

The Effects of Expanding Pell Grant Eligibility for Short Occupational Training Programs: New Results on Employment and Earnings from the Experimental Sites Initiative

NCEE 2025-005r
U.S. DEPARTMENT OF EDUCATION

A Publication of the National Center for Education Evaluation at IES



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This report was prepared for the IES under Contracts 91990018C0057 and ED-IES-12-C-0097 by Mathematica and Social Policy Research Associates. The content of the publication does not necessarily reflect the views or policies of IES or the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

November 2024

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Thomas, J., Gonzalez, N., Williams, B., Wiegand, A., Paxton, N., Hu, J., & Hebbbar, L. (2024). *The effects of expanding Pell Grant eligibility for short occupational training programs: New results on employment and earnings from the Experimental Sites Initiative* (NCEE 2025-005). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. <http://ies.ed.gov/ncee>

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The Effects of Expanding Pell Grant Eligibility for Short Occupational Training Programs: New Results on Employment and Earnings from the Experimental Sites Initiative

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Pell Grants are the cornerstone of federal financial aid for students with low income who are enrolled in postsecondary education. Currently, these grants are available only to those who seek an initial undergraduate degree or credential requiring at least a typical semester of instruction. Because these rules may restrict access to programs providing skills needed for new or better jobs, in 2011 the U.S. Department of Education (ED) began pilots of two experimental expansions to Pell Grant eligibility. The first experiment allowed income-eligible students with a bachelor's degree to obtain Pell Grants for short-term occupational training programs. The second experiment allowed income-eligible students to obtain Pell Grants for very short-term programs lasting as little as eight weeks. This report updates earlier results from a rigorous evaluation of the experiments conducted by ED's Institute of Education Sciences (IES), adding new information about the experiments' impacts on labor market success. This fuller picture could help Congress as it considers legislation to make Pell Grants for short-term occupational training permanent policy.

Key Findings

- *Offering Pell Grants for short-term occupational training programs to students with low income who have a bachelor's degree increased program enrollment and completion by about 20 percentage points.*
- *Offering Pell Grants for very short-term occupational training programs increased program enrollment and completion by about 10 percentage points.*
- *More than half of students offered experimental Pell Grants used them, receiving an average grant amount of \$1,800; they were just as likely as those not offered the grants to also use federal student loans.*
- *Despite boosting program enrollment and completion, offering experimental Pell Grants did not increase employment or earnings in the medium to long term.*

Each year, federal Pell Grants help millions of students with low income pay for postsecondary education, including more than 6 million students in 2022-23 alone (Office of Federal Student Aid, 2023). Eligibility rules are intended to ensure funds help people who need financial aid most and focus on educational programs substantial enough to provide a return on the federal investment. Thus, more than 90 percent of Pell Grants are distributed to students with annual family incomes of less than \$70,000 (Office of Federal Student Aid, 2022), who do not already have a bachelor's degree, and who enroll in programs that last at least a typical semester (15 weeks).¹ However, the rules might prevent adults with low income, who need additional help to succeed in the labor market, from benefiting from occupational training programs that can be completed in less time and often at a lower cost than other programs that currently can be paid for using Pell Grants.

Coming out of the Great Recession (2007-09), policymakers and postsecondary schools sought ways for displaced workers to earn credentials that could quickly improve their job prospects. To address concerns that tuition and fees could be barriers to occupational training, ED decided to pilot test two expansions to Pell Grant eligibility. The pilots waived specific eligibility rules for a limited number of postsecondary schools that volunteered to participate. ED has the authority to waive federal financial aid regulations under the

Experimental Sites Initiative of the Higher Education Act, to test policy ideas that might lead to changes in regulations or statutes. ED is required to evaluate each pilot or “experiment” and report the results to Congress every other year.²

The two 2011 Pell Grant experiments were intended to help adults with low income enter and complete short-term training programs that schools viewed as preparation for jobs in demand (Exhibit 1).³ Experiment 1 offered Pell Grants to post-bachelor’s students for short-term programs (for example, programs for registered nurses) and Experiment 2 offered Pell Grants for very short-term programs to students without a bachelor’s degree (for example, programs for certified nursing assistants). As is standard under current federal aid rules, the Pell Grants in both experiments had to be used for credit-earning programs leading to an educational certificate, and the amounts were based on program length and number of credits awarded.⁴ The experiments were operated and overseen by ED’s office of Federal Student Aid (FSA) from 2012 to 2017.

Determining whether the experiments achieved their intended outcomes is important, given the potential costs of making them permanent policy and ongoing questions about the economic benefits of short-term programs. This report presents the results from a rigorous evaluation of the experiments conducted by IES. The report first describes the impacts of each experiment on eligible students’ enrollment in and completion of short occupational programs and their receipt of other forms of federal financial aid, which were published in 2020.⁵ These promising results, as well as continuing congressional interest in Pell Grants for short programs, prompted IES to update the earlier report by adding new findings about the experiments’ impacts on employment and earnings outcomes in the medium to long term.⁶ Appendix A provides more information about the implementation of the 2011 Pell Grant experiments and Box 1 provides an overview of the evaluation design.

Exhibit 1. The 2011 Pell Grant experiments

- Eligible students:** Un- or underemployed, otherwise met Pell grant income requirements
- Eligible programs:** Short occupational programs leading to a certificate or credential aligned with local or regional workforce needs
- Duration:** November 2012 to March 2017



Experiment 1: Pell for short-term programs for post-bachelor’s students		Experiment 2: Pell for very short-term programs	
Eligibility rule waived	Duration of allowed programs	Eligibility rule waived	Duration of allowed programs
Prohibition on Pell grants for students with a bachelor’s degree	Up to 1 year (2 years if enrolled part-time)	Requirement for programs to include a minimum of 600 clock hours over 15 weeks	8 to 15 weeks

Box 1. Overview of the evaluation design

Who participated?

Forty-six postsecondary schools volunteered, were approved by the U.S. Department of Education's (ED's) office of Federal Student Aid (FSA) to participate in the experiments, and identified eligible students.⁷ Across both experiments, 72 percent of study schools were public two-year colleges and nearly half (46 percent) were in the southeastern region of the United States (Appendix A, Exhibit A.7). Thirty-five schools participated in Experiment 1, 28 schools participated in Experiment 2, and 17 participated in both experiments.

- In total, 2,684 adults were eligible for the experiments and were included in the analyses. Participants were required to meet all other Pell Grant eligibility criteria (such as having a low income), fill out a Free Application for Federal Student Aid (FAFSA), and express interest in an occupational training program approved for the study.
- Experiment 1 (Pell for short-term programs for post-bachelor's students) analyzed outcomes for 414 students. All had a bachelor's degree,⁸ 64 percent were female, and 93 percent were considered independent students based on FAFSA criteria.⁹ On average, participants were 36 years old and had a gross income of \$20,670. Almost a quarter (24 percent) were already enrolled in a study school,¹⁰ though not in the program for which they hoped to receive an experimental Pell Grant, as required by the study (Appendix B, Exhibit B.4a).
- Experiment 2 (Pell for very short-term programs) analyzed outcomes for 2,270 students. About half (53 percent) had some college education, 36 percent were female, and 85 percent were independent. On average, they were 32 years old and had a gross income of \$22,451. Fourteen percent were already enrolled in a study school (Appendix B, Exhibit B.4a).

What data were used?

The study drew on the following data sources:

- School records on student academic progress and attainment to measure primary enrollment and completion outcomes
- National Student Clearinghouse data to explore enrollment and completion at schools other than those in the study^{11, 12}
- School records and administrative data from ED's FSA databases to measure student characteristics and receipt of financial aid
- National Directory of New Hires records, which the U.S. Department of Health and Human Services maintains and uses to administer the Child Support and Temporary Assistance to Needy Families programs, and to measure employment, earnings, and receipt of unemployment insurance benefits¹³
- U.S. Department of Labor data on whether occupations were expected to grow rapidly or have large numbers of job openings in each state to assess whether the programs students expressed interest in, enrolled in, and completed were associated with high-demand occupations¹⁴

What outcomes were measured?

