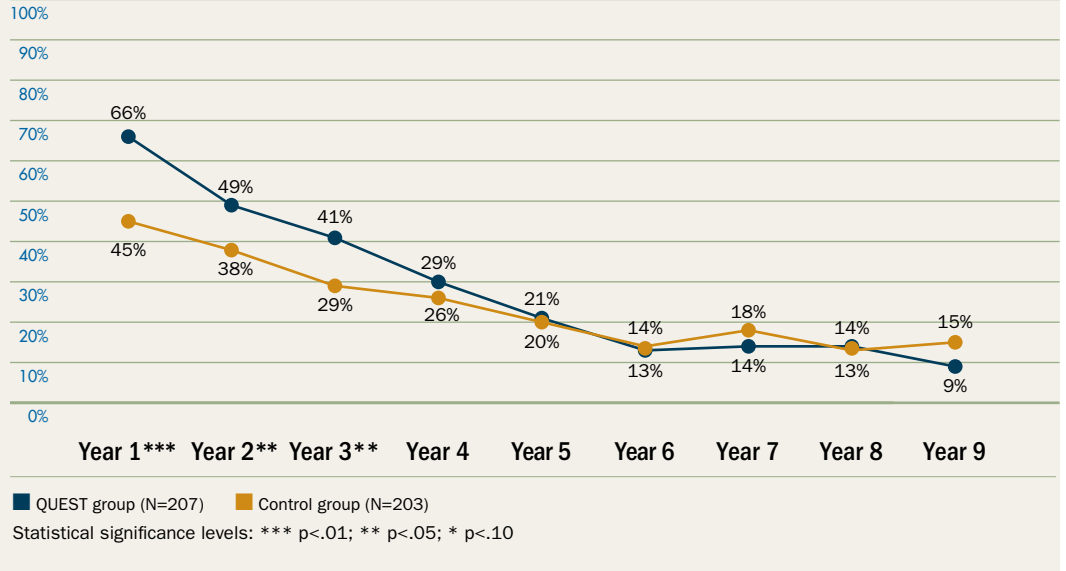
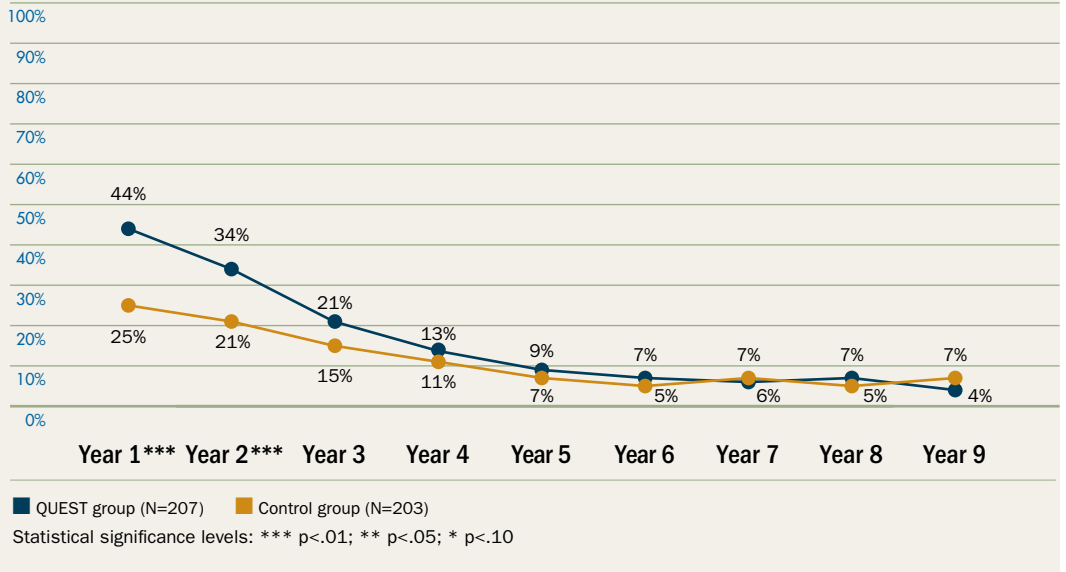


Figure 5 Percent Enrolled Full Time in NSC-Covered Postsecondary Education during Each Year after Random Assignment



The enrollment impacts coincide with the period when participants were supported by Project QUEST. Ninety-five percent of treatment group members received support from Project QUEST during the first year after random assignment (Figure 6). Nearly three-quarters continued to receive support during the second year and 32 percent during the third year. Figure 6 includes Project QUEST's support of students whose educational activities are not captured in the NSC data, including those who pursued the medical records coder training and those who participated in remedial math and English classes at Project QUEST prior to enrolling in a college program.

Overall, QUEST participants received support for an average of 22.6 months. This varied substantially by program track from averages of 14.6 months for those in the medical records coder track to 3.5 years for those in the registered nursing track (Table 3).

Figure 6 Percent of QUEST Participants Who Received Support from Project QUEST during Each Year after Random Assignment

