

Increasing the Take-Up of Cal Grants

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NOVEMBER 2018

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This research publication reflects the views of the authors and not necessarily the views of our funders, our staff, our advisory board, the Regents of the University of California, or the California Student Aid Commission.

Introduction

Following decades of rising inequality and stagnating employment and earnings for non-college workers, attending college is more important than ever before to a young adult's economic prospects. A young person who earns a two-year associate degree will earn over \$200,000 more over the course of his or her lifetime than someone with just a high school diploma, and the returns for bachelor's degrees are even higher (de Alva & Schneider, 2013; Ma, Pender, & Welch, 2016; Oreopolis & Petronijevic, 2013). Even students who are less academically strong see big pay-offs from going to college, returns that have grown substantially over the last few decades (Oreopolous & Petronijevic, 2013; Scott-Clayton, 2015; Card, 1999, 2001) as incomes for those without college degrees have stagnated (Holzer, 2018). Growing evidence also suggests that

Fewer than two-thirds of California's high school seniors immediately enroll in college upon completing high school.

among those who go to college, students benefit from attending four-year rather than two-year and more selective rather than less selective colleges (Cohodes & Goodman, 2014; Goodman, Hurwitz, & Smith, 2017).

In spite of this evidence, fewer than two-thirds of California's high school seniors immediately enroll in college upon completing high school (National Center for Higher Education Management Systems [NCHEMS], 2018).

This share is much lower for students from low-income families, for those whose parents did not go to college, and for those from underrepresented minority groups (Wilber & Rosigno, 2016). A portion of these gaps reflects differences in preparedness at the end of high school, but there are large gaps even among students who are similarly prepared. In one often-cited statistic, the shares of high-achieving, low-income students who go to college and who earn bachelor's degrees are lower than the shares of lower-achieving students from higher-income families (Fox, Connolly, & Snyder 2005, p. 50).

Policymakers have made large investments in recent decades in increasing access to college for low-income students and in offsetting the increasing cost of tuition. The federal Pell Grant program provides more than \$26 billion in grants to over 7 million students each year (TICAS, 2018; College Board, 2017). On top of this, many states have created state-level college aid programs, often targeted at high-achieving, low-income students, that provide an additional \$10 billion in aid each year, and public and private institutions have increased institutional aid by over 30 percent since 2011 (College Board, 2017). The net effect of this is that grant aid to students totals roughly \$125 billion per year, a quadrupling in real terms over the last decade (College Board, 2017; Seltzer, 2017). Many low- and middle-income students face zero net costs for tuition and fees at public institutions, and often at private colleges as well.

For many students who could not have attended college in the past, the various sources of aid combine to make college a financially feasible option, though for others additional aid and support would be needed. But there are strong suggestions that existing aid programs fail to reach all students who would benefit from them. One analysis found that more than 20 percent of California community college students who were eligible for a Pell Grant did not receive it, leaving almost \$130 million in financial aid on the table in a single semester (Martorell & Friedmann, 2018). This may reflect a lack of familiarity with or misunderstanding of aid rules and availability, institutional obstacles to the issuance of aid, or psychological barriers that students face when making high-stakes college decisions. There are also likely many students who chose not to attend college but would have, had they known what aid was available. This suggests that there may be room to improve college access and success within the scope of existing aid programs, simply by helping students to navigate a very difficult system.

There is direct evidence that this approach can be effective. For example, an experiment that helped families fill out the Free Application for Federal Student Aid (FAFSA) yielded large effects on college-going (Bettinger et al., 2009). Similarly, one of the Obama Administration's signature higher education initiatives involved providing prospective students with access to calculators that attempt to estimate the aid that will be available to them, under a theory that this would support more informed decisions. In other settings, there is substantial evidence that simple changes to phrasing and framing of communications can increase take-up of government benefits. Bhargava and Manoli (2015), for example, find that simpler notices and application processes and repeated reminders increase take-up of tax benefits. Similar improvements may be possible with college aid as well.

This paper reports on a simple innovation implemented in collaboration with the California Student Aid Commission (CSAC), which administers the Cal Grant college scholarship program, in 2017–18. For a randomly chosen subset of low-income high school seniors who were entitled to Cal Grants, CSAC replaced its regular preliminary notification letter with alternative letters that were designed to be simpler, more inviting, and easier to assimilate. The alternate letters were less visually cluttered, with fewer colors, graphics, and logos; were substantially shorter; used simpler language; and attempted to emphasize the student's deservingness of the award using insights from behavioral science. We describe these letters in greater detail below, and we include examples as an appendix.

Students receiving the preliminary notification letters had already filled out the FAFSA, indicating above-average familiarity with the financial aid process and the ability to navigate complex systems. Nevertheless, they may have failed to appreciate the aid that was available to them, how to claim it, and how it affected

the affordability of different college options. If so, the improved letters had the potential to help them make better, more informed choices.

Preliminary evidence indicates that the new letters were highly successful. The first step that students need to take to claim their Cal Grant awards is to register for accounts on a website run by CSAC. Among students who filed FAFSAs and were sent the more traditional preliminary notification letters by May 1, 2018, 62% had registered accounts by June 11. Among those who were randomly selected to receive the alternate letters, the registration rate was as much as 6.8 percentage points higher. Although we will not know for several months whether the higher rate of account registration translates into higher rates of college-going and/or Cal Grant receipt, at a minimum this early evidence indicates that an extremely simple zero-cost intervention can help students navigate the college aid process more smoothly.

California financial aid, the Cal Grant, and notification letters

The higher education landscape in California is complex. The state hosts two independent four-year public university systems, the University of California and the California State University, as well as a 114-campus community college system that is the largest higher education system in the United States (soon to expand to include an online-only virtual campus). It also has a host of private colleges, including some that are for-profit and some that are not-for-profit. Tuition and fees vary dramatically among these institutions, as do institutional financial aid programs.

The Cal Grant

The Cal Grant is a suite of many different programs that provide college scholarships in varying amounts to different student sub-populations. Our work with CSAC has focused on notification award letters sent to high school seniors to let them know about their eligibility for two varieties of Cal Grants — Cal Grant A and Cal Grant B. These awards serve students who enroll in college within a year of graduating from high school and, as entitlements, are available to any student who meets the eligibility requirements. We discuss them in more detail below.¹

¹ Other varieties of Cal Grants serve transfer students, students enrolled in vocational programs not leading to degrees, undocumented students, and students returning to school more than a year after finishing high school. Our work with CSAC on preliminary notification letters did not address these programs, and we do not discuss them here.

The Cal Grant A is for high-achieving, moderate-income students pursuing associate's or bachelor's degrees, while the Cal Grant B is for low-income students, with good but lesser high school achievement. Both programs are enormously complicated, even for policy experts; our discussion of the rules for each glosses over some complexities in support of outlining the broad contours of the programs.