The study's primary outcomes were defined as follows:

- *Enrollment* in any program at study schools within 12 months of random assignment for Experiment 1 and 8 months of random assignment for Experiment 2.¹⁵ This definition reflects that experimental Pell Grants were available only in study schools and students offered the grants could choose to enter programs for which the funds could not be used.
- *Completion* of any program at study schools within 30 months of random assignment for Experiment 1 and 10 months of random assignment for Experiment 2.¹⁶
- *Whether employed and average quarterly earnings* from the third quarter of 2020 to the fourth quarter of 2021 (within 42 to 93 months of random assignment for Experiments 1 and 2).¹⁷ For post-bachelor's students interested in short-term programs (Experiment 1), the study measured employment and earnings an average of 3.2 years after students were expected to have completed their programs. For students interested in very short-term programs (Experiment 2), the study measured employment and earnings an average of 4.9 years after students were expected to have completed their programs.¹⁸ The study assessed students' employment and earnings following the onset of the COVID-19 pandemic and the economic downturn that followed, when unemployment rates remained higher than before the pandemic.¹⁹

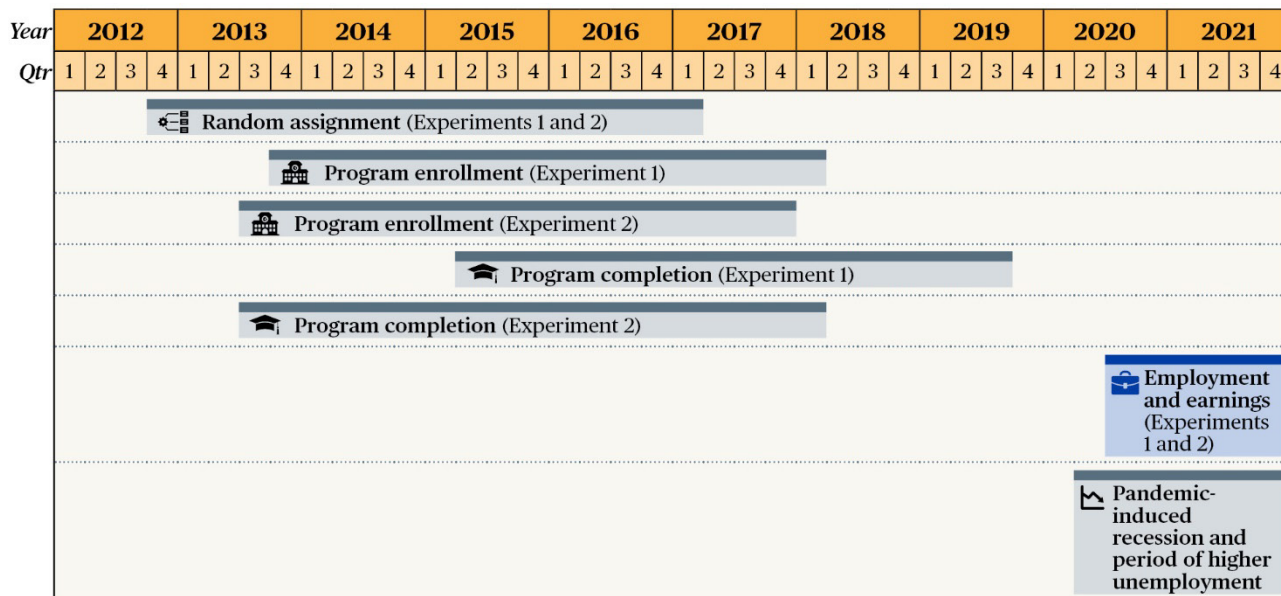
The study examined exploratory outcomes (such as enrollment, completion, and federal student loan receipt at any school, including those outside of the study, and receipt of unemployment insurance benefits) to better understand the primary findings. Examining outcomes in any postsecondary institution assessed whether students who did not have access to an experimental Pell Grant enrolled in another school instead. Unemployment insurance benefits typically take into account earnings from prior employment and thus provided an alternative way to measure labor market outcomes.

How was the study conducted?

- Eligible students identified by each participating school were randomly assigned, separately by experiment, to a group offered experimental Pell Grant funds in their financial aid award packages or to a group not offered these funds. Students had a 60 percent chance of being offered experimental Pell Grant funds. Students in either group could receive any other financial aid for which they were eligible, as determined by study schools.
- The study compared outcomes for the two groups of students (those who were offered experimental Pell Grants and those who were not) in each experiment to measure the effects of the changes in Pell Grant eligibility.²⁰ The two groups were similar on all but one of 18 characteristics available (gender, in Experiment 2), which is about what would be expected by chance. The similarities between the two groups suggest the random assignment for each experiment worked as intended to create two statistically equivalent groups of students, such that any differences in their later outcomes can be interpreted as the result of being offered an experimental Pell Grant.

Exhibit 2 summarizes the timing of key study milestones, including when each outcome was measured.

Exhibit 2. Timing of key study milestones



Notes: Students were randomly assigned on a rolling basis from November 2012 to March 2017. For Experiment 1, the study measured program enrollment 12 months after random assignment using school records from November 2013 to March 2018. For Experiment 2, the study measured program enrollment 8 months after random assignment using school records from July 2013 to November 2017. For Experiment 1, the study measured program completion 30 months after random assignment using school records from May 2015 through September 2019. For Experiment 2, the study measured program completion 10 months after random assignment using school records from September 2013 to January 2018. For both experiments, employment and earnings outcomes were measured using data from the National Directory of New Hires (NDNH) from the third quarter of 2020 through the fourth quarter of 2021 (within 42 to 93 months of random assignment).

Qtr = Quarter

Sources: Random assignment system, school records, NDNH.

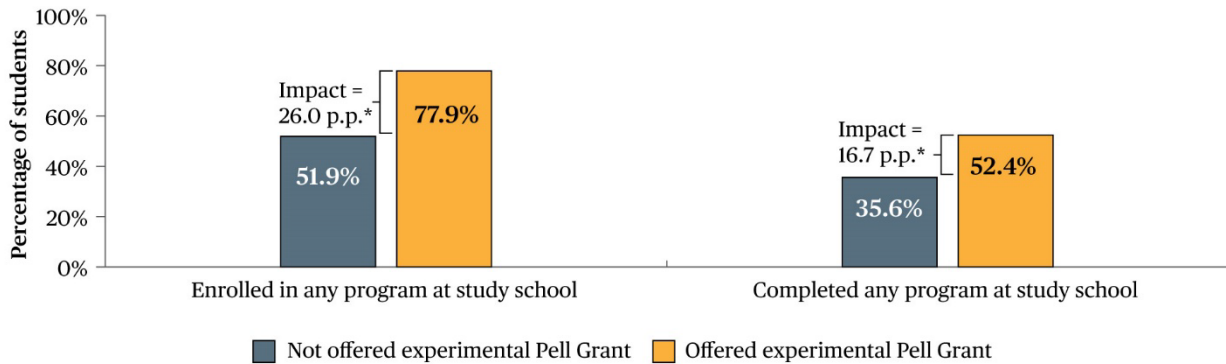
OFFERING PELL GRANTS TO STUDENTS WITH A BACHELOR’S DEGREE INCREASED PROGRAM ENROLLMENT AND COMPLETION

With high unemployment rates among recent college graduates leading up to the start of the study in 2012,²¹ the post-bachelor’s Pell Grant experiment (Experiment 1) provided study participants the opportunity to use experimental Pell funds to pursue short-term occupational training lasting up to one year with full-time attendance. Lowering the cost barrier to these programs could enable adults with low income to invest in a new career or update their skills in their current field. Thus, the experiment sought to increase enrollment in and completion of certificate programs with value in the labor market.

- Students with a bachelor’s degree were 26 percentage points more likely to enroll in additional education if they were offered an experimental Pell Grant to pay for a short-term occupational training program.*** Among college graduates participating in Experiment 1, 78 percent of those offered experimental Pell Grants enrolled in a program at a study school within a year, compared with 52 percent of students not offered experimental Pell Grants (Exhibit 3). The impact was also large (20 percent) when enrollment at any school was considered (Appendix C, Exhibit C.1), indicating that students not offered Pell Grants did not simply move to enroll in other, potentially less expensive schools in large numbers.

- Program completion increased by 17 percentage points.** About half of the college graduates offered an experimental Pell Grant (52 percent) completed a program within 30 months at a study school compared with 36 percent of those not offered these funds (Exhibit 3). Students not offered experimental Pell Grants did not complete programs elsewhere in large numbers; nor does it appear that they completed longer programs that might have different, and perhaps better, employment or earnings prospects than the short programs the experiment encouraged (Appendix C, Exhibit C.1).