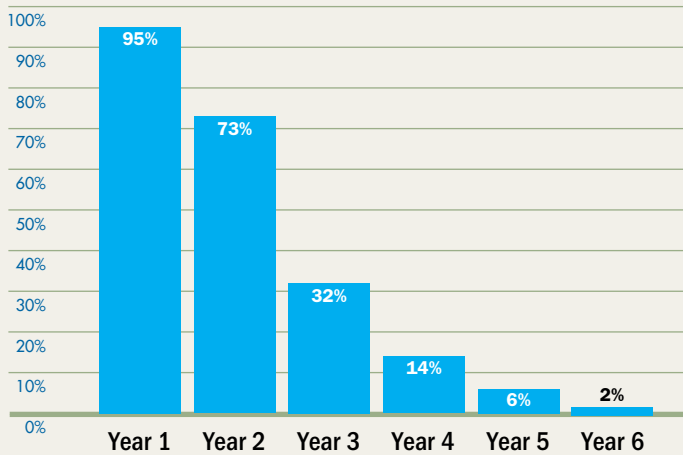
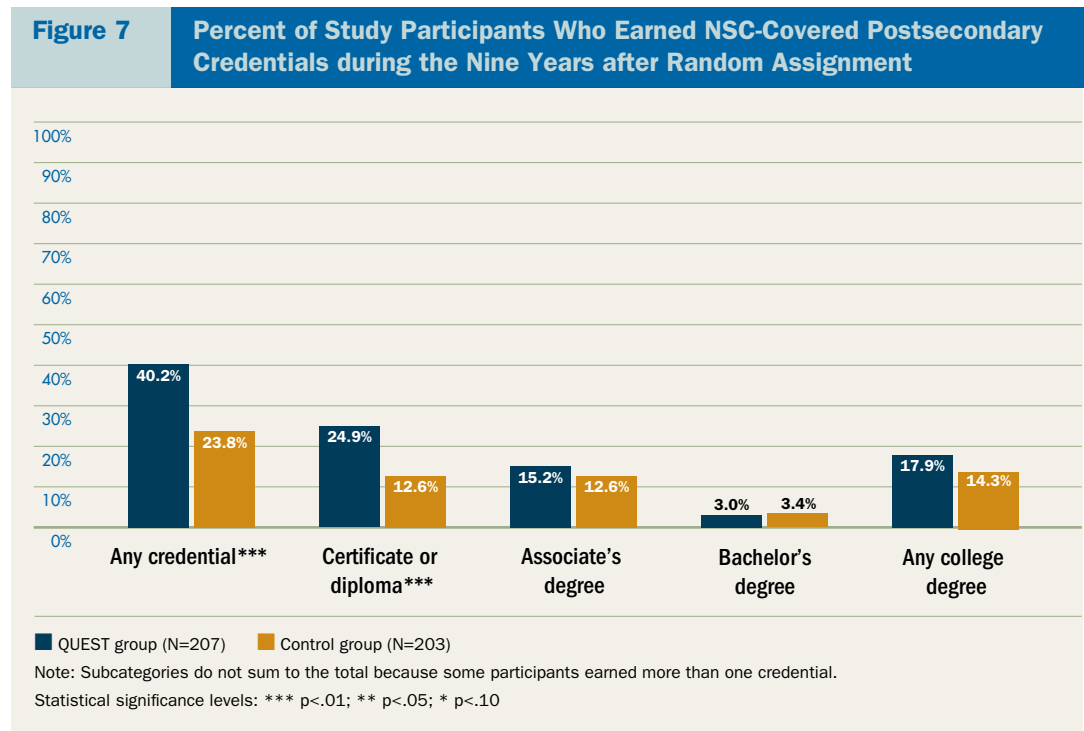


Table 3 Average Number of Months Participants Received Support from Project QUEST by Program Track

Medical records coder	14.6
Technicians	20.8
Licensed vocational nurse	24.5
Registered nurse	36.5
All	22.6

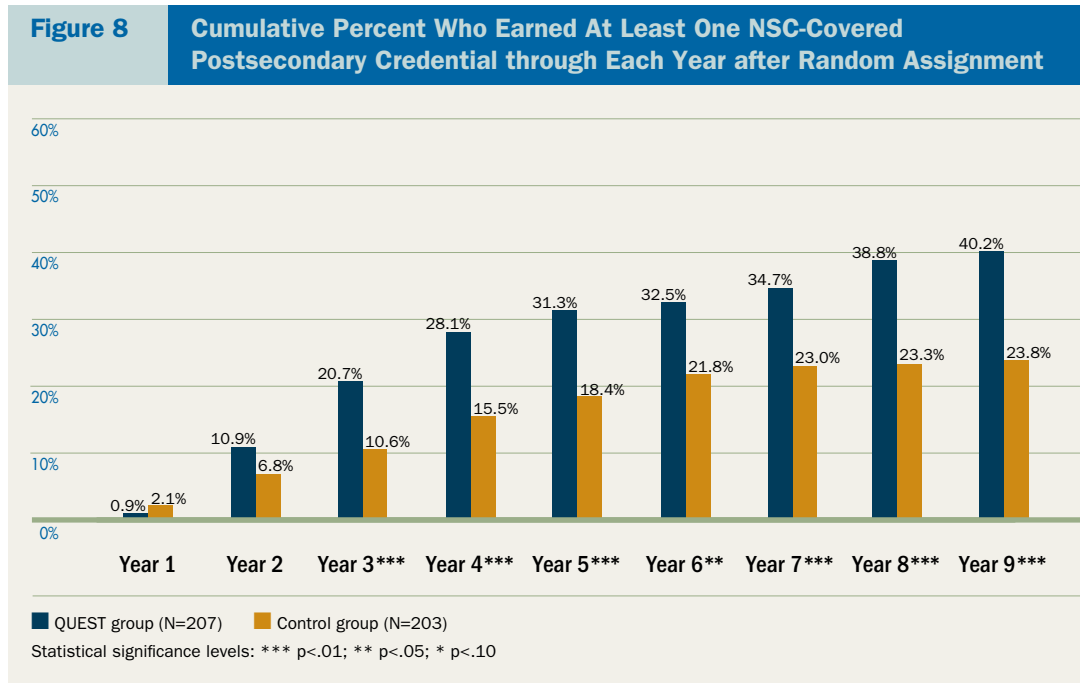
Project QUEST significantly increased attainment of a college credential.

QUEST participants were significantly more likely than control group members to earn an NSC-covered college credential during the nine years after random assignment—a 16.4 percentage point difference (Figure 7). Project QUEST nearly doubled the percentage of participants who completed a college certificate or diploma program. QUEST participants were also slightly more likely than control group members to earn a college degree (18 percent versus 14 percent, respectively), but the difference was not statistically significant.



As shown in Figure 8, Project QUEST increased credential attainment starting in the second year after random assignment. By the sixth year after random assignment, when nearly all treatment group members were no longer receiving support from QUEST, there was a 10.7-point difference between the two groups in the percent who had earned at least one NSC-covered credential. The difference between the groups continued to grow in years seven through nine, when an additional 7.7 percent of QUEST participants earned their first credential compared with 2 percent of control group members. Seventy-three percent of QUEST participants who completed their first credential in years seven through nine earned either an associate's or bachelor's degree.