The Cal Grant A is designed to help pay for tuition and fees at public or private colleges. Award amounts vary by the type of institution attended. [Table 1](#) contains the award amounts for full-time students in the 2018–19 academic year; students who enroll half-time receive awards equal to half of the maximum for their institution's category.

TABLE 1. 2018–19 Cal Grant A Awards for Full-time Students

COLLEGE SEGMENT	AWARD
California State University (CSU)	\$5,742
University of California (UC)	\$12,630
Private, non-profit colleges	\$9,084
For-profit colleges (WASC accredited)	\$8,056
For-profit colleges (not WASC accredited)	\$4,000

These award amounts are set to cover in-state tuition and required statewide fees at the CSU and UC. They do not cover campus-level fees. Because tuition is much higher at the UC than at CSUs, the face value of the Cal Grant is much larger at UC. Awards for students attending private colleges generally do not cover full tuition, but are nevertheless quite generous relative to comparable programs in other states, or to the CSU awards. Awards are renewable for up to four full-time years (eight years for those enrolled half-time), conditional on satisfactory academic progress and no breaks in enrollment (CSAC, 2016).²

Students who enroll in community colleges do not receive the Cal Grant A, even if they are otherwise eligible. If they transfer to a CSU or UC within two years, however, they receive the Cal Grant A for their final two years.

The Cal Grant B program is initially less generous, at least for students attending four-year institutions. It pays only \$1,672 toward books and living expenses. This “access award” is available at both community colleges and four-year institutions, however. Many Cal Grant B students also receive a fee waiver at community colleges. Moreover, following a successful first year of college, Cal Grant B students receive a tuition and fees component that equals the Cal Grant A amount for the appropriate sector in addition to their access awards. Students who are eligible for both the Cal Grant A and B (i.e., those with both high achievement in high school and very low family incomes) can receive either.

² Under a new law, the time limit will be 8 years for students who are or were formerly foster youth. In addition, students can take a leave of absence for up to one year (in total over the college career) without losing their awards.

The net effect is that students receiving Cal Grant A and attending public institutions receive aid packages that include grants sufficient to cover at least the full statewide tuition and fees. Moreover, many Cal Grant students are also eligible for federal Pell Grants, which they can apply toward remaining private college tuition or, at public institutions, toward living expenses. There may also be additional state aid, such as the California College Promise Grant. Colleges may supplement federal and state grants with institutional aid, providing additional support for living expenses. Institutional aid budgets are much larger at UC and CSUs than at community colleges. As a consequence, for students receiving Cal Grants the net cost of attending college will often be lower at UC or CSU than at a community college. Students may of course take out loans to cover remaining unmet needs.

The Cal Grant eligibility and claiming process

To be eligible for the Cal Grant A and B entitlement awards, students must meet three sets of requirements:

- **General requirements.** To obtain a new Cal Grant award, a student must be an incoming college student within one year of high school graduation. In addition, students must be US citizens or eligible non-citizens³; must meet selective service requirements; must not be incarcerated; must not be in default on federal loans; must maintain satisfactory academic progress and CA residency; and must be participating in a program leading to a degree.
- **Family income.** The student's family income must fall below a threshold that varies based on family size. For students graduating from high school in 2019 and first enrolling in college in 2019–20, incomes must be below \$102,500 for a family of four to qualify for the Cal Grant A. The cap for the Cal Grant B is much lower, \$53,900 (CSAC, 2018).
- **Academic achievement.** For the Cal Grant A, the student must have a high school GPA of 3.0 or higher. For the Cal Grant B, a GPA of 2.0 or higher is needed.

The income and achievement eligibility requirements are assessed by CSAC, based on information provided by schools and students. High schools provide GPAs for all members of their senior classes to CSAC at the beginning of the school year. Students must then submit FAFSAs, as early as October 1st of their senior year.⁴ CSAC uses this information to identify potentially eligible students.

³ A separate set of programs is available for undocumented immigrants covered by AB 540 (a part of a set of bills known as the "California Dream Act"). Our notification letter intervention did not apply to these students.

⁴ In 2016, the FAFSA open date changed from January 1st to October 1st, allowing students to file their applications as much as three months earlier.

Once a student is identified as potentially eligible, CSAC mails the student a preliminary notification of his or her award eligibility. These notifications have gone out beginning in mid-November of the senior year in the past years, and are processed on a rolling basis through the next spring as FAFSA information arrives to CSAC. Importantly, both UC and CSU admissions applications are due by the end of November, so many students will not be able to modify their application decisions in response to the notification letters.

Notification letters include instructions about how students can claim their awards. The claiming process has several steps and involves both the students and their colleges. Students must create an account on WebGrants4Students, CSAC's online portal for students, confirm their GPAs, and report the school they will be attending. Following enrollment, institutions must verify both that the student meets the financial eligibility requirements and that the student is enrolled in a program that meets Cal Grant eligibility guidelines. Once these requirements are met, the colleges disburse the award to the student (which may involve simply applying it toward the student's account).

The Cal Grant and college accessibility

In principle, the Cal Grant should help make college more accessible to a large population of California's high school seniors. However, in the presence of limited information and a potentially overwhelming process, the Cal Grant may fail to reach some students in its intended population.

First, students must file FAFSAs in order to qualify. CSAC communicates directly with students who have already taken this first step, and so those who do not file a FAFSA may not be aware that they are Cal Grant eligible. There are many financial aid advising programs that aim to help students fill out the FAFSA. Some of these programs, like the California Student Opportunity and Access Project and the Cash for College workshops, are sponsored by CSAC. In the future, because of new legislation (AB 2015), every high school will provide students with information on how to fill out the FAFSA at least once before their senior year. Still, for many students, financial eligibility could be imputed with high reliability (for example, based on the school attended and/or the student's free lunch status), and it would be possible to notify such students that they are likely eligible for a Cal Grant if they complete the FAFSA.

Second, even after filing the FAFSA students must navigate a complex process to receive their awards. They must register on WebGrants4Students and, often, respond to federal and college requirements that they provide documentation for the information provided on the FAFSA. After these are done, it should in principle be up to the college to claim the award, though CSAC reports that

some colleges fail to claim awards on behalf of all of their eligible students so it may be necessary for the student to advocate for herself at this stage as well.

Finally, students must make informed decisions about whether to attend college and in many cases which college to attend. The Cal Grant A aims to remove tuition and fees as a consideration in the decision about whether to attend college, and because non-tuition costs will generally be similar across sectors the graduated nature of the award should remove relative cost considerations in the choice of college (at least among public institutions). However, if students fail to appreciate this aspect of the Cal Grant, do not understand how the size of the award relates to relative tuition costs at different colleges, or have trouble optimally weighing the costs and benefits of different options in a complex decision, they may make choices different from those that they would make with a more complete understanding.