Exhibit 3. Impact of offering experimental post-bachelor’s Pell Grants on enrollment in and completion of programs at study schools



* Percentages differ significantly between the treatment and control groups, 0.05 level, two-tailed test.

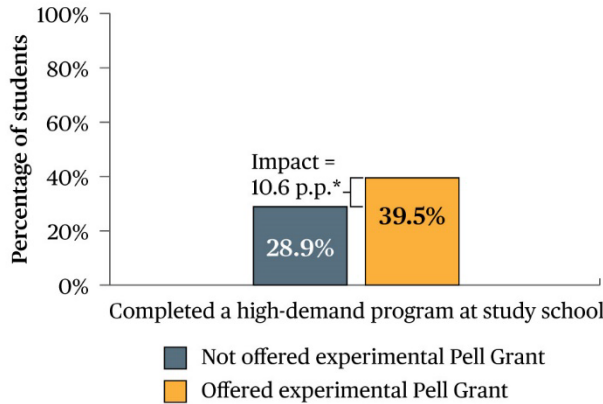
Notes: Sample size is 414 students. The exhibit shows the percentage of students in the treatment group (offered experimental Pell Grant) and in the control group (not offered experimental Pell Grant) who were enrolled in any program at the study school within one year of random assignment, and who completed any program at the study school within 30 months of random assignment. The impact estimates are regression-adjusted for student socioeconomic characteristics measured before random assignment such that the percentage for the treatment group equals the sum of the unadjusted control group mean and the regression-adjusted impact estimate (percentages for completion of any program study schools do not add up due to rounding). See Appendix B for a description of the study’s analytic methods and Appendix C for full results.

Source: School records.

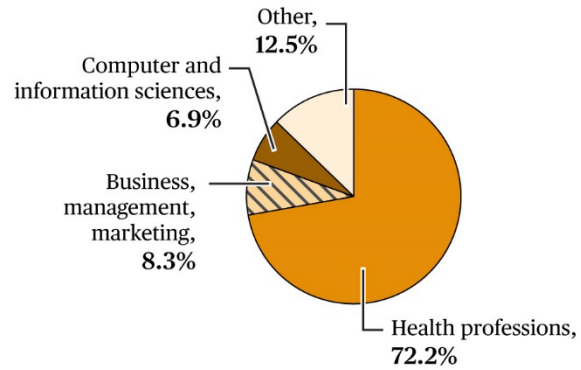
- Students with a bachelor’s degree who were offered an experimental Pell Grant were also 11 percentage points more likely to complete programs considered in high demand in their state.** The offer of an experimental Pell Grant increased completion of not just any education program at study schools, but of high-demand programs—defined by the study as those associated with occupations in a new and emerging field, projected to grow rapidly, or having a large number of openings in the student’s state.²² About 40 percent of students offered an experimental Pell Grant completed a high-demand program, compared with 29 percent of students who were not offered these funds (Exhibit 4). By far the most common high-demand programs completed by students offered an experimental Pell Grant were in the health professions (Exhibit 4), such as nursing and emergency medical technology.

Exhibit 4. Completion of high-demand programs at study schools among students offered experimental post-bachelor's Pell Grants

(a) Impact of offering post-bachelor's Pell Grants on completion of high-demand program



(b) Percentage of students who were offered an experimental Pell Grant and completed a high-demand program, by field



* Percentages differ significantly between the treatment and control groups, 0.05 level, two-tailed test.

Notes: Panel (a) (sample size = 414 students) shows the percentage of students in the treatment group (offered experimental Pell Grant) and in the control group (not offered experimental Pell Grant) who completed any high-demand program at the study school within 30 months of random assignment. The impact estimates are regression-adjusted for student socioeconomic characteristics measured before random assignment such that the percentage for the treatment group equal the sum of the unadjusted control group mean and the regression-adjusted impact estimate. See Appendix B for a description of the study's analytic methods and Appendix C for full results. Panel (b) (sample size = 144 students) shows the percentage of students in the treatment group who completed each type of program, among those who completed a high-demand program. Program types with fewer than 10 students were grouped together into the "other" category and include programs such as foreign languages, literatures, and linguistics; engineering technologies and engineering-related fields; personal and culinary services; and homeland security, law enforcement, firefighting, and related protective services. The study associated programs with specific occupations using crosswalks from the National Center for Education Statistics. To determine whether a program was in a high-demand occupation in its state, the study adapted criteria established by the Occupational Information Network (O*NET) for Bright Outlook occupations that were expected to grow rapidly or have large numbers of job openings from 2014 to 2016, midway through the study period (see Appendix B for details on how the study identified high-demand programs).

Sources: School records, O*Net (<https://www.onetonline.org/find/bright>), National Center for Education Statistics (<https://nces.ed.gov/pubs2002/cip2000/>).

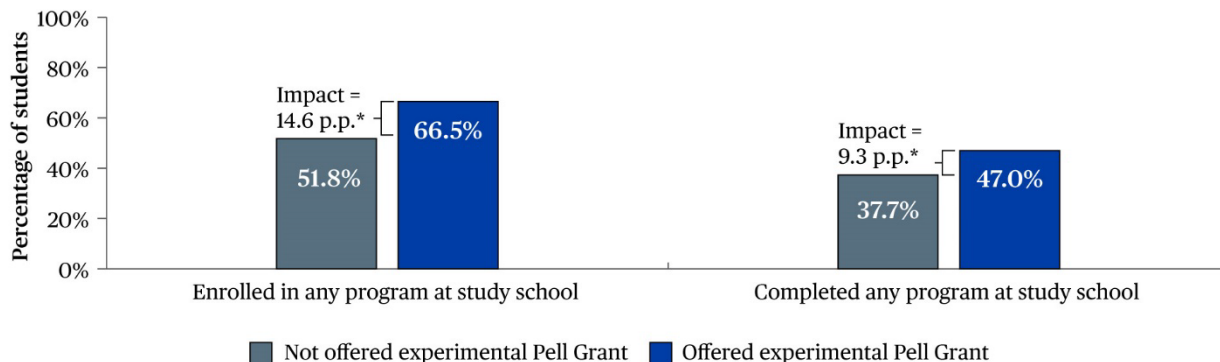
- The experiment's impacts on enrollment and completion were especially large among dislocated workers, but were consistent for students of different genders, ages, and incomes, and those facing different local unemployment conditions.*** The offer of an experimental Pell Grant for college graduates was particularly effective in increasing program enrollment and completion for the unemployed and underemployed students the experiment intended to help. Among students who identified themselves as a "dislocated worker"²³ on the Free Application for Federal Student Aid (FAFSA), those who received an experimental Pell Grant offer were 46 percentage points more likely to enroll in a program than those who were not offered these funds. In contrast, the offer increased enrollment among non-dislocated workers by about 14 percentage points. Dislocated workers also experienced larger impacts on program completion (28 versus 5 percentage points). Aside from the greater impacts among dislocated workers, the experiment was similarly effective for other groups of students, including those living in communities with different unemployment rates (Appendix C, Exhibit C.3).

OFFERING PELL GRANTS FOR VERY SHORT-TERM OCCUPATIONAL TRAINING PROGRAMS ALSO INCREASED PROGRAM ENROLLMENT AND COMPLETION

Short-term programs have become an increasingly popular path to obtaining a postsecondary credential, with the number of certificates awarded more than doubling from 2000 to 2022 (NCES, 2023). Students with family incomes low enough to qualify for Pell Grants may find certificates from very short programs (2 to 4 months in length) especially appealing because these programs tend to cost less and more easily allow students to work while learning (FSA, 2020). They may also provide a credential that signals skills to employers more quickly than longer programs. In fact, some evidence indicates that short-term vocational credentials can lead to higher earnings than more traditional associate's degrees, though the comparative benefits of these credentials vary (Carnevale et al., 2012). The FSA-approved programs eligible for Pell Grants under Experiment 2 were about 11 weeks long on average and primarily in the fields of transportation and materials moving, health professions, security and protective services, and mechanic and repair technologies (Appendix A, Exhibit A.11).²⁴ As with Experiment 1, this experiment sought to increase enrollment in and completion of programs with value in the labor market.