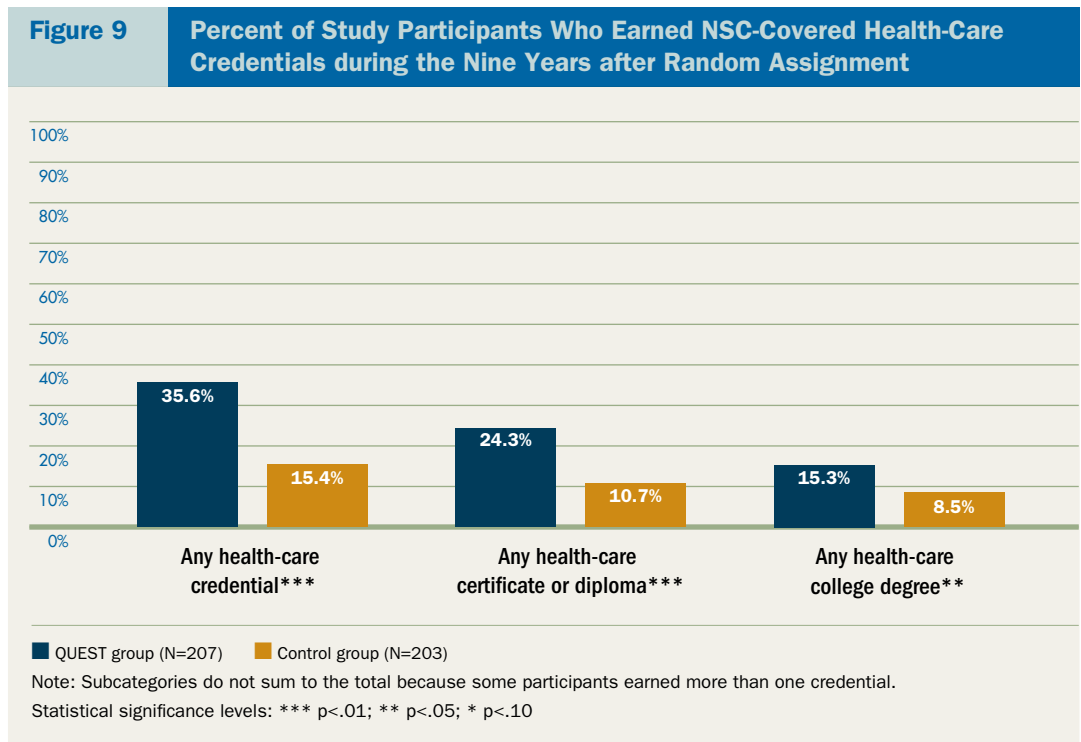
QUEST participants were more likely than control group members to earn one NSC-covered credential while a similar percentage earned two or more credentials. Thirty percent of QUEST participants earned one NSC-covered credential during the nine years after random assignment, and 11 percent earned two or more. Comparatively, 13 percent of control group members earned one credential and 10 percent earned two or more.



Project QUEST more than doubled the attainment of a health-care credential.

A main tenet of Project QUEST's sectoral strategy is to prepare individuals for well-paying careers while meeting the needs of employers in strong sectors of the local economy. As noted earlier, the study focused on Project QUEST's efforts to help individuals earn credentials and enter careers in the health-care field. At the time of study enrollment, all individuals in the study, including those in the control group, were interested in enrolling in one of the health-care certificate or degree programs that Project QUEST supported.

As shown in [Figure 9](#), QUEST participants were more than twice as likely as control group members to earn a college credential in the health-care field. The largest impact was on the percent who completed a health-care certificate program, primarily licensed vocational nursing certificates. The program's full impact on earning health-care certificates is underestimated because the data do not include the medical records coder program. Project QUEST also had a significant, positive impact on the percent who earned a college degree in the health-care field. Thirteen percent of QUEST participants earned either an associate's of applied science or a bachelor's of science in nursing, compared with 7 percent of control group members.

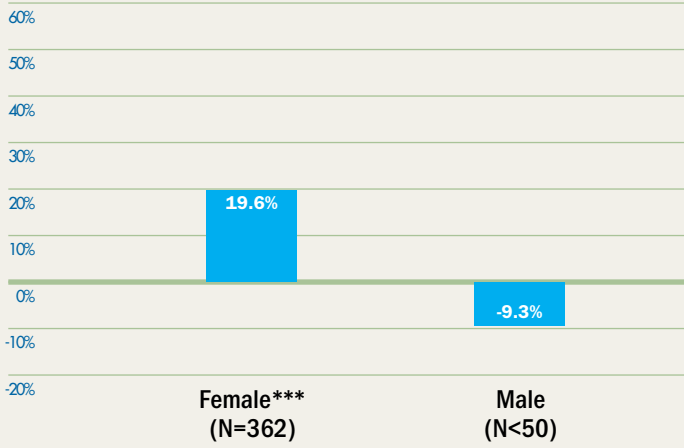


Among study participants who earned any NSC-covered credentials, health-care credentials were the most common for both the QUEST group and the control group. Among QUEST participants who earned any credentials, 89 percent earned at least one credential in the health-care field and 78 percent earned a certificate or degree in nursing. Among control group members who earned a college credential, 64 percent earned at least one health-care credential and 38 percent earned a certificate or degree in nursing. The other types of credentials that control group members earned included a mix of occupational programs, including administrative or office skills and early childhood education, and academic programs, including general studies and liberal arts.

Project QUEST had significant positive impacts on credential attainment for most subgroups.

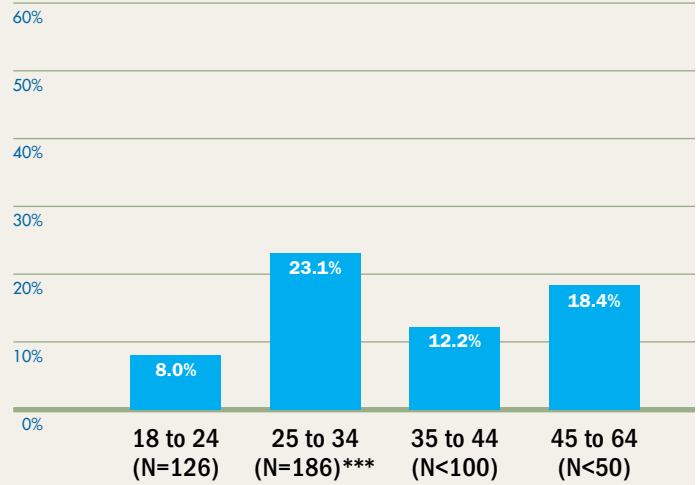
Project QUEST had positive impacts on the likelihood of earning any NSC-covered college credential for most subgroups of participants. The one exception was male participants, but the number of males in the sample was small (Figure 10). QUEST participants across age groups were more likely than control group members to earn a credential, but the impact was statistically significant only for 25-to-34-year-olds (Figure 11). Project QUEST's impact was significant for both Latino and non-Latino participants and for those who had either a GED or a high school diploma at the time of program entry (Figures 12 and 13). This latter finding is important, as some researchers have questioned the wisdom of public investment in training for individuals with GEDs.⁶

Figure 10 Project QUEST's Impact on the Likelihood of Earning an NSC-Covered College Credential, by Gender