Several aspects of the Cal Grant process described above may contribute to this mis-optimization. First, many aspects of the college selection process — including some decision points that come several years prior to high school graduation — must be made well in advance of receiving the Cal Grant notification letter. Course selections from the beginning of high school, decisions to study for and take standardized tests like the PSAT, the SAT, and/or the ACT, and extra-curricular activities will all influence the student’s college options. The availability of the Cal Grant may not influence these decisions if, as seems likely, students are not fully aware of the availability and rules of the program. Moreover, most students who will apply to UC and CSU campuses will have done so before the Cal Grant notification letter arrives.

Second, the Cal Grant notification letter itself may not fully resolve students’ misunderstandings of the process. In the era of electronic communications, it is not clear how many high school seniors even open letters that arrive by postal mail. Once opened, the letter, like many government communications, is not as clear and compelling as it might be, and a student could well fail to appreciate the value of the Cal Grant or have the cognitive bandwidth to navigate the process for obtaining one. Moreover, while the letter provides a version of our [Table 1](#), it provides little context: “maximum award” values are listed but no information is provided about what it takes to qualify for the maximum award, and the letter does not explain that the dollar values listed are set to fully cover tuition and fees at public institutions. Our work on alternative forms of the notification letter is intended to address these shortcomings and test whether this channel is an important contributor to mis-optimizations in the college enrollment process.

Finally, the dual role of the student and the college in claiming the award may leave students confused and allow some to fall through the cracks. Although in

principle registering for a WebGrants4Students account and responding to any subsequent queries should be enough for any eligible student to obtain the Cal Grant, in some cases the college may fail to claim the award or may not do so in a timely way. Nothing in the Cal Grant communications explains to students that this may occur, or what to do to ensure that it doesn't. Again, clearer letters may leave students better placed to advocate for themselves.

CSAC experimentation: Improving student information via improved notifications

CSAC began sending preliminary notification letters and asking students to register their school choice with CSAC in 2016. Letters are mailed to students' postal addresses, as reported on their FAFSAs; CSAC follows up with an e-mail in February.

Since the initial letters, CSAC has worked diligently to improve both the letter design and the language used in the letter text. In the summer of 2017, CSAC contacted the California Policy Lab for technical assistance with the design of a new notification letter and with an evaluation of its impact. The California Policy Lab (CPL) is an initiative based at the University of California's Berkeley and Los Angeles campuses that aims to pair academic expertise with state and local public agencies to carry out quantitative research, based in the state's administrative data, that will enable the agencies to better serve the public interest. The present authors are all affiliated with CPL, and we worked with CSAC to design a new notification strategy.

As a result of this work, CSAC used three versions of the notification letter in the 2017–18 academic year (see Appendix). The first version, which we refer to as the “Baseline,” was a streamlined version of the letters that had been used in prior years. We worked with CSAC to make the language and presentation clear. Despite this, the letter remained quite dense and contained several undefined acronyms and terms. It referred, for example, to the value of Cal Grant B awards, without ever explaining what those were or whether the student was eligible for the Cal Grant B. Moreover, figuring out what one needed to do next to obtain a Cal Grant award required very careful reading, as important information was spread throughout the letter, often in small type. The second and third versions (which we refer to as the “Simplified” version and the “Simplified + Belonging” letters) were designed based on insights from behavioral science to maximize the chance that students reading them would understand and act on them. They were dramatically simplified, with far less text than the baseline letter, and with graphical design features that drew attention to the specific action that students

needed to take. In particular, the call to action to visit WebGrants4Students was enclosed in a red box in the middle of the letter, along with the account and ID numbers that students would need to create accounts. In the first letter, by contrast, the URL was printed in small type at the very bottom, and the account information was listed separately at the top without explanation of what it was to be used for.

The two simplified letters were identical to one another in all but one regard. The second letter contained two additional sentences, printed in bold, that aimed to convey a sense of shared purpose and belonging: “You have shown that you’re the kind of person who belongs in college. We’ve been working hard to help you get there!”

All three letters are reproduced in the Appendix to this paper. As we discuss below, high schools were randomly assigned to one or another form of the letter. This allows us to measure the causal effect of one letter relative to another.

Preliminary results from the pilot study, discussed in greater detail below, were highly encouraging, and CSAC decided to base the 2018–19 letters on the second of the two simplified letters employed in the 2017–18 year. We are again working with CSAC to test several letter variants. One goal will be to disentangle the effects of the various elements of the 2017–18 letters. We also plan to test letter variants that attempt to provide students with additional information about college costs and sources of aid. We discuss the planned interventions below, after we discuss the design and results of the 2017–18 study.

Mechanics of the experiments

In order to test the effectiveness of the 2017–18 letter variants, we employed a randomized control trial. Randomization ensures that the students receiving the different variants are similar, on average, in all dimensions other than the type of letter they received. This means that any differences in observed outcomes among them can be attributed to the causal effect of the letters rather than to confounding factors, such as ability, motivation, or educational preparedness. Randomization occurred at the school level, meaning that all students within a school received the same letter variant but students at neighboring schools might have received different variants.

The first 2017–18 preliminary notification letters were printed in the second week of November, for students who submitted FAFSAs shortly after they became available in October. By that point, over 30,000 students had been

identified as eligible. To overcome internal logistical hurdles involved with printing and mailing so many letters, CSAC printed and mailed them in batches. The first batch of 11,970 Baseline letters was mailed first, between November 20th and November 28th, 2017. The first 12,041 Simplified letters followed a week later on November 28–November 30, and the first 8,599 Simplified + Belonging letters were mailed on November 30–December 6. New batches were sent approximately weekly thereafter as students filed their FAFSAs and were identified as eligible. As the volume of letters to be mailed declined, gaps were reduced. Baseline letters were typically mailed on Monday with Simplified and Simplified + Belonging letters following later in the week.

A consequence of this mailroom schedule is that the Baseline letters arrived somewhat earlier than the alternative letters, possibly confounding their effects. If letters received on November 22 are more or less likely to be read and acted upon than are letters received on November 30, we have limited ability to distinguish this from an effect of the letter content. For this reason, in our primary analyses we control for the day of the week on which each student's letter was mailed and for a polynomial in the number of days between the letter mailing and May 1st, the last mailing date included in our results presented below. Treatment effects are identified from the fact that the day of the week on which each type of letter was mailed varied across batches, under the assumption that date effects are smooth over time. This assumption would be violated if, for example, letters that arrived before Thanksgiving were discretely more likely to be acted upon than those arriving later. In future analyses, we plan to test the sensitivity of our results to excluding the first batches of letters, among which the mailing gaps were largest.

Roughly 26,000 letters went out in November, followed by 32,000 in December and 17,000 in January. By May 1st, notification letters had been mailed to 131,903 students in 2,298 schools. The average annual household income for these students was a little over \$20,000, and one-third of the students had a parent who had been to college.

CSAC sent a reminder e-mail in early February to all students who had received letters to date, encouraging them to register for their account if they had not already done so. This email was identical for all students, and in particular did not vary across the three letter groups. CSAC also makes other efforts to reach out to students, including encouraging high school counselors to reach out to students who have not yet registered (which the counselors can check via their own WebGrants accounts).