- ***Students offered an experimental Pell Grant to pay for a very short-term occupational training program were 15 percentage points more likely to enroll in additional education than students who did not receive the offer.*** In Experiment 2, 66 percent of students offered an experimental Pell Grant enrolled in any program at a study school within 8 months, compared with 52 percent of students not offered an experimental Pell Grant (Exhibit 5). The size of the impact was similar (14 percentage points) when examining enrollment in any postsecondary school (Appendix C, Exhibit C.2).
- ***Program completion increased by 9 percentage points.*** Nearly half of the students offered an experimental Pell Grant for a very short-term occupational training program (47 percent) completed a program within 10 months at a study school compared with 38 percent of those not offered these funds (Exhibit 6). Although students not offered an experimental Pell Grant could have chosen to enroll in other schools or pursue an associate's degree (which would take more than 10 months to complete), there was no evidence the significant effect on program completion would differ if the analysis were extended beyond the study schools or the 10-month follow-up window (Appendix C, Exhibit C.2).

Exhibit 5. Impact of offering experimental Pell Grants for very short-term occupational training programs on enrollment in and completion of programs at study schools



* Percentages differ significantly between the treatment and control groups, 0.05 level, two-tailed test.

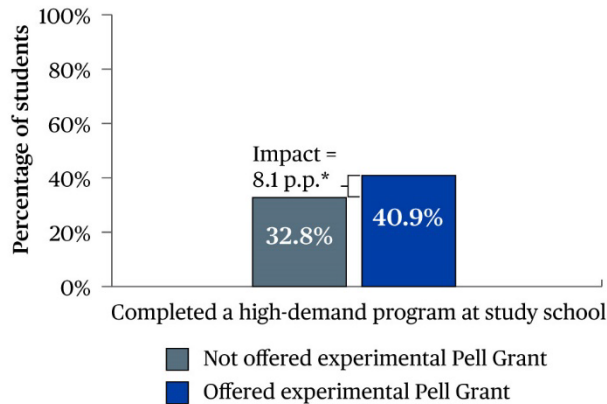
Notes: Sample size is 2,270 students. The exhibit shows the percentage of students in the treatment group (offered experimental Pell Grant) and in the control group (not offered experimental Pell Grant) who were enrolled in any program at the study school within 8 months of random assignment, and who completed any program at the study school within 10 months of random assignment. The impact estimates are regression-adjusted for student socioeconomic characteristics measured before random assignment such that the percentage for the treatment group equal the sum of the unadjusted control group mean and the regression-adjusted impact estimate (percentages for enrollment in any program at study schools do not add up due to rounding). See Appendix B for a description of the study’s analytic methods and Appendix C for full results.

Source: School records.

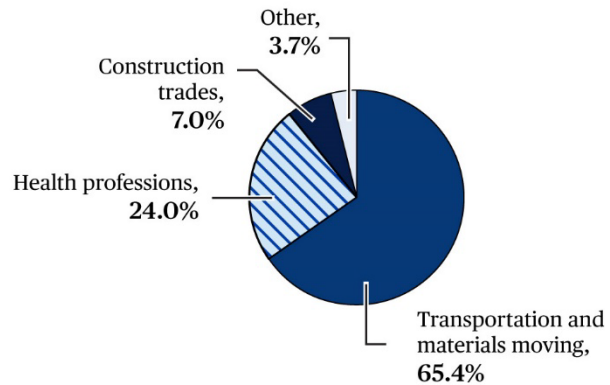
- Students offered an experimental Pell Grant to pay for a very short-term occupational training program were 8 percentage points more likely to complete programs considered in high demand in their state.** The offer of an experimental Pell Grant increased completion of programs associated with high-demand occupations in a student’s state. About 41 percent of students offered an experimental Pell Grant completed a high-demand program, compared with 33 percent of students who were not offered these funds (Exhibit 6). Among those students offered an experimental Pell Grant who completed a high-demand program, 65 percent completed programs in transportation and materials moving (Exhibit 6). Almost all of these programs provided training in truck and commercial vehicle operation.
- The experiment’s positive impacts on enrollment and completion were consistent for students with different characteristics.** The offer of an experimental Pell Grant was similarly effective in increasing enrollment and completion among students of different genders, ages, and incomes, as well as those facing different employment challenges and local unemployment rates (Appendix C, Exhibit C.4).

Exhibit 6. Completion of high-demand programs at study schools among students who were offered experimental Pell Grants for very short-term occupational training programs

(a) Impact of offering post-bachelor's Pell Grants on completion of high-demand programs



(b) Percentage of students who were offered an experimental Pell Grant and completed a high-demand program, by field



* Percentages differ significantly between the treatment and control groups, 0.05 level, two-tailed test.

Notes: Panel (a) (sample size = 2,270 students) shows the percentage of students in the treatment group (offered experimental Pell Grant) and in the control group (not offered experimental Pell Grant) who completed any high-demand program at the study school within 30 months of random assignment. The impact estimates are regression-adjusted for student socioeconomic characteristics measured before random assignment such that the percentage for the treatment group equal the sum of the unadjusted control group mean and the regression-adjusted impact estimate. See Appendix B for a description of the study’s analytic methods and Appendix C for full results. Panel (b) (sample size = 863 students) shows the percentage of students in the treatment group who completed each type of program, among those who completed a high-demand program. Program types with fewer than 10 students were grouped together into the “other” category and include programs such as precision production; homeland security, law enforcement, firefighting, and related protective services; mechanic and repair technologies and technicians; and family and consumer sciences and human sciences. The study associated programs with specific occupations using crosswalks from the National Center for Education Statistics. To determine whether a program was in a high-demand occupation in its state, the study adapted criteria established by the Occupational Information Network (O*NET) for Bright Outlook occupations that were expected to grow rapidly or have large numbers of job openings from 2014 to 2016, midway through the study period (see Appendix B for details on how the study identified high-demand programs).

Sources: School records, O*Net (<https://www.onetonline.org/find/bright>), National Center for Education Statistics (<https://nces.ed.gov/pubs2002/cip2000/>).

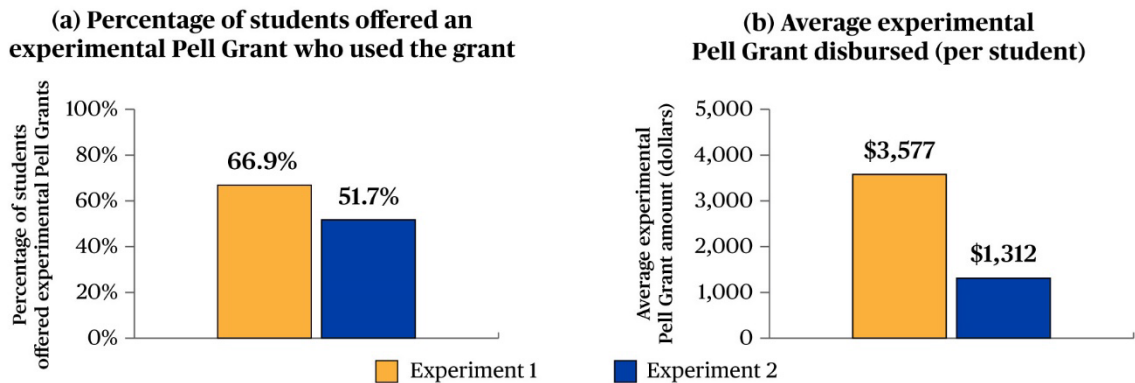
MOST STUDENTS OFFERED EXPERIMENTAL PELL GRANTS USED THEM BUT WERE JUST AS LIKELY AS THOSE NOT OFFERED PELL GRANTS TO ALSO USE FEDERAL LOANS

When the two experiments began, it was expected that those most in need of training to get jobs were also those least able to pay for it out of pocket or to take out loans to cover the costs. Although economic conditions improved over the years that eligible students entered the experiments (2012-17), the financial challenges many Pell Grant-eligible students face can still be substantial (Goldrick-Rab et al., 2018). It is therefore important to understand whether students with low income who were offered experimental Pell Grants used those funds and whether having access to these funds affected their need for additional aid to support their education. For example, having access to a Pell Grant could reduce a student’s need for a federal student loan to pay for a

program. At the same time, because having access to Pell Grants encouraged more students to enroll in educational and training programs, more people might have needed additional funds to cover schooling costs.