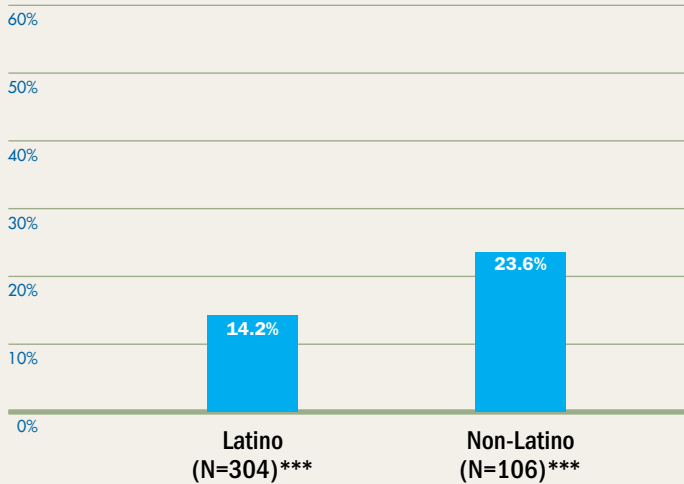
Within group significance level: *** p<.01
Between group significance level: * p<.10

Figure 11 Project QUEST's Impact on the Likelihood of Earning an NSC-Covered College Credential, by Age



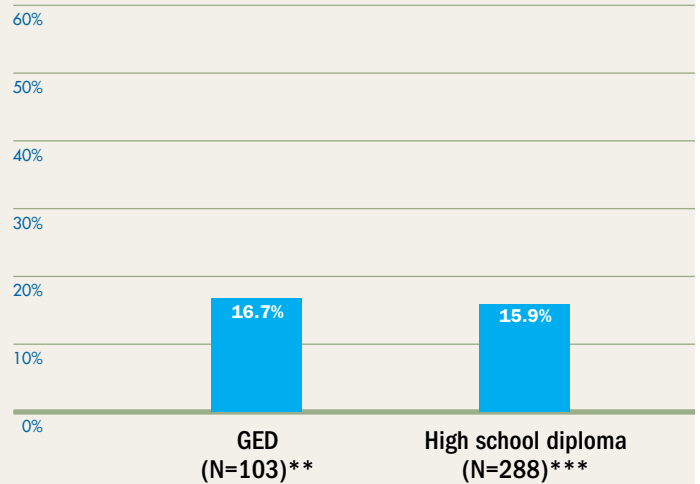
Within group significance level: *** p<.01

Figure 12 Project QUEST's Impact on the Likelihood of Earning an NSC-Covered College Credential, by Ethnicity



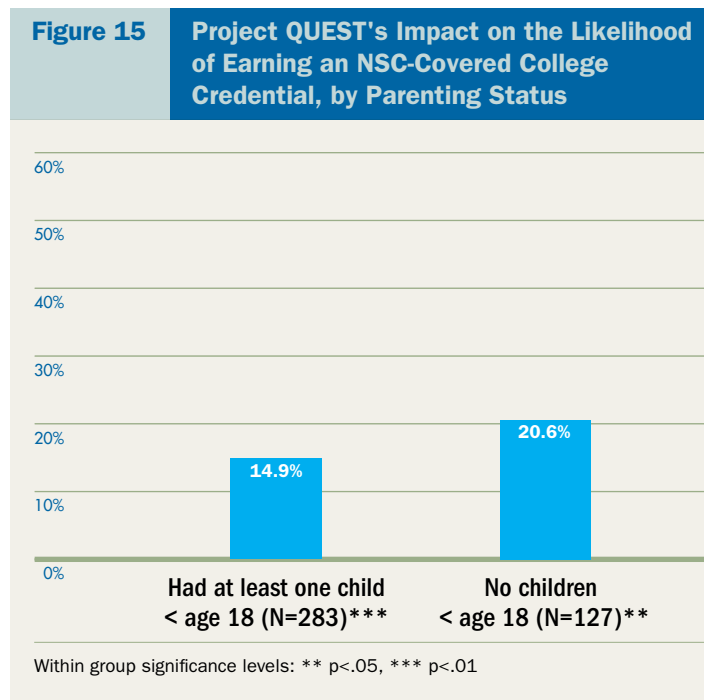
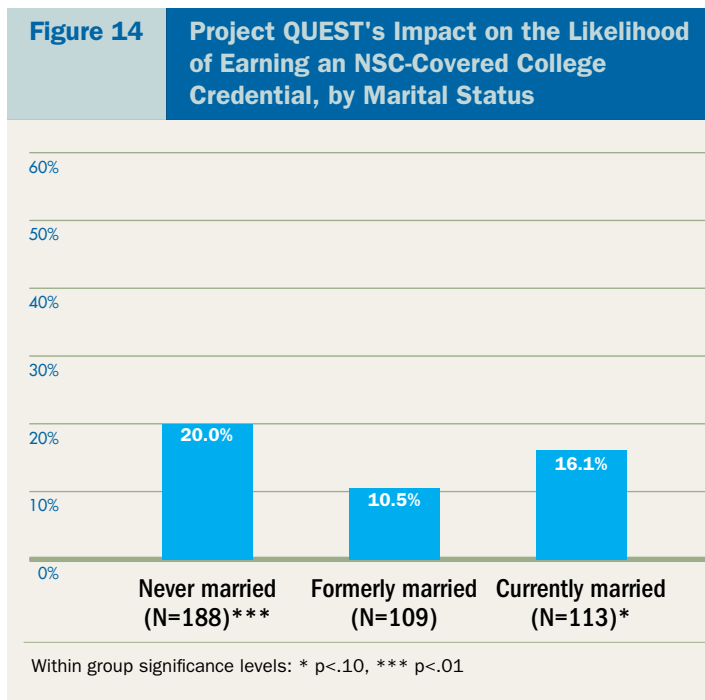
Within group significance level: *** p<.01

Figure 13 Project QUEST's Impact on the Likelihood of Earning an NSC-Covered College Credential, by Education



Within group significance levels: ** p<.05, *** p<.01

Program impacts on earning a credential were significant for both those who were currently married and those who had never been married, as well as for those with and without children under the age of 18 at the time of program entry (**Figures 14 and 15**). Differences between the subgroups were not statistically significant.