Initial Results

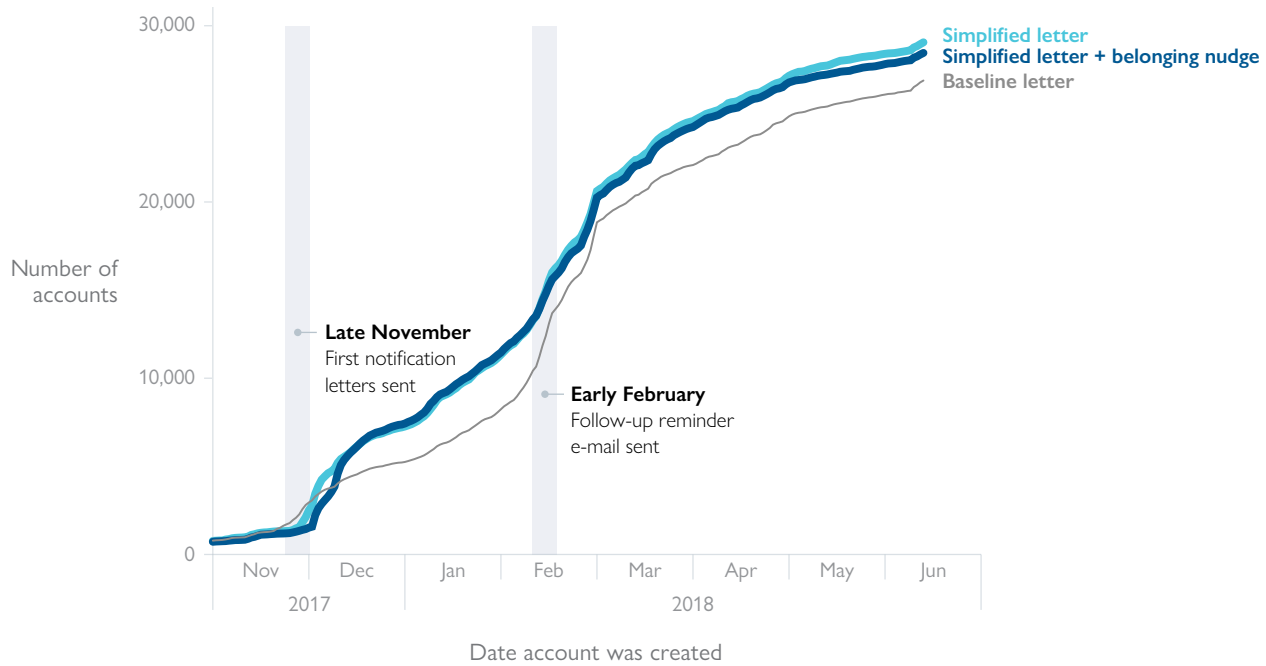
The long-term outcomes of interest in our study are college enrollment, Cal Grant payout, and retention, each of which may be affected if clearer notification letters improve students' understanding of the college aid process and if this leads to different enrollment choices. It is too soon to tell whether the alternative letters led to different college choices, as students receiving letters in 2017–18 only began to enroll in Fall 2018.

Our initial analysis focuses on an earlier outcome, registration for a WebGrants4Students account, as this is necessary step in the process and is the request made of students in the notification letter. This will tell us whether students were more likely to take action as a result of the improved letters as we would expect if the letters more effectively communicate the necessary information to them. It is possible that impacts on account registration will not translate into impacts on subsequent enrollment or award payments, as students can obtain Cal Grant awards even if they do not register for accounts prior to enrollment. It is similarly possible that improved letters could affect college choices without changing account registration rates, by improving understanding of the program among students who would have registered anyway (due to counselor encouragement, for example) or among students who will not take the subsequent steps necessary to enroll in college whether or not they register for a WebGrants account. Nevertheless, we view account registration as a valuable early indicator of the success of our new letters, and as a test of whether the letters overcame cognitive barriers imposed by the older, more complex letters.

Figure 1 shows the running total number of accounts created on WebGrants4Students, by letter variant, from the beginning of November 2017 through early June 2018.

The lines begin near zero (though a handful of tenacious students had already registered for accounts before the first notification letters were mailed). The Baseline series ticks up first, in late November, followed by the Simplified letter and the Simplified + Belonging letter, respectively. This early gap in *when* students registered reflects differences in the timing of the initial letter mailing. But within a few weeks of the initial mailings, when all of the students who received them had had time to respond, we see that the simplified letter variants have generated many more registrations. This is much more consistent with an effect of the contents of the letters themselves rather than of the timing.

FIGURE 1. Cumulative WebGrants4Students Account Registrations by Letter Group.



All three series increase from mid-December through early February, as initial letter recipients continued to register and as new letters went out. The rate of increase is higher for the simplified letter recipients than for the baseline letter group, again indicating higher responsiveness.

68% of students receiving the simplified letters registered for accounts, compared to 62% of those receiving the baseline letter.

CSAC’s follow-up reminder e-mail, sent in early February, is visible in Figure 1 as an increase in account registrations in later February and early March. The increase was larger for the Baseline group, suggesting that the e-mail reached some students who were inclined to register but were not successfully reached by this letter. Nevertheless, cumulative sign-ups remained much higher for the simplified letter groups throughout the period. By the beginning of June, 26,755 students who received the Baseline letter had created accounts,

compared to 29,772 students who received the Simplified letter and 29,338 students who received Simplified + Belonging letter. This represents 62.0% of students who received the baseline letter, 67.6% of students who received the first simplified letter, and 69.0% of students who received the second simplified letter. Each of these is statistically significantly different from the two others; given our large samples, differences this large are quite unlikely to have occurred by chance.

Account registrations in spring 2018 reflect both delayed registrations among students who received letters in the fall and immediate registrations among students who filed their FAFSAs and received their letters later, making it difficult to interpret the estimates in [Figure 1](#) as registration rates. [Figure 2](#) presents the data in a different way, showing the share of students who had registered for accounts as a function of the elapsed time from the mailing of the notification letter. Again, we see that some students registered before the letters were mailed, but this is equally common among all three treatment groups. There are sharp increases in registrations in the days immediately following the mailing of the letters, much larger for the students receiving the simplified letters than for those receiving the baseline letter. Twenty-six point five percent of students who received the baseline letter had registered for accounts by the 21st day following the letter mailing, compared to 36.2% and 39.4% of the students who received the first and second simplified letters, respectively. The gap persists at roughly this magnitude for the subsequent two months. It closes somewhat thereafter, likely due to the follow-up e-mail and other outreach efforts that captured some students who had not been reached by the initial letters, but remains substantial even 150 days after the letters were sent.

FIGURE 2. Students Registered for WebGrants4Students Account from Date of Mailing, by Letter Group.