- ***More than half of students offered experimental Pell Grants used the funds, with about \$1,800 estimated to have been disbursed per student on average.***²⁵ Surprisingly, many students with low income who took the time to apply to study schools, complete a FAFSA, and express interest in experimental Pell Grants, and were then offered an experimental Pell Grant, ultimately did not take up this offer. Some did not enter a postsecondary program (see Exhibits 3 and 5). Others enrolled in programs without using the experimental Pell Grants—about 9 percent of those offered grants for Experiment 1 and 16 percent of those offered grants for Experiment 2. These programs students entered without experimental grants were either longer, not occupationally focused, or not credit earning—none of which were allowable under the experiments. About two-thirds (67 percent) of eligible college graduates interested in additional occupational training and half (52 percent) of eligible students interested in very short-term programs went on to use the experimental Pell Grants offered to them (Exhibit 7). On average, those who did use the grants received \$3,577 for short training programs (Experiment 1) and \$1,312 for very short-term occupational training programs (Experiment 2), according to data from the study schools (Exhibit 7). Across the two experiments, the average amount students received was \$1,752.²⁶

Exhibit 7. Use of experimental Pell Grants among students who received the offer, by experiment



Notes: Panel (a) (sample size = 254 in Experiment 1 and 1,363 students in Experiment 2) shows the percentage of students offered experimental Pell Grants who went on to use the grants during the study period. Panel (b) (sample size = 170 students for Experiment 1 and 705 for Experiment 2) shows the average experimental Pell Grant amount, per student, for those who used the grants. These amounts were reported by study schools and could cover more than one program and award year.

Source: School records.

- Being offered an experimental Pell Grant had no impact on the share of students taking out federal student loans or the average amount of federal student loans they received.** Federal loans can be used to pay for tuition, fees, books, and living expenses that are not already covered by Pell Grants or other aid. Despite the offer of a Pell Grant inducing significantly more students to enroll in postsecondary programs in both experiments, gaining access to experimental Pell Grant funding did not result in increased (or decreased) use of federal student loans. Students who were offered experimental Pell Grants were just as likely as students without access to experimental Pell Grants to take out federal student loans and had similar loan amounts, on average (see Appendix C, Exhibits C.1 and C.2).²⁷

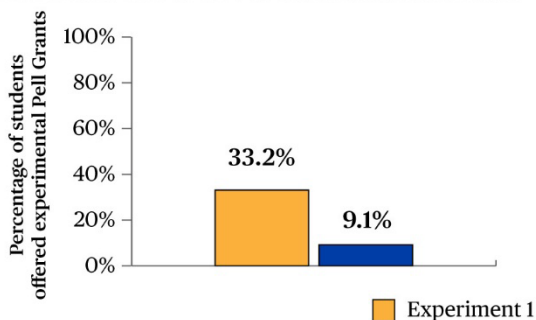
There are two factors that appear to have balanced each other, resulting in no overall effect on students' use of federal loans. If those offered and not offered experimental Pell Grants enrolled in the same types of programs in equal proportions, it is reasonable to expect that a higher share of those without access to the grants would rely on loans to cover costs. In fact, among the subset of students who enrolled in a program, a larger proportion of students not offered experimental funds took out loans (about 71 percent) compared with students offered a Pell Grant (about 43 percent). But enrollment was not equal across the groups; students offered an experimental Pell Grant were 26 percentage points more likely to enroll in postsecondary programs in Experiment 1 and 15 percentage points more likely in Experiment 2 (Exhibits 3 and 5). Some share of these additional enrollees took out federal loans, offsetting the higher proportion of students without access to these grants who used loans.

The use of federal student loans was more common in Experiment 1, where programs were longer and thus costlier. Thirty-three percent of students with a bachelor's degree who were offered experimental Pell Grants (Experiment 1) took out federal student loans; the average loan amount among these students was \$12,950 (Exhibit 8). Among students in Experiment 2 who were offered experimental Pell Grants for very short-term programs, only 9 percent took out federal loans, and the average disbursed amount was lower (\$4,021; Exhibit 9). The fact that students with access to experimental Pell Grants took out loans is not surprising. The maximum Pell Grant award amount in 2014-15 (about midway through the study period) was \$5,730 (FSA

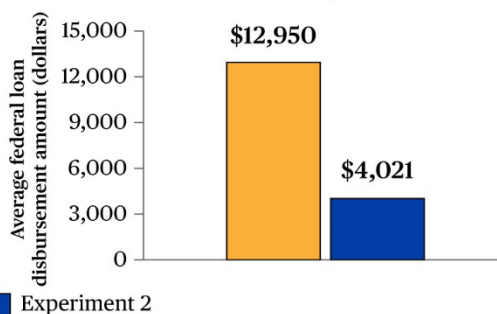
2015), far less than the average cost of attending a study school (\$19,600 for Experiment 1 and \$16,900 for Experiment 2).^{28, 29} Even if the cost of attendance was prorated for the duration and credits earned in short-term or very short-term programs, expenses likely remained for some.

Exhibit 8. Use of federal student loans among students who received an offer of experimental Pell funds, by experiment

(a) Percentage of students offered an experimental Pell Grant who took out federal student loans



(b) Average federal loan disbursement amount (per student)



Notes: Panel (a) (sample size = 254 in Experiment 1 and 1,363 students in Experiment 2) shows the percentage of students offered experimental Pell Grants who went on to take out a federal student loan during the study period. Panel (b) (sample size = 87 students for Experiment 1 and 126 for Experiment 2) shows the average loan amount, per student, for those who used loans. These amounts were reported by the office of Federal Student Aid and could cover more than one program and award year.

Source: School records.

DESPITE BOOSTING PROGRAM ENROLLMENT AND COMPLETION, OFFERING EXPERIMENTAL PELL GRANTS FOR SHORT PROGRAMS DID NOT INCREASE EMPLOYMENT OR EARNINGS IN THE MEDIUM TO LONG TERM

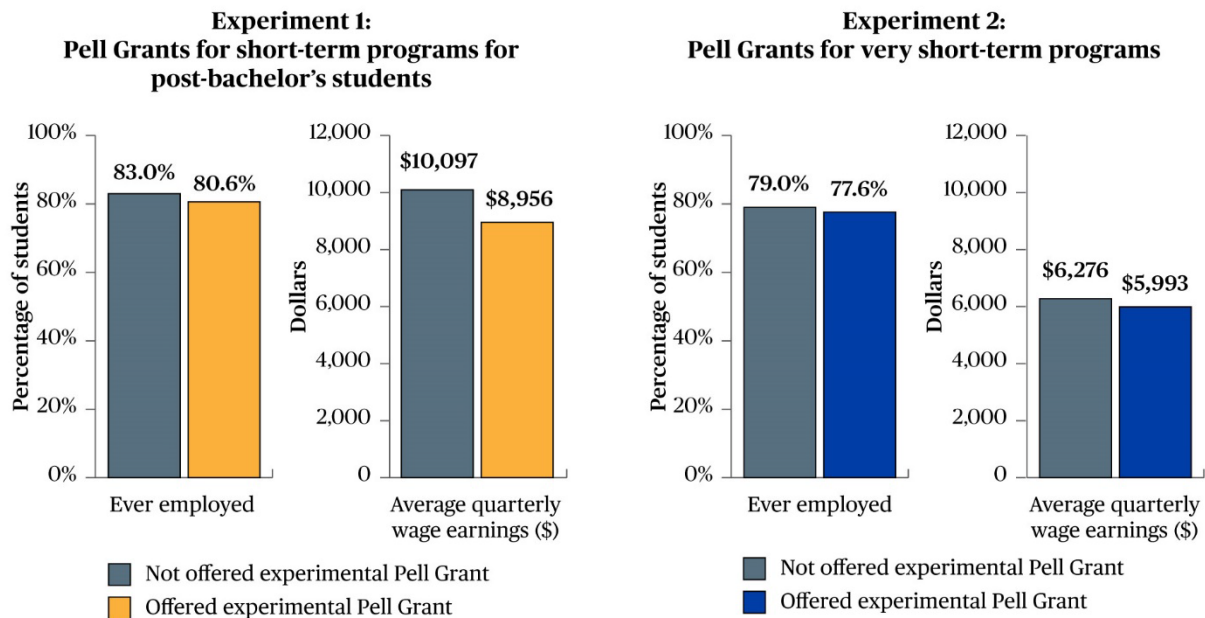
Given the costs to the federal government of expanding Pell Grant eligibility, understanding whether increased enrollment in and completion of short-term occupational training ultimately led to the expected economic benefits is important for policymakers. Proponents of expanding Pell Grants to allow more students with low income to complete occupational training argue that these programs can help workers earn higher wages relative to a high school diploma and in some cases earn as much as those with an associate's or bachelor's degree (Brown, 2018). However, the benefits of shorter programs have been found to vary with the field of study, local labor market conditions, and individual characteristics such as gender, race, and ethnicity (Carnevale et al., 2012, 2020; Baum et al., 2021; Ositelu et al., 2021). Critics raise concerns about the variation in labor market returns across fields of study or occupations and providers, pointing to data showing that many graduates of short-term occupational training programs are not employed or they earn poverty-level wages (Ositelu, 2021). Because research has found the effects of occupational training programs tend to rise over time after completion (Card et al., 2018), this study assessed students' employment and earnings in the medium to long term, on average almost six years after these students were identified for the study and randomly assigned.³⁰