Comparison of NSC, Project QUEST, and Survey Data

In our earlier publication on Project QUEST's impacts after six years, we reported findings based on surveys completed with study participants and data from Project QUEST. We found that 98 percent of QUEST participants and 77 percent of control group members reported attending any postsecondary education or training program during the six years after random assignment. Seventy-five percent of QUEST participants and 57.2 percent of control group members reported earning a postsecondary credential, including certificates and degrees. While QUEST participants were significantly more likely than the control group to report earning a vocational certificate or license (72.6 percent versus 49.1 percent, respectively), they were less likely to report earning a college degree (18.2 percent versus 26.3 percent, respectively).

The NSC findings in this report likely differ from the earlier survey findings for a number of reasons. The survey captured vocational training completed at providers that do not report to NSC. The survey also captured training programs at institutions that report to NSC but do not report on all students attending non-degree certificate or diploma programs. This included the medical records coder program

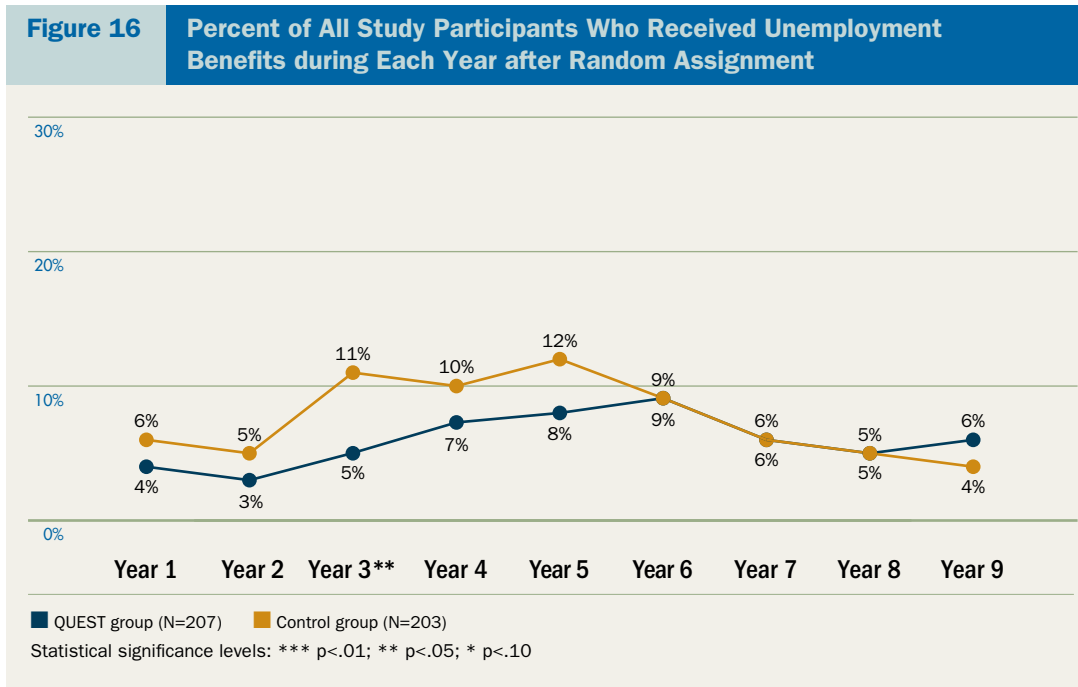
at San Antonio College (SAC) that Project QUEST supported during the study. A comparison of the survey and NSC data found that 43 QUEST participants and 12 control group members who reported attending a college covered by NSC were not represented in the NSC data. This included 32 QUEST participants who attended the medical records coder program at San Antonio College. If this program had been reported to NSC, the percent of QUEST participants who had enrolled in college would have increased from 74 percent to 89 percent, and the percent who earned any college credential would have increased from 40 percent to 62 percent. In the survey, no members of the control group reported attending the medical records coder program at SAC; therefore, we would not expect this omission to affect the control group outcome. However, control group members may have been more likely to attend other programs not captured in the NSC data.

Other potential reasons for discrepancies between the survey and the NSC data include mismatches due to misspellings of names, resulting in false negative findings, and federal privacy laws that allow students to prevent their records from being shared. We also examined whether survey nonresponse bias was a factor but found that this did not contribute significantly to the discrepancies. The results of this analysis appear in the appendix. Another possible explanation for the discrepancy in rates of earning a college degree is that some study participants who completed a certificate program misreported earning an associate's degree in the survey.

Project QUEST's Impact on Unemployment Benefits Receipt

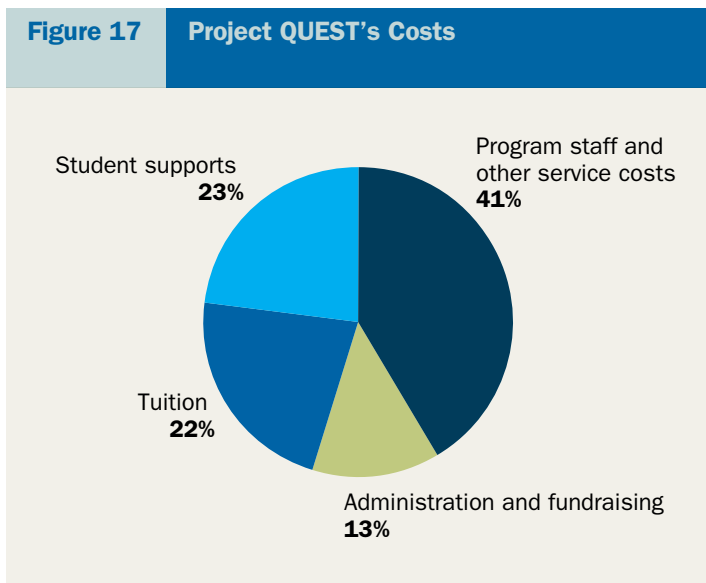
Early differences in unemployment benefits receipt faded over time.

QUEST participants were significantly less likely than control group members to receive unemployment benefits in the third year after random assignment. The third year represents years 2009 to 2011, depending on when participants enrolled, coinciding with peak unemployment during the Great Recession. The differences between the groups in the percent who received unemployment benefits faded over time, and the rates of receipt were similar in years six through nine (**Figure 16**). Overall, the difference in the percent of QUEST participants and control group members who ever received unemployment benefits during the nine years was not significant (28 percent versus 32 percent, respectively). The average benefit amount over the nine years, including for those who received zero benefits, was \$638 for QUEST participants and \$878 for control group members; the \$240 difference was not statistically significant.