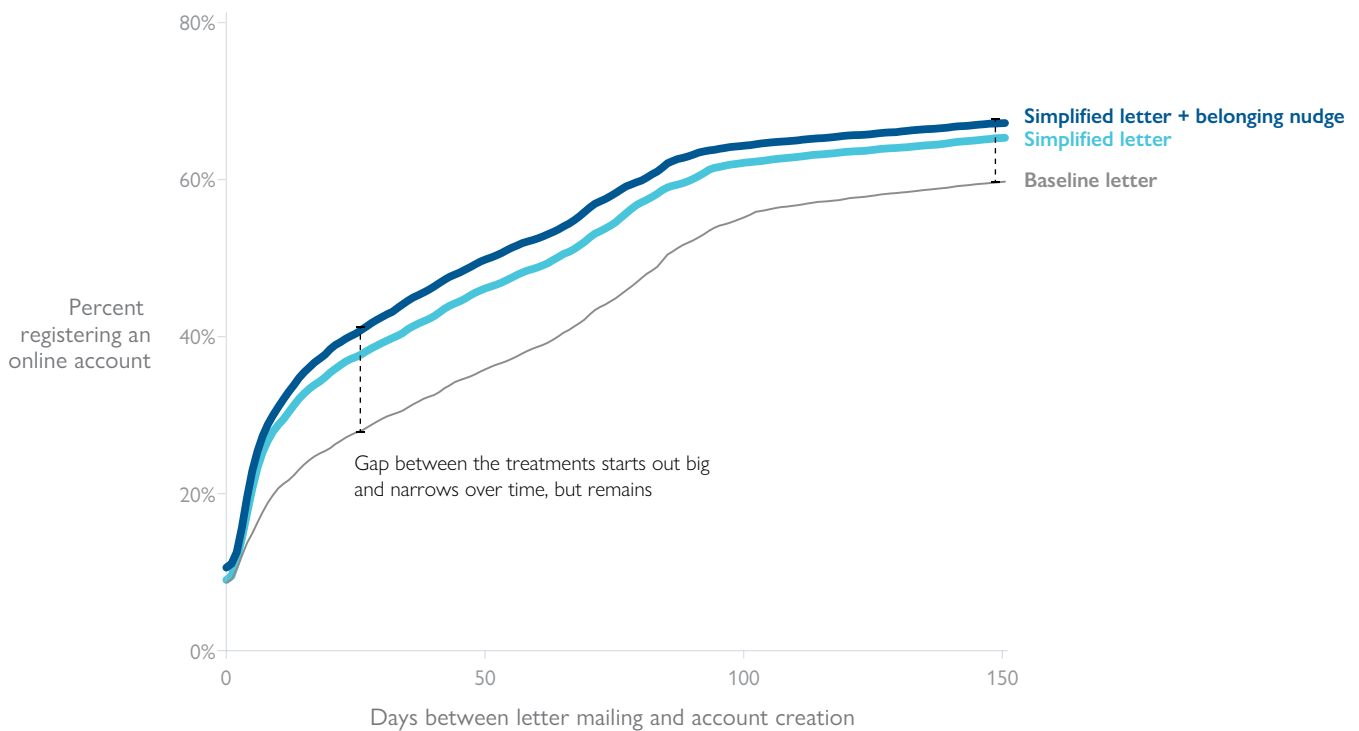


Figure 3 displays the share of students in each treatment arm who had registered for accounts by the second week of June. As noted above, this was 62.0% for students who had received the Baseline letter, 67.6% for students who had received the Simplified letter, and 69.0% for students who had received the simplified letter with the additional belonging language. Table 2 also shows the estimated effects of the two simplified letters relative to the baseline letter, and of the Simplified + Belonging letter relative to the Simplified letter, in each case after controlling for day-of-week and calendar date effects as discussed above. Students who received the Simplified letter were 5.7 percentage points more likely to create WebGrants accounts than students who received the Baseline letter. Students who received the Simplified + Belonging letter were 8.5 percentage points more likely to create accounts than those who received the Baseline letter and 2.8 percentage points more likely than students who received the Simplified letter, without the additional belonging language. All of these differences are statistically significantly different from zero.

FIGURE 3. Percentage of Students with WebGrants4Students Account as of June 11, 2018.

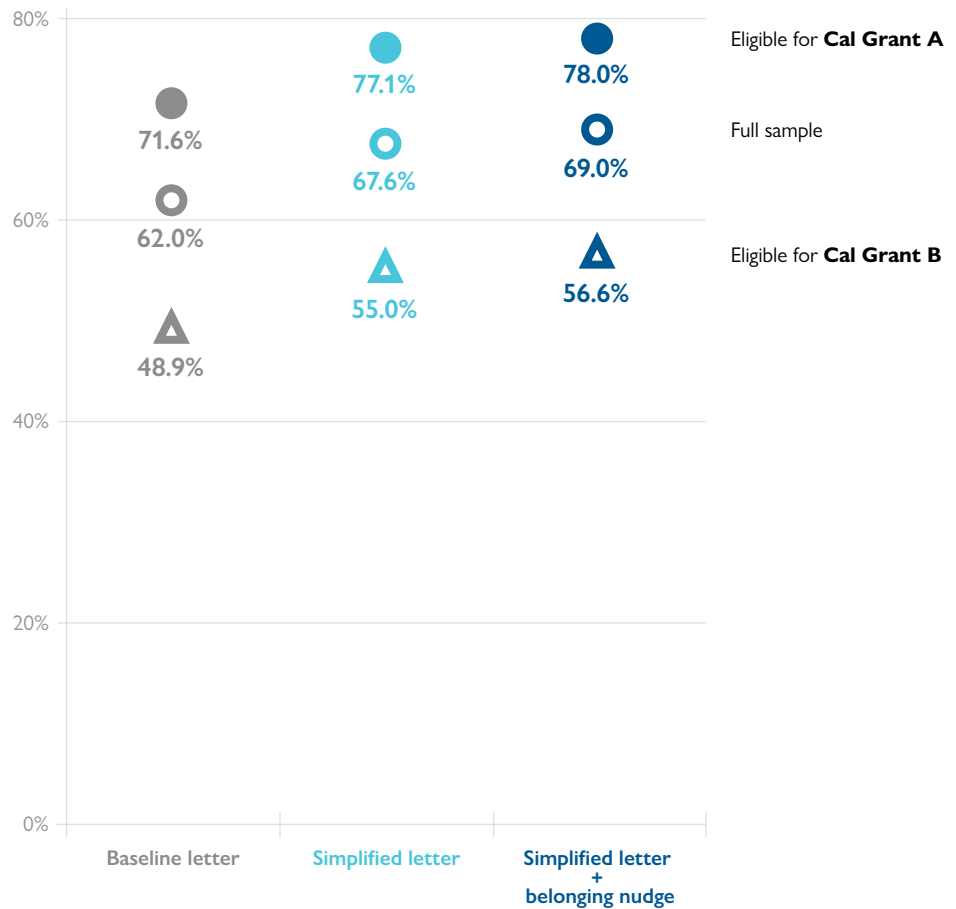


TABLE 2. **Effects of Treatment Status on WebGrants4Students Account Creation.**

	BASELINE	SIMPLIFIED	SIMPLIFIED + BELONGING
Share of Students with WebGrants Accounts	62.0%	67.6%	69.0%
Effects of Treatments...			
Relative to Baseline		+5.7 pct pts +9.2%	+8.5 pct pts +13.7%
Relative to Simplified			+2.8 pct pts +4.1%