- ***Being offered an experimental Pell Grant for a short-term occupational training program did not increase students' prospects of being employed, as measured during the pandemic-induced period of higher unemployment.*** From the third quarter of 2020 through the fourth quarter of 2021, students who

were offered an experimental Pell Grant were about as likely to be employed as students not offered an experimental Pell Grant (Exhibit 9). For example, 81 percent of post-bachelor's students offered Pell Grants for short-term programs (Experiment 1) were employed at any point during this period, compared with 83 percent of students not offered the experimental Pell Grant, a difference small enough to be statistically indistinguishable from no difference. Employment rates were also similar among students in Experiment 2, regardless of whether they were offered an experimental Pell Grant for a very short-term program of 8 to 10 weeks (78 to 79 percent). There was no evidence that either experiment improved labor force participation when measured in other ways, such as whether they received unemployment insurance benefits (Appendix C, Exhibits C.1 and C.2).

- ***Nor did the offer of an experimental Pell Grant increase students' earnings during the same period.*** Even without improving overall employment, the higher rates of program enrollment and completion among students offered experimental Pell Grants could have translated into higher paying jobs, which may have boosted students' earnings. However, from the third quarter of 2020 through the fourth quarter of 2021, average quarterly earnings were similar for students who were offered an experimental Pell Grant and those who were not (Exhibit 9). Including the \$0 for those who were not employed during that period, on average, post-bachelor's students offered Pell Grants for short-term programs earned about \$9,000 per quarter (or \$692 per week), compared with about \$10,100 (or \$777 per week) for students not offered the experimental Pell Grant, a difference small enough to be statistically indistinguishable from no difference.³¹ Students offered Pell Grants for very short-term programs earned an average of about \$6,000 per quarter (or \$462 per week), compared with \$6,300 (or \$485 per week) for students not offered this experimental Pell Grant.³²

Exhibit 9. Impact of offering experimental Pell Grants on employment and earnings, by experiment



Notes: Sample size is 407 students for Experiment 1 and 2,215 students for Experiment 2. The exhibit shows the percentage of students in the treatment group (offered experimental Pell Grant) and in the control group (not offered experimental Pell Grant) who were ever employed from the third quarter of 2020 through the fourth quarter of 2021 and average quarterly wage earnings, including \$0 for those who were not employed, during this same period. The impact estimates are regression-adjusted for student socioeconomic characteristics measured before random assignment such that the percentage for the treatment group equal the sum of the unadjusted control group mean and the regression-adjusted impact estimate. See Appendix B for a description of the study's analytic methods and Appendix C for full results. None of the values differ significantly between the treatment and control groups, 0.05 level, two-tailed test. Across both experiments, the percentage ever employed and the average quarterly wage earnings did not differ significantly between the treatment and control groups, 0.05 level, two-tailed test.

Source: National Directory of New Hires.

- Even as unemployment rates recovered to pre-pandemic levels, being offered an experimental Pell Grant some years earlier did not appear to benefit students in the labor market.*** The pandemic-induced recession and ensuing period of high unemployment might have hurt students' job prospects, regardless of whether they enrolled in and completed a program with or without an experimental Pell Grant. To explore whether offering experimental Pell Grants may have increased employment during a more typical labor market, the study examined employment and earnings only in the fourth quarter of 2021. By then, the job market had largely recovered, with unemployment falling to 4.3 percent among the states where participating schools and students were located.³³ This rate was close to the 3.8 percent in the same states in the fourth quarter of 2019, just before the start of the pandemic.³⁴ However, there were no differences in employment or earnings between students offered and not offered an experimental Pell Grant during this later but more limited period (Appendix D, Exhibits D.4 and D.5).
- Students offered an experimental Pell Grant who sought to enter short programs geared toward high-demand occupational fields fared no better in the labor market than students offered an experimental Pell Grant for programs in other fields.*** Being offered an experimental Pell Grant could be more beneficial for students interested in programs associated with high-demand occupations in their state than for

students interested in programs associated with occupations not highly demanded by employers. However, despite boosting completion of programs in high demand according to labor market data, being offered an experimental Pell Grant did not increase employment or earnings for students who had specifically expressed interest in high-demand programs at the time of random assignment (Appendix C, Exhibits C.4 and C.6).³⁵

Being offered an experimental Pell Grant could also be more beneficial for students in certain fields, regardless of whether their program was associated with a high-demand occupation. For example, workers with certificates in culinary, education, or health care services earn no more than high school graduates, on average, whereas those with technical, mechanical, or business certificates have a positive “earnings premium” of 11 to 20 percent over high school graduates (Baum et al., 2021).³⁶ A portion of students offered an experimental Pell Grant completed programs in fields that typically have a positive earnings premium (33 percent of completers in Experiment 1 and 62 percent of completers in Experiment 2). However, this factor did not translate into higher earnings overall for students offered an experimental Pell Grant. The programs completed by students offered an experimental Pell Grant and students who were not offered an experimental Pell Grant were comparable (Appendix C, Exhibits C.14 and C.15).

- ***The experiments’ lack of impacts on employment and earnings were consistent for students with different characteristics.*** Research suggests that the economic benefits of short-term occupational training programs can vary for different groups of people. For example, studies have shown that, on average, men whose highest education level is a certificate earn 13 percent more than men with a high school diploma only, whereas for women, this earnings premium is 7 percent (Baum et al., 2021). However, this study’s findings did not mirror that variation: Students offered an experimental Pell Grant were no more likely to be employed or earn more than students not offered an experimental Pell Grant, regardless of their gender, age, income level, status as a dislocated worker, or local unemployment rate (Appendix C, Exhibits C.5 and C.6).

Looking Ahead

ED's spending on Pell Grants is now at close to \$30 billion annually.³⁷ Some policymakers and stakeholders seek to expand the amounts awarded or who is eligible. Others question the increasing costs of federal financial aid and whether the grants, and a potential investment in short-term programs in particular, encourage student success as intended (Kreighbaum, 2019; Ositelu, 2021). It is therefore important to identify lessons for the future and questions from this study, particularly given the costs of making the pilot eligibility expansions permanent policy. For example, if current very short noncredit occupational courses were eventually made credit-earning and eligible for Pell Grants, participation among students with low income would add as much as \$1.7 billion more to federal financial aid expenditures over the next 10 years.³⁸ This cost should be considered against evidence on the economic benefits of short-term and very short-term certificate programs. In the current study, offering experimental Pell Grants did not increase employment or earnings in the medium to long term despite boosting program enrollment and completion.

Some uncertainties remain about what might happen if the pilots became permanent policy.