Comparison of Benefits and Costs

Project QUEST makes a substantial investment in participants to help them complete postsecondary education and obtain well-paying jobs. To address the question of whether it is worthwhile to society to invest in the Project QUEST model, we compared the program's net earnings benefit to its net costs, including both program costs and the costs of postsecondary education. For purposes of comparison, we converted both benefits and costs to 2017 dollars—the final year in the analysis.



The average cost per participant of Project QUEST was \$11,490 in 2017 dollars. [Figure 17](#) presents the breakdown of these costs. Tuition costs—that is, the portion of participants' community college tuition that Project QUEST paid—accounted for 22 percent of the overall costs. The additional supports that Project QUEST provided made up another 23 percent of costs, the most common of which were books, transportation, certification exam fees, review courses, uniforms, and vaccinations required to enter the health-care field. Salaries and benefits for program staff, including the career counselors who supported participants from college enrollment through job placement, and other direct program costs accounted for 41 percent of the overall costs.

We estimated college costs for QUEST participants and control group members using cost data from the Integrated Postsecondary Education Data System from the US Department of Education's National Center for Education Statistics as well as enrollment data from NSC. Details about the calculation of college costs are included in the appendix. The total costs for QUEST participants include the college costs plus the non-tuition costs of the Project QUEST program.

In the nine years after random assignment, Project QUEST's average net earnings benefit exceeded its average net college and program costs by \$6,869. The net earnings benefit over the nine years was \$20,754, while net program and college costs averaged \$13,885 (Table 4). In addition to the costs of the Project QUEST program, the QUEST group's average college costs were higher than those of the control group, due to QUEST participants' higher rates of college enrollment.

The college costs do not include QUEST participants who attended the medical records coder program. We estimate that including these participants' costs would increase the average college costs for the QUEST group by about \$800. Members of the control group also would have attended college programs not captured in the NSC data, but we do not have data on their enrollment that could be used to estimate those costs. From a societal perspective, additional benefits include an increase in fringe benefits associated with the increase in earnings. While these benefits would be partially offset by an increase in work-related expenses, such as commuting and childcare costs, we expect that the estimate of Project QUEST's net benefit would be greater using standard methods to estimate fringe benefits and work-related costs.

Table 4 Comparison of Average Net Earnings Benefits to Net Costs during the Nine Years after Random Assignment (2017 Dollars)

	QUEST group	Control group	Net
Benefits			
Average earnings	\$207,915	\$187,161	\$20,754
Costs			
Average college costs	\$14,320	\$9,528	\$4,792
Average Project QUEST costs (not including tuition)	\$9,093	\$0	\$9,093
Average total costs	\$23,413	\$9,528	\$13,885

Conclusions

Project QUEST has demonstrated the largest sustained earnings impacts ever found in a US workforce development program. Not only did Project QUEST have a significant impact on earnings, but also it enabled participants to earn an average of nearly \$34,000 nine years after study enrollment—lifting them out of poverty and into San Antonio's middle class. Project QUEST's strategy is to provide low-income adults with comprehensive supports to complete the postsecondary education and training needed to access well-paying careers. This report documents that Project QUEST significantly increased college enrollment and credential attainment—in particular, more than doubling the attainment of health-care credentials.

Project QUEST's 16.4-percentage-point impact on credential attainment nine years after study enrollment is among the highest impacts ever found for comprehensive efforts to improve students' educational success. By comparison, a report on the early impacts from an RCT study of the Valley Initiative for Development and Advancement (VIDA), which is based on the Project QUEST model, found that the program increased credential attainment by 8.3 percentage points after two years.⁷ RCT studies of two college completion programs—InsideTrack, which offers two years of student coaching, and Stay the Course, which provides students with intensive case management and emergency financial assistance—found impacts on college completion rates of about 4 percentage points two to three years after random assignment.⁸ The RCT study of CUNY ASAP—which provides up to three years of comprehensive counseling and financial supports, as well as blocked courses and consolidated schedules to help students earn a college credential—found that the program increased credential attainment by 18 percentage points after three years. By the sixth year after study enrollment, ASAP's impact had narrowed to a 10-percentage-point difference.⁹

The Project QUEST findings are even more impressive given that the impact was not only sustained but grew over the nine years after study enrollment. This indicates that the program set participants on a path to complete postsecondary education long after they had stopped receiving its support. The Project QUEST findings underscore three additional points:

- With the exception of VIDA, the other programs to improve college completion rates mentioned above targeted services exclusively to students already enrolled in college. For the study, Project QUEST targeted low-income adults who were not enrolled in college but were interested in pursuing a career in health care. The study's findings demonstrate that it is possible for an organization to successfully recruit, prepare, and support individuals not currently enrolled in a postsecondary institution. Many of these individuals likely would not have enrolled in, yet completed, a postsecondary education program without Project QUEST's outreach efforts.

- Project QUEST targets credentials valued by employers in the local labor market, including both certificate and degree programs. The study demonstrated success in the health-care field, in which credentials are essential to accessing well-paying jobs and in which demand for workers remains robust over time.
- Project QUEST had its largest impact among nontraditional-aged college students—those over the age of 24—most of whom had children.

The Project QUEST study demonstrates that the program had a large, positive impact not only on credential attainment but also on earnings and career advancement over a nine-year period. Studies of other comprehensive efforts that have shown impacts on attainment of college credentials have not yet demonstrated longer-term impacts on employment and earnings. Long-term follow-up is needed in other studies to determine whether educational gains translate into positive impacts on earnings and career advancement.