The study sample included students eligible for the Cal Grant A, students eligible for the smaller Cal Grant B award, and students who qualified for both. Cal Grant B students come from lower income families and may have lower GPAs. [Table 3](#) presents estimates of the effects of letters on account registrations separately for students who were and were not eligible for Cal Grant A, with the former group including those who were eligible for both programs. (We divide in this way because the letter content was better targeted to Cal Grant A students than to those eligible only for Cal Grant B.) The baseline registration rate was much lower for the lower-income group, but the improved letters were if anything more effective for these students than for the higher-income Cal Grant A students.

TABLE 3. **Estimated Effects of Treatments on Cal Grant A- and Cal Grant B-eligible Students.**

	ELIGIBLE FOR CAL GRANT A (N=75,295)	ELIGIBLE ONLY FOR CAL GRANT B (N=54,663)
Share of Baseline Group with WebGrants Accounts	71.6%	48.9%
Effect of...		
Simplified letter relative to Baseline	+5.3 pct pts	+6.2 pct pts
Simplified + Belonging letter relative to Baseline	+7.7 pct pts	+8.8 pct pts
Simplified + Belonging letter relative to Simplified	+2.4 pct pts	+2.6 pct pts

Notification letters planned for 2018–19

As discussed above, we are working with CSAC to test further improvements to the letters in 2018–19. A particular focus will be modifications aimed at improving students' understanding of the net costs of various college options. Applying to college and searching for financial aid can be a complex process, and there is evidence that students have a poor understanding of both the cost of college and the availability of financial aid that may be available to them to cover the cost. One common misunderstanding is about the relative costs of different types of colleges. Though community colleges are often thought of as the cheapest option given their relatively low tuition, the various aid sources accessible to students attending public four-year institutions can reduce the net price of a four-year institution to below the net price of a community college (TICAS, 2017).

The divergence between the full cost of college and net price of college — the cost borne by the student or their family after accounting for grant aid — was the driving factor underlying the 2011 federal requirement that all colleges and universities maintain net price calculators on their websites. These calculators, however, are not always well publicized or easy to find, nor are they always easy to compare across colleges (Hopkins, 2011; Nelson, 2012). In the 2018–19 academic year, we will test notification letter variants that proactively provide students with net cost information from colleges' calculators. Costs will be computed for each of the California public institutions that the student listed on his/her FAFSA, using the student's FAFSA responses to fill in family economic resources that are needed to feed the calculators. The FAFSA allows students to select a different living situation — on campus, off campus, or with parents — for each institution they select to receive their form, and this will be used to generate appropriate cost estimates.

In 2018–19, a particular focus will be modifications aimed at improving students' understanding of the net costs of various college options.

As noted above, there are many students for whom a UC or CSU may end up costing less than a community college. Consider the hypothetical example below of a student from a family of four, with family income of \$30,000. [Table 4](#) presents estimates extracted from four colleges' net price calculators for this student, using one set of potential responses regarding residency plans. The table shows the amounts each college or university estimates a student will pay for tuition and fees, room and board, books and supplies, and other expenses, which are added together for the total cost of attendance at each school. The table also shows the student's estimated Cal Grant A amount, the additional estimated grant aid a student can expect to receive, and the sum of those figures as the

total grant aid.⁵ The total grant aid is subtracted from the total cost to give the student's estimated net cost of attending a given college.

TABLE 4. Net Price of Different Institutions.

	UC BERKELEY	SAN FRANCISCO STATE UNIVERSITY	CAL STATE LA	LONG BEACH COMMUNITY COLLEGE
LIVING ON CAMPUS / OFF CAMPUS / WITH PARENTS	ON CAMPUS	ON CAMPUS	OFF CAMPUS	OFF CAMPUS
COSTS				
Tuition & Fees	\$17,048	\$6,476	\$6,632	\$1,182
Room & Board	\$18,144	\$13,434	\$14,502	\$12,492
Books & Supplies	\$916	\$1,860	\$1,948	\$1,791
Other Expenses	\$3,048	\$2,878	\$2,974	\$4,399
Total Cost of Attendance	\$39,156	\$24,648	\$26,056	\$19,864
GRANT AID				
Cal Grant	\$12,630	\$5,742	\$5,742	\$1,672
Other Grants	\$17,726	\$7,561	\$7,215	\$4,143
Total Grant Aid	\$30,356	13,303	\$12,957	\$5,815
Estimated Net Price	\$8,800	\$11,345	\$13,099	\$14,049

For this particular student, the calculator indicates that net costs would be higher at Long Beach Community College than at any of the four-year institutions, due to differences in the value of Cal Grants and institutional aid. This is a fairly common situation.

We are working with CSAC to design a letter that presents this customized information in an accessible form. While the net cost figures shown in [Table 4](#) are merely estimates and may not exactly correspond to a student's eventual cost or aid package, we believe that they are substantially more accurate than the typical students' prior knowledge about college costs and aid. In particular, we expect

⁵ The net cost calculators do not report the value of the Cal Grant separately, but rather report the total grants that will be available. We assume that for Cal Grant A students this will reflect the full value of the Cal Grant, and separate that into the Cal Grant and "other grants" accordingly. Note that the calculators generally do not collect enough information to accurately assess Cal Grant eligibility, so report the same total value of grants for those who do and do not qualify for Cal Grants. In effect, they assume that Cal Grants fully crowd out institutional aid. We believe that this is a reasonable approximation, at least at the four-year institutions.

that most of the students receiving CSAC notification letters overestimate the cost of attendance and underestimate the aid available to them (e.g., Grodsky & Jones, 2007; Scott-Clayton, 2012; see also the review by The Institute for College Access and Success, 2008), so that this information will lead them to revise downward their cost estimates of attending college in general, and four-year colleges in particular.

If we are correct that the provision of net cost estimates will improve students' information sets and lead them to revise downward their assessments of the net cost of college, this may lead some students to choose to attend college who would not have otherwise, and may lead some others to select a four-year college rather than a community college. These are the outcomes we will measure.

One important limitation of our study — both the initial version in 2017–18 and the planned version in 2018–19 — is that CSAC's notification letters only go out after students have filled out a FAFSA. This is generally too late in the process to enable improved information to influence students' decisions on where to apply for admission (though it may affect potential transfer decisions in subsequent years). Nevertheless, we think it is possible that this intervention will have an effect, by framing students' thoughts and plans at a stage when there are few decisions to be made but college may be seeming less and less distant in the future. We view it as a proof of concept — if it is possible to influence take-up or enrollment at this late date, among a relatively well-informed subpopulation, then there should be significant opportunities to increase participation in the Cal Grant program through better information and support at other stages in the application cycle as well.