- ***Would the findings be similar if the expansions in Pell Grant eligibility were extended to all postsecondary schools nationally, or at least all of those that offer short-term occupational training programs?*** The participating schools were primarily public two-year colleges, concentrated in the southeastern United States. They tended to be smaller or larger than similar schools in their state and had a larger percentage of Pell Grant recipients (see Appendix A). Their students had already completed a FAFSA and expressed interest in a program of study at the school before learning about their eligibility for an experimental Pell Grant. These procedures limited the potential for information about the availability of the grants to spur more interest in short occupational programs and in applying for financial aid as might occur if the policy were expanded nationwide. It is unclear whether different schools, offering different programs, to different students would also raise program enrollment and completion or have greater success in improving labor market outcomes.
- ***Would the findings be different in a labor market not affected by the COVID-19 pandemic?*** The current study measured employment and earnings from the third quarter of 2020 to the fourth quarter of 2021, a period that overlapped with the pandemic-induced economic recession. Although the study did not find any impacts on employment or earnings toward the end of this period, as the economy recovered, students may have faced different economic conditions depending on the industry they were employed in. The recession affected industries differently and the economic recovery similarly varied across industries (Gould & Kassa, 2021; Baker & Richwine, 2024).³⁹ Overall, it is unclear whether students would have benefited more from occupational training under different economic conditions. It is also important to note that these two federal financial aid experiments were intended to help people with low income and to improve the economy following the financial crisis of 2009 and its subsequent recession. The months of employment and earnings the study measured are consistent with the experiments' original intent of providing access to training during a challenging or uneven labor market.
- ***Would the findings be different if the expansions in Pell Grant eligibility included additional requirements to ensure program quality?*** Although the study found that offering experimental Pell

Grants increased completion of short-term programs preparing students for high-demand jobs in their state, this increase did not lead to higher employment or earnings for students who sought to enter these programs. Programs eligible under the experiments were expected to meet local or regional workforce needs, but schools had discretion over how to make that determination. Recent policy proposals that would expand Pell Grant eligibility have considered ways to ensure program quality. For example, the Jumpstarting Our Businesses by Supporting Students Act of 2023 would require that credentials meet the federal Workforce Innovation and Opportunity Act standards to ensure programs better align with the skills demanded by employers, while the College Affordability Act would require programs to show that annual earnings for graduates exceed median earnings of those with only a high school diploma. It is unclear whether these or other types of safeguards for program quality would lead to better economic outcomes for students and a higher return on the federal investment in expanding Pell Grant use in this way.

Some important lessons for future research stem from the way the study was conducted. This study was the first to evaluate the effects of offering Pell Grants using random assignment, the most rigorous methodology for assessing effectiveness (FSA, 2022). It was also the first time this method was used to evaluate a pilot under ED's Experimental Sites Initiative, in place since the 1980s. The use of random assignment lends credibility to a growing body of evidence about the effects of Pell Grants for students with low income. Other evaluations use different methods but some have also found that this form of aid leads to higher rates of college enrollment and completion, particularly among older, nontraditional students. Some studies suggest Pell Grants lead to higher earnings (although for different types of programs than in this study).⁴⁰ The current study also underscores the feasibility of using random assignment to evaluate federal education programs, including financial aid, and in doing so on college campuses, as an increasing number of studies do.

ENDNOTES

¹ To be eligible for a Pell Grant, students must also meet the general **federal student aid eligibility** requirements. See Office of Federal Student Aid (n.d.).

² The Experimental Sites Initiative (ESI) is authorized by Section 487A(b) of the Higher Education Act of 1965 (20 U.S.C. 1094a(b)). Under the ESI statute, the secretary of the U.S. Department of Education is required to review and evaluate the experiences of institutions that participate as experimental sites and, biennially, submit a report based on the review and evaluation to the authorizing committees (Section 487A(b)(2)). See U.S. Department of Education (1998).

³ The *Federal Register* notice made by the U.S. Department of Education on October 27, 2011, states that Experiments 1 and 2 will require that the program provide “training needed to meet local or regional workforce needs, as determined by the institution in consultation with employers or state or local workforce agencies.” See <https://www.federalregister.gov/documents/2011/10/27/2011-27880/postsecondary-educational-institutions-invited-to-participate-in-experiments-under-the-experimental>.

⁴ Experimental Pell Grants were prorated based on enrollment status and the length of attendance and were paid directly to institutions for participating students. Under the current rules, students cannot use Pell Grants for noncredit programs, which are generally shorter than credit-earning programs but do not typically lead to an educational credential. See Reed (2014)

⁵ <https://ies.ed.gov/ncee/pubs/2021001/>

⁶ Several legislative efforts have sought to expand Pell Grant eligibility to students enrolled in short-term programs, including the Bipartisan Workforce Pell Act, the Promoting Employment and Lifelong Learning Act, the Jobs to Compete Act, and the Jumpstart Our Businesses by Supporting Students Act. For additional information on these bills, see https://www.nasfaa.org/legislative_tracker_pell_grants.

⁷ Schools interested in participating in Experiments 1 and 2 completed a multistep approval process. Schools interested in Experiment 2 required additional program approval before they could participate. Because very short-term programs are not typically authorized for federal financial aid, they required approval by the schools’ accreditor; the relevant state agency, in some cases; and FSA. For more information on the approval process, see Appendix A.

⁸ Although all those with a bachelor’s degree should appear in school or FSA records as having some postsecondary experience, records for the Experiment 1 sample indicated that approximately 6 percent did not have prior postsecondary experience. Despite this lack of documentation, schools determined these participants to be eligible for Experiment 1.

⁹ To be considered an independent student, a FAFSA applicant must be 24 years or older; have a dependent of their own; be married; be on active duty in the military or a veteran; be in foster care, an orphan, or a ward of the state; be homeless; or be an emancipated minor.
<https://studentaid.gov/apply-for-aid/fafsa/filling-out/dependency>.

¹⁰ Prior enrollment was measured up to 12 months before random assignment. In both experiments, the differences in the percentage of students enrolled before random assignment did not differ between the group of students offered experimental Pell Grants and the group not offered experimental Pell Grants (Appendix B, Exhibits B.4a B.4b).

¹¹ Although overall coverage rates within the National Student Clearinghouse (NSC) had increased to more than 90 percent among public, not-for-profit schools, of the 46 study schools, 33 schools (72 percent) participated in the NSC at the time when the data were obtained. See Dunder & Shapiro (2016).

¹² Research suggests most state and national postsecondary data sets do not include data on noncredit students, which means students enrolled in noncredit programs might not appear in the NSC (though they would appear in the records provided by study schools). See Xu & Ran (2015).

¹³ Title IV-D of the Social Security Act allows researchers to request data from the National Directory of New Hires (NDNH) that is deidentified if the research being conducted is found by the secretary of health and human services to help achieve the purposes of Part A or Part D of the Social Security Act. Purposes include ending parents' dependence on government benefits by promoting job preparation, work, and marriage. Even after a data request approval, it can take several months to obtain NDNH data.
https://www.acf.hhs.gov/sites/default/files/documents/ocse/a_guide_to_the_national_directory_of_new_hires.pdf

¹⁴ Although programs eligible for the experiments were expected to meet a local or regional workforce need, participating schools had complete discretion over how to make those determinations. Because schools did not report on decision making, the study determined whether programs were associated with high-demand occupations in the state they were offered to assess whether the experiments' impacts differed for students who expressed interest in a high-demand program and whether the experiments impacted students' likelihood of enrolling in or completing a high-demand program. To be deemed high demand, occupations needed to be projected to grow rapidly, be projected to have large numbers of openings, or be a new or emerging. In Experiment 1, 52 percent of students expressed interest in a high-demand program before random assignment; in Experiment 2, the share was 58 percent (Exhibit B, Exhibit B.4a).

¹⁵ The time frame in which participants could enroll in a program was selected to be 12 months for Experiment 1 because the experiment allowed students as long as two years to use the experimental Pell Grants for a program lasting as long as one year if completed full time. An 8-month follow-up period for measuring enrollment in Experiment 2 was selected because the minimum duration for a program in that experiment is 8 weeks.

¹⁶ Participants in Experiment 1 had up to two years to complete their program. Thus, the 30-month time period for follow-up was selected to allow for this two-year period plus an additional 6 months in the event participants did not enroll in a course immediately or took longer than expected to complete the program. Short occupational training programs are not generally offered on the same semester schedule as more traditional college courses; therefore, schools might have identified and entered eligible students into the lottery for experimental Pell Grants months before students enrolled in a program. A longer follow-up period would allow adequate time for students to enroll in and feasibly complete the very short programs eligible for

Experiment 2. The study relies on school data, which includes student records from November 2012 through December 2017. Given that schools continued to identify students eligible for the study through March 2017, 10 months is the longest follow-up possible without substantially decreasing the sample size and statistical power of the study.

¹⁷ The study used records from the NDNH to measure employment and earnings. The NDNH is a national database of wage and employment information maintained by the Office of Child Support Enforcement within the U.S. Department of Health and Human Services. The law requires the deletion of all NDNH data from the database 24 months after the date of receipt. Therefore, the study was able to obtain records from only a limited period (the third quarter of 2020 to the fourth quarter of 2021).