Endnotes

- 1 Holzer, Harry. *Job Market Polarization and U.S. Worker Skills: A Tale of Two Middles*. Washington, DC: Brookings Institution, April 2015.
 - 2 During the first three years of the study, which covered the period when all study participants enrolled and at least their first year in the program, QUEST paid 100 percent of tuition for participants. After this time, QUEST covered 50 percent of participants' tuition but continued to cover 100 percent of their fees, as well as the costs of books and other education-related expenses.
 - 3 Project QUEST was initially part of a Public/Private Ventures study we launched of sector-based training programs that included Per Scholas, Jewish Vocational Service Boston, and the Wisconsin Regional Training Partnership.
 - 4 See: Elliott, Mark and Anne Roder, *Escalating Gains: Project QUEST's Sectoral Strategy Pays Off*. New York: Economic Mobility Corporation, April 2017. For further details on the program model and participants, see: Roder, Anne and Mark Elliott, *Escalating Gains: The Elements of Project QUEST's Success*. New York: Economic Mobility Corporation, May 2018.
 - 5 Center for Community College Student Engagement, 2017, *Even One Semester: Full-Time Enrollment and Student Success*. Austin, TX: The University of Texas at Austin, College of Education, Department of Educational Administration, Program in Higher Education Leadership.
 - 6 See Clement, Douglas, Interview with James Heckman. Federal Reserve Bank of Minneapolis, June 1, 2005. <https://www.minneapolisfed.org/article/2005/interview-with-james-heckman>.
 - 7 Rolston, Howard; Elizabeth Copson; and Karen Gardiner, *Valley Initiative for Development and Advancement: Implementation and Early Impact Report*, OPRE Report #2017-83, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, US Department of Health and Human Services, October 2017.
 - 8 Evans, William N., et al., *Increasing Community College Completion Rates among Low-Income Students: Evidence from a Randomized Controlled Trial Evaluation of a Case Management Intervention*. NBER Working Paper 24150. Cambridge, MA: National Bureau of Economic Research, December 2017.
- Bettinger, Eric and Rachel Baker, "The Effects of Student Coaching: An Evaluation of a Randomized Experiment in Student Advising." *Educational Evaluation and Policy Analysis* 36(1): 3–19.
- 9 Gupta, Himani, *The Power of Fully Supporting Community College Students: The Effects of the City University of New York's Accelerated Study in Associate's Programs after Six Years*. New York: MDRC, October 2017.

Appendix

Study Design and Final Sample

The evaluation of Project QUEST uses a randomized controlled trial design to assess its impacts on individuals' outcomes. To assess program impacts, this report relies on data from a baseline survey conducted at the time of study enrollment, administrative data on earnings and unemployment benefits receipt from the Texas Workforce Commission (TWC) for the two years before and nine years after study enrollment, and National Student Clearinghouse (NSC) data on postsecondary enrollment and completion during the nine years after study enrollment. We used data from the baseline survey to examine the characteristics of treatment and control group members in the final sample and to control for any differences in characteristics between the groups in the analysis of program impacts. We also analyzed data from Project QUEST on study participants' anticipated health-care program track and program outcomes for members of the treatment group.

QUEST staff completed the program's intake and screening process to identify eligible candidates and obtained their written consent to take part in the study. Staff then sent their contact information to a survey firm, the Institute for Survey Research (ISR) at Temple University, which completed the baseline survey and conducted random assignment. Individuals were blocked according to their intended program track (i.e., registered nursing, licensed vocational nursing, medical records coding, and the various technician tracks), and ISR randomly assigned 50 percent of study participants to the treatment group and 50 percent to the control group within these blocks. Between April 2006 and October 2008, 410 individuals enrolled

in the study, of whom 207 were randomly assigned to the treatment group and 203 to the control group. QUEST staff invited those assigned to the treatment group to participate in the program. Those assigned to the control group were told that they would not receive support from QUEST but that they could enroll in college or training on their own or seek other services.

Table A1 presents the baseline characteristics of the full sample of treatment and control group members. There were no significant differences between the groups in key baseline characteristics, including gender, age, highest degree earned, annual earnings, housing status, marital status, and whether participants had any children under age 18. Treatment group members were somewhat less likely than control group members to be Latino and more likely than control group members to have a valid driver's license and to live in public or subsidized housing. These differences are most likely due to chance, given the number of characteristics tested.

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 Project QUEST and control groups. We estimated impacts using multivariate regression analysis, and we report regression-adjusted results. The regression models included the baseline explanatory variables in **Table A1** to control for any differences between the treatment and control group members. The models also included a binary variable for being a treatment group member and an index variable indicating study participants' intended health-care program track.

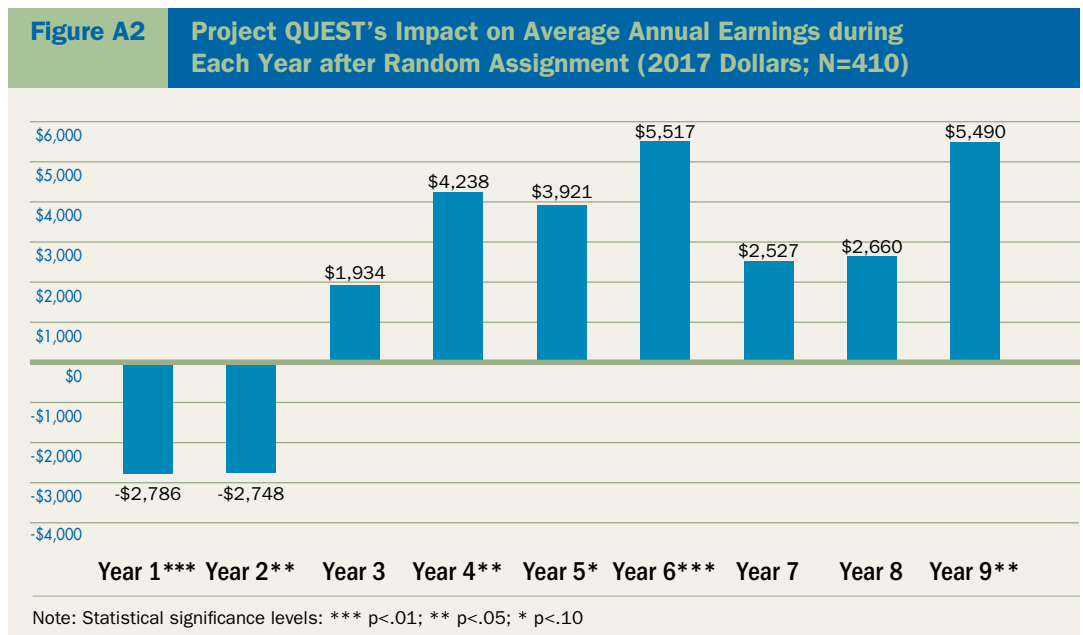
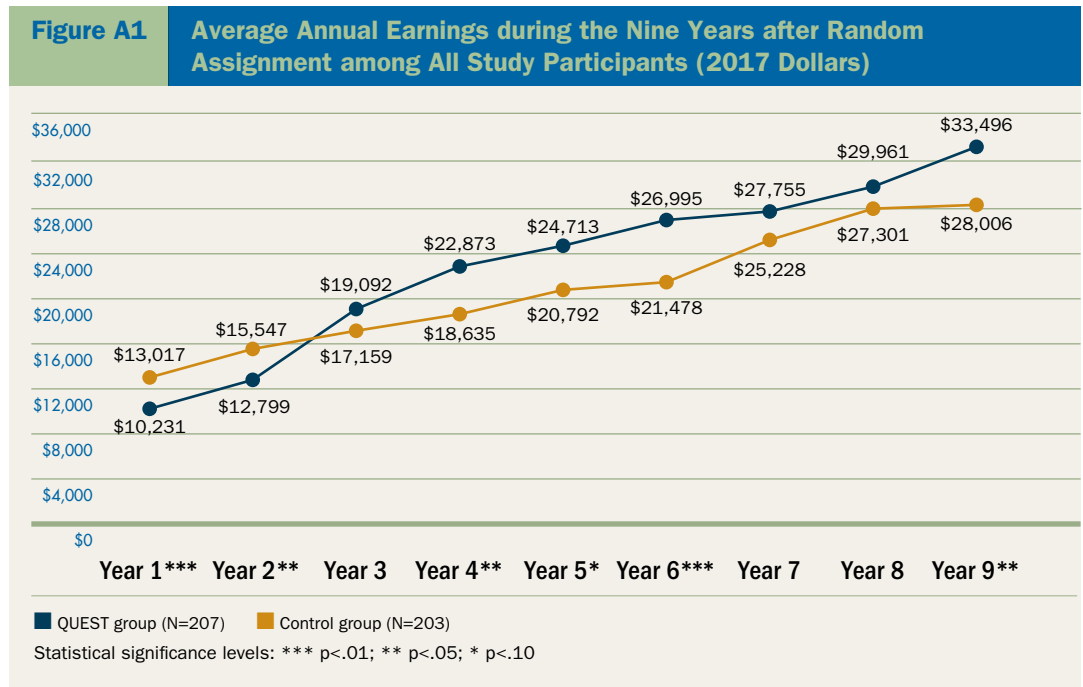
Table A1 Comparison of the Baseline Characteristics of Treatment and Control Group Members in the Project QUEST Randomized Controlled Trial