Discussion

Students finishing high school must make highly consequential decisions about whether to attend college and where to enroll, with enormous financial implications for their families. Many have very little access to college counseling, and it is not easy for them to find accurate information about the costs of their different options or about how to access available aid.

The Cal Grant program is intended to make college affordable for low- and moderate- income students. But it can have only limited effects on these students' educational attainment if the students do not find out about the award until after they are already in college. In order for this aid to influence students' college choices, they must understand its financial implications *before* they must enroll.

The early evidence from our pilot study in 2017–18 indicates that clearer presentation of information about the Cal Grant in the preliminary notification

letter can help in reaching students. Those who received simplified letters were substantially more likely to register for WebGrants4Students accounts by June of their senior year of high school. Even more encouraging, those who received letters emphasizing that they belonged in college were more likely to register than those who received nearly identical letters without that emphasis. This is a strong suggestion that our evidence on account registrations reflects differences in students' views of college more generally. We will not know for several more months whether the provision of more accessible information in the notification letter will translate into different college choices. Nevertheless, the initial evidence is encouraging enough to justify moving ahead with additional efforts in the 2018–19 academic year to further improve the informational value of the Cal Grant notification letters.

The importance of these findings extends beyond registering for the Cal Grant. Myriad programs and services require outreach to potential recipients, and many eligible beneficiaries do not take up programs they are entitled to. Although this project focused on tweaking the primary notification letter, the lessons around better design and the principles of behavioral science can be applied by CSAC in communications to other student groups, and at other points in the process where CSAC interacts with students. These could include adjusting how CSAC does outreach to increase college readiness, how CSAC communicates with students when it's time to renew grants, or how CSAC explains the process of transferring from community college to a four-year school. Importantly, these lessons are also useful for agencies that administer other programs, from nutrition assistance to tax benefits.

The results also demonstrate the value of research partnerships between academics and public agencies. In this project, we were able to apply lessons from the academic behavioral science literature to make substantial improvements in the Cal Grant notification letters, a priority for the leadership of the California Student Aid Commission. We were able to do so by incorporating both the design of the letters and the evaluation of the project in the day-to-day operations of CSAC, allowing for timely and relevant results. We look forward to continuing the California Policy Lab partnership with CSAC, working together to further improve their outreach and student support efforts, and to measure the impacts of those improvements, in the years to come.

WORKS CITED

- Bargava, S. & Manoli, D., (2015). Psychological Frictions and the Incomplete Take-Up of Social Benefits: Evidence from an IRS Field Experiment. *American Economic Review*. 105(11), 3489-529.
- Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2009). *The Role of Simplification and Information in College Decisions: Results from the H&R Block FAFSA Experiment*. NBER Working Paper No. 15361. Cambridge, MA: National Bureau of Economic Research.
- California Student Aid Commission (2016). *Cal Grant Handbook*. Retrieved from: https://www.csac.ca.gov/sites/main/files/file-attachments/calgrant_handbook.pdf.
- California Student Aid Commission (2018). *Cal Grant Income and Asset Ceilings*. Retrieved from: <https://www.csac.ca.gov/post/cal-grant-income-and-asset-ceilings>.
- Card, D. (1999). The Causal Effect of Education on Earnings. In Ashenfelter, O. & Card, D. (Eds.) *Handbook of Labor Economics*, vol. 3, Part A., Elsevier. <https://econpapers.repec.org/RePEc:eee:labchp:3-30>.
- Card, D. (2001). Estimating the Return to Schooling: Progress on Some Persistent Econometric Problems. *Econometrica*, 69(5), 1127–1160.
- Cohodes, S. R., & Goodman, J. S. (2014). Merit Aid, College Quality, and College Completion: Massachusetts' Adams Scholarship as an In-Kind Subsidy. *American Economic Journal: Applied Economics*, 6(4), 251–285.
- College Board (2017). *Trends in Student Aid 2017* (Trends in Higher Education). New York, NY: Author.
- de Alva, J. K., & Schneider, M. (2013). *What's the Value of an Associate's Degree? The Return on Investment for Graduates and Taxpayers*. Washington, D.C.: AIR.
- Fox, M.A., Connolly, B.A., and Snyder, T.D. (2005). *Youth Indicators 2005: Trends in the Well-Being of American Youth*, (NCES 2005–050). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.
- Goodman, J., Hurwitz, M., & Smith, J. (2017). Access to 4-Year Public Colleges and Degree Completion. *Journal of Labor Economics*, 35(3), 829–867.
- Grodsky, E., & Jones, M. T. (2007). Real and imagined barriers to college entry: Perceptions of cost. *Social Science Research*, 36(2), 745–766.
- Hopkins, K. (2011, December 15). *10 things you need to know about net price calculators*. Retrieved from <https://www.usnews.com/education/best-colleges/paying-for-college/articles/2011/12/15/10-things-you-need-to-know-about-net-price-calculators>.
- Holzer, H. (2018, June 6). *Workers without college degrees deserve a shot at the middle class*. Retrieved from <https://bidenforum.org/workers-without-college-degrees-deserve-shot-middle-class-4f8af71ce341>.
- Ma, J., Pender, M., & Welch, M. (2016). *Education Pays 2016: The Benefits of Higher Education for Individuals and Society* (Trends in Higher Education). New York, NY: College Board.

Martorell, P., & Friedmann, E. (2018). *Money Left on the Table* (Research Brief No. Volume 3, Number 3). Davis, CA: Wheelhouse.

National Center for Higher Education Management Systems. (2018). *HigherEdInfo.org: College-Going Rates of High School Graduates —Directly from High School*. Retrieved from <http://www.higheredinfo.org/dbrowser/?year=2014&level=nation&mode=data&state=0&submeasure=63>.

Nelson, L. (2012, August 14). *Net Price vs. Out of Pocket*. Retrieved September 27, 2018, from <https://www.insidehighered.com/news/2012/08/14/some-net-price-calculators-could-lead-students-take-debt>.

Oreopolis, P. & Petronijevic, U. (2013) *Making College Worth It: A Review of Research on the Returns to Higher Education*. NBER Working Paper No. 19053. Cambridge, MA: National Bureau of Economic Research.

Scott-Clayton, J. (2012). *Information Constraints and Financial Aid Policy*. NBER Working Paper No. 17811. Cambridge, MA: National Bureau of Economic Research.

Scott-Clayton, J. (2015) The Role of Financial Aid in Promoting College Access and Success: Research Evidence and Proposals for Reform. *Journal of Student Financial Aid*, 45(3): 7–22.

Seltzer, R. (2017, October 25). *Net Price Keeps Creeping Up*. Retrieved from <https://www.insidehighered.com/news/2017/10/25/tuition-and-fees-still-rising-faster-aid-college-board-report-shows>.

The Institute for College Access & Success (2008). *Paving the Way: How Financial Aid Awareness Affects College Access and Success*. Oakland, CA: Author. Retrieved from: https://ticas.org/sites/default/files/pub_files/Paving_the_Way.pdf.

The Institute for College Access & Success (2018). *Pell Grants Help Keep College Affordable for Millions of Americans*. Oakland, CA: Author. Retrieved from: https://ticas.org/sites/default/files/pub_files/overall_pell_one-pager.pdf.

Wilbur, T. G., & Roscigno, V. J. (2016). First-generation Disadvantage and College Enrollment/Completion. *Socius*. Vol. 2.

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Jesse Rothstein is a Professor of Public Policy and Economics at the University of California, Berkeley. He serves as Director of the UC Berkeley Institute for Research on Labor and Employment and of the California Policy Lab-Berkeley. He previously served as Chief Economist at the U.S. Department of Labor and as Senior Economist with the Council of Economic Advisers, Executive Office of the President, both in the Obama Administration. Rothstein's research focuses on education policy and on the labor market. His recent work includes studies of teacher quality, of school finance, of intergenerational economic mobility, and of the labor market during the Great Recession. His work has been published in leading journals in economics, public policy, education, and law. He was named the John T. Dunlop Outstanding Scholar by the Labor and Employment Relations Association in 2011. He is a member of the editorial boards of the *American Economic Review*, *Industrial Relations*, and the National Education Policy Center. He is a research associate of the National Bureau of Economic Research and a fellow of the National Education Policy Center, the CESifo Research Network, the IZA, and the Learning Policy Institute. Rothstein received a Ph.D. in economics and a Master's in Public Policy, both from the University of California, Berkeley, and an A.B. from Harvard.

ACKNOWLEDGMENTS

We are very grateful to the California Student Aid Commission for its role in this project. Lupita Alcalá, David O'Brien, Catalina Mistler, and Jessica Moldoff in particular, were close collaborators at every stage. We also thank Christian Osmeña for his assistance in fostering this collaboration. Miranda Boyden provided excellent research assistance. Laura Szabo-Kubitz and Jessica Thompson of The Institute for College Access and Success provided helpful feedback on an early draft of this paper. Finally, we are grateful for financial support to the Abdul Latif Jameel Poverty Action Lab and the Laura and John Arnold Foundation.

ERRATA

The following is a description of the changes made to the report since it was originally published.

November 13, 2018:

On page 25, the original version omitted the Appendix of the treatment and control letters. This has been added.

June 19, 2019:

Changed design, formatting, and pagination. Some typographical errors fixed.



Cal Grant Preliminary Eligibility Notification

- [REDACTED]
- [REDACTED]
- [REDACTED]

Date 01/19/2018

CSAC ID Number [REDACTED]

Congratulations!

You have been awarded a preliminary Cal Grant award for the 2018-19 academic year!

Governor Edmund G. Brown Jr., the Legislature and the California Student Aid Commission (CSAC) are investing in YOU because of your academic achievements and determination. Based on the information you provided to CSAC on your Free Application for Federal Student Aid (FAFSA) or California Dream Act Application (CADAA) as well as your GPA, you have been determined to be preliminarily eligible for a Cal Grant.

Cal Grant award amounts vary by the type of college you choose to attend and enrollment status. These are the current Cal Grant maximum amounts you could receive if you enroll at an eligible California campus in the following segments:

College Segment	Maximum Cal Grant Award Amount
California Community College (CCC):	\$1,672
California State University (CSU):	\$5,742*
University of California (UC):	\$12,630*
Private, Non-Profit or WASC-accredited colleges:	\$9,084*
Non-WASC accredited For-Profit Colleges:	\$4,000*

*Cal Grant B students may also receive a \$1,672 access award in addition to the amount listed above.

In addition to a Cal Grant you are potentially eligible for a Federal Pell Grant, for approximately \$ 5920

These grants, and any other financial aid that you might receive, will help you cover the costs of attending college, which include tuition and fees, food and housing, and books and supplies.

The Cal Grant and Pell Grant do not require repayment and is only one part of your financial aid package. After you are admitted, the campus financial aid office will provide a full financial aid award notice. In addition to the Cal Grant and Pell Grant, you may also be eligible for one or more of the following:

- Institutional grants or scholarships offered at public and private colleges and universities;
- California College Promise Grant;
- Work-Study Program or Federal Student Loans;
- Other types of financial aid offered at your campus of attendance, such as private scholarships and student loans.

This is an initial Cal Grant award notification only. You must still apply for admission to the campus you plan to attend. Your college makes the final eligibility determination for Cal Grant prior to disbursing your award. For questions about final eligibility determination and disbursement dates, reach out to the financial aid office at your chosen campus.

Make California and your families proud by continuing and completing your education.

Claim your Cal Grant Award by logging onto WebGrants for Students at www.csac.ca.gov/mygrantinfo

See enclosed flyer for more information

Lupita Cortez Alcalá

Executive Director

E1PRP2 (11/17)



- [REDACTED]
- [REDACTED]
- [REDACTED]

Date 01/19/2018

CSAC ID Number [REDACTED]

Dear [REDACTED],

Congratulations! Based on your hard work and record of academic achievement, you have been preliminarily selected to receive a **Cal Grant scholarship**. This scholarship will help you pay for the costs of college for all four years if you remain eligible. It does not need to be repaid.

Go to www.csac.ca.gov/mycalgrantinfo and take the first step to claim **your** scholarship!

Grant ID number: [REDACTED]

CSAC ID number: [REDACTED]

As you research different college options, remember that **the Cal Grant is designed so that tuition cost doesn't determine which college you choose to attend**. The maximum amounts you would receive are listed below:

College Segment	Maximum Cal Grant Award Amount
California Community College (CCC):	\$1,672
California State University (CSU):	\$5,742
University of California (UC):	\$12,630
Private, Non-Profit or WASC-accredited colleges:	\$9,084
Non-WASC accredited For-Profit Colleges:	\$4,000

In addition you may be eligible for a living stipend of up to \$1,672 per year, and for other grants, such as an estimated \$ 1170 in a Federal Pell Grant.

Good luck with your applications! You are already on your way to becoming a college graduate!

Sincerely,

Lupita Cortez Alcalá

Executive Director
California Student Aid Commission

E1TG12 (11/17)



- [REDACTED]
- [REDACTED]
- [REDACTED]

Date 01/19/2018

CSAC ID Number [REDACTED]

Dear [REDACTED],

Congratulations! Based on your hard work and record of academic achievement, you have been preliminarily selected to receive a **Cal Grant scholarship**. This scholarship will help you pay for the costs of college for all four years if you remain eligible. It does not need to be repaid.

**You have shown that you're the kind of person who belongs in college.
We've been working hard to help you get there!**

Go to www.csac.ca.gov/calgrantinfo