¹⁸ Research has found that, on average, the employment effects of occupational training programs tend to rise over time after completion (Card et al. 2018). Thus, examining employment and earnings in the medium to long term helps ensure students had ample time to complete programs, join the labor force, and reap the potential benefits from the training.

¹⁹ The quarterly unemployment rate spiked from 3.8 percent in the first quarter of 2020 to 13.0 percent in the second quarter of 2020, when the COVID-19 pandemic began (Essien et al., 2023). By the fourth quarter of 2021 (the last quarter of employment and earnings data analyzed by the study), it had fallen to 4.2 percent. The unemployment rate returned to pre-pandemic levels in the first quarter of 2022, when it reached 3.8 percent.

²⁰ To examine the impact of each individual potential expansion to Pell Grant eligibility, the study compared students in the group offered experimental Pell Grants with those in the group not offered a grant for Experiment 1 and Experiment 2, using statistical (regression) models. These models took into account the demographic and academic characteristics of participating students and schools. See Appendix B for a more detailed description of the analyses that were conducted.

²¹ In October 2011, the unemployment rate among those who recently had completed bachelor's degrees was 13.5 percent. See U.S. Bureau of Labor Statistics (2013)

²² The study classified programs as high demand if they were associated with an occupation that met one or more of the following criteria established by the Occupational Information Network (O*NET) for the 2014-16 period: was projected to have rapid growth or a large number of openings in the student's state based on short-term occupational projections data, or was considered to be new and emerging. For more details, see Appendix A.

²³ Students may qualify as a dislocated worker on the FAFSA if they lost their job, were laid off, or are receiving unemployment benefits. For a complete list of criteria, see <https://studentaid.gov/2324/help/student-dislocated-worker>.

²⁴ The programs in which students expressed interest were not necessarily the same programs they enrolled in or completed.

²⁵ The maximum Pell Grant award ranged from \$5,550 for the 2011-12 school year to \$5,920 for the 2017-18 school year.

²⁶ These amounts were reported by study schools and could cover more than one program and award year.

²⁷ Data on loans students received during the study period, obtained from FSA's administrative data systems, could span multiple award years, programs, and schools (including schools outside of the study) and therefore might not line up exactly with the period during which students used their experimental Pell Grants. Any misalignment would apply to those offered and not offered an experimental Pell Grant and therefore would not bias the estimates.

²⁸ The study did not obtain data on full- or part-time status from study schools. Students who enrolled part-time would have a lower cost of attendance but would also have their Pell Grant award amounts prorated based on the length of the program in which they enrolled.

²⁹ On average, the annual cost of attending a study school was about \$18,000, but it could range from about \$9,000 to \$46,000. Cost of attendance information was obtained from the 2014-15 Integrated Postsecondary Education System (IPEDS) and measures the total price for in-state students living off campus (not with family), as reported by schools. Twenty-two percent of schools in Experiment 1 and 25 percent of schools in Experiment 2 did not report this information in the 2014-15 IPEDS.

³⁰ Because students were randomly assigned on a rolling basis from November 2012 to March 2017 as they were identified as eligible and sought to enter a short program, the amount of time between that identification and assignment and the study's measurement of labor market outcomes differed across students. The average lengths of these follow-up periods were generally similar for students offered and not offered experimental Pell Grants. However, in Experiment 1 the follow-up period was one quarter longer, on average, for students offered experimental Pell Grants (23 quarters compared to 22 quarters) (Appendix B, Exhibit B.4b). Although a longer follow-up period had the potential to increase students' chances of being employed, the study found no impacts on employment.

³¹ Weekly average wages were estimated first by multiplying average quarterly earnings by four to generate an estimate of the average yearly earnings and then dividing the average yearly earnings estimate by 52, the number of weeks in a year. Information on hours worked, and part-time and full-time status were not available in the NDNH data.

³² Given the experiments' sample sizes and the magnitude of the impacts they had on program completion (17 percentage points for Experiment 1 and 9 percentage points for Experiment 2), research by Weiss et al. (2014) suggests the economic benefits of completing a certificate program would have to be improbably large for the study to detect an effect on earnings with high probability. The study's minimum detectable effect (that is, the smallest "true" effect the study could reliably detect given its sample size and design) was 9.3 percentage points for employment and \$2,497 for quarterly earnings for Experiment 1 and 4.8 percentage points for employment and \$696 for quarterly earnings for Experiment 2 (see Appendix B, Exhibit B.9). Nevertheless, because students offered experimental Pell Grants on average had *lower* employment and earnings than students who did not receive the offer—earning approximately \$4,560 less per year in Experiment 1 and \$1,130 less per year in Experiment 2—there do not appear to be any economic benefits.

³³ See Appendix A, Exhibit A.7 for more information about the location of study schools. NDNH data did not include information on which states study participants' received earnings from.

³⁴ The unemployment rates reported for the fourth quarter of 2021 and the fourth quarter of 2019 were calculated based on data from the Local Area Unemployment Statistics program of the U.S. Bureau of Labor Statistics. The data include historical monthly unemployment rates for each state. The unemployment rates were calculated by averaging the monthly unemployment rates in each quarter year across the states with schools that participated in the study. <https://www.bls.gov/lau/rdscnp16.htm#data>

³⁵ A similar share of students expressed interest in programs considered in high demand from 2014 to 2016—the midway period when students were enrolling in programs—as in the period between 2020 and 2022, which aligns with the timing of when employment and earnings were measured. In either case, about 60 percent of students expressed interest in high-demand programs.

³⁶ Earnings premiums can vary within fields. In particular, although the average return to a certificate in health services—the most common field for certificate programs nationally and among the most common for students in this study—is negligible, returns vary widely across health occupations.

³⁷ See the Federal Student Aid Data Center for data on Pell Grant volumes. <https://studentaid.gov/data-center/student/title-iv>

³⁸ See the Congressional Budget Office's Cost Estimate of the Bipartisan Workforce Pell Act, which expands Pell Grant eligibility to students enrolled in short-term job-training programs. <https://www.cbo.gov/system/files/2024-01/hr6585.pdf>

³⁹ Although students who were offered an experimental Pell Grant were more likely to complete a program than those who were not, the types of programs both groups of students completed were generally similar (Appendix C, Exhibits C.12 and C.13). However, because the NDNH data do not include information on the industry or sector of employment, the study could not examine differences in employment or earnings by sector.

⁴⁰ For example, see Seftor and Turner (2002), Park & Scott-Clayton (2018), and Denning et al. (2019). Some quasi-experimental studies have also found limited impacts of Pell Grant eligibility, such as Carruthers and Welch (2019). Overall, the enrollment and completion impacts in the 2011 Pell Grant experiments are larger than in previous research on Pell Grants, which has typically focused on different types of students and programs.

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ACKNOWLEDGMENTS

This study benefited from the contributions of many people across various organizations. We are deeply grateful to the schools that volunteered to participate in the evaluation, without which the study would not have been possible. We thank the U.S. Department of Labor, which helped recruit schools for the study and supported this report, and the Office of Child Support Enforcement within the U.S. Department of Health and Human Services, which provided data from the National Directory of New Hires (NDNH). In particular, we thank Jean Christy for supporting the process of obtaining NDNH data. We are also grateful to staff at the U.S. Department of Education's office of Federal Student Aid (FSA), including those who facilitated the use of FSA data for the study, such as Maria Acebey and Alfonso Rangel. Several current and past staff at Mathematica and Social Policy Research Associates supported the study throughout its phases, including Julie Bruch, Kai Filipczak, Sheena Flowers, Philip Gleason, Mary Hancock, Albert Liu, Mary Grider, Jensen Hu, Marybeth MacKenzie, Karen Needels, Marian Negoita, Przemyslaw Nowaczyk, Jun Park-Lee, Brian Roff, Peter Schochet, and Neil Seftor. The study received valuable advice from the technical working group, which included Sandy Baum, Sara Goldrick-Rab, Kevin Hollenbeck, Noah Mann, Dave Marcotte, and Larry Singell. We also thank staff at the U.S. Department of Education (Jeff Appel, James Benson, Michael Brickman, Warren Farr, Craig Munier, Felicia Sanders, Emily Slack, Matthew Soldner, and Katherine Sydor) and the Office of Management and Budget (William Carroll), for their valuable advice.

DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST

None of the research team members for this evaluation has financial interests that this evaluation could affect. None of the members of the technical working group convened by the research team over the course of the study to provide advice and guidance has financial interests that could be affected by findings from the evaluation.