	Treatment group (N=207)	Control group (N=203)	p-value
Gender			.705
Female	88.9%	87.7%	
Male	11.1%	12.3%	
Age			.633
18 to 24	29.5%	32.0%	
25 to 34	46.4%	44.3%	
35 to 44	15.5%	17.7%	
45 to 64	8.7%	5.9%	
Race/Ethnicity			.058
Latino	69.1%	79.3%	
Black	16.9%	10.8%	
White	12.1%	6.9%	
Other	1.9%	3.0%	
US immigrant	9.7%	5.4%	.164
Highest degree earned			.278
GED	24.6%	25.6%	
High school diploma	69.1%	71.4%	
College degree (associate's or bachelor)	6.3%	3.0%	
Had any health-care certificates or licenses			.525
Yes	30.4%	27.6%	
No	69.6%	72.4%	
Housing status			.128
Own	18.4%	14.3%	
Rent	63.3%	58.6%	
Live rent-free	17.4%	26.6%	
Homeless	1.0%	0.5%	
Living in public or subsidized housing			.061
Yes	15.5%	9.4%	
No	84.5%	90.6%	
Had a valid driver's license	92.3%	86.2%	.047
Rating of own health			.162
Excellent	48.3%	57.6%	
Good	44.0%	35.5%	
Fair or poor	7.7%	6.9%	
Marital status			.412
Currently married	30.4%	24.6%	
Formerly married	25.1%	28.1%	
Never married	44.4%	47.3%	
Any children under age 18 in household			.407
Yes	67.2%	70.9%	
No	32.8%	29.1%	
Average annual earnings in the two years prior to enrollment based on state administrative data (including zeros)	\$21,976	\$20,116	.292

Constant Dollars

The earnings amounts in this brief are reported in current dollars, unless otherwise noted. **Figures A1 and A2** present the earnings impacts adjusted for inflation

and expressed as 2017 dollars. Values were adjusted using the Consumer Price Index Research Series (CPI-U-RS), unadjusted for seasonal variation, from the US Department of Labor, Bureau of Labor Statistics.



Comparison of Survey and NSC Data

We examined whether survey non-response bias contributed to differences between the college enrollment and completion rates reported in the six-year follow-up survey and the NSC results. The response rate on the six-year follow-up survey was 83.7 percent overall, 84.5 percent among treatment group members, and 82.8 percent among control group members. [Table A2](#) presents college enrollment and completion rates based on the NSC data for survey responders and non-responders. Non-response bias does not explain

differences between the survey and NSC data in the percent ever enrolled in college during the nine years. In fact, study participants who did not respond to the six-year survey were somewhat more likely than those who did respond to enroll in college according to the NSC data. Survey non-responders were somewhat less likely than survey responders to earn an NSC-covered credential but given the small number of non-responders and the size of the difference, most of the discrepancy between the NSC data and survey data remains after accounting for this difference.

Table A2 Analysis of Non-Response Bias in the Six-Year Follow-Up Survey

	QUEST group		Control group	
	N	Percent	N	Percent
Percent ever enrolled in college during the nine years				
Survey responders	175	73%	168	62%
Survey non-responders	32	78%	35	71%
Percent who earned an NSC-covered credential during the nine years				
Survey responders	175	43%	168	25%
Survey non-responders	32	31%	35	14%

Calculation of College Costs

We estimated college costs using cost data from the Integrated Postsecondary Education Data System (IPEDS) from the US Department of Education's National Center for Education Statistics as well as enrollment data from NSC. Total college expenses are the core expenses reported to IPEDS for each year of the study. Core expenses for public institutions include instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, depreciation, scholarships and fellowships, interest, and other operating and nonoperating expenses. Core expenses for private, not-for-profit and for-profit institutions include instruction, research, public service, academic support, student services, institutional support, net grant aid to students, and other expenses. For all institutions, core expenses exclude expenses for auxiliary enterprises (e.g., bookstores, dormitories), hospitals, and independent operations.

We divided total expenses by the 12-month FTE enrollment for each year to produce annual expense per FTE amounts for each school and project year. For the four Alamo District Schools in the data, due to a change in reporting that affected the FTE calculation during this period, we divided total expenses by the total number of credit hours and multiplied the per-credit rate by 30 to produce the annual expense per FTE estimates. We then adjusted the annual expense amounts for inflation, expressed as 2017 dollars.

We used the annual expense per FTE amounts to calculate the total college costs for each participant over the nine years after random assignment using the NSC enrollment data. The annual expense per FTE amounts were discounted if the participant was

only in school for part of the year and/or was enrolled less than full time (i.e., if the NSC data indicated the person was enrolled three-quarter time, we used 75 percent of the annual expense per FTE; if half time, we used 50 percent; if less than half time, we used 25 percent).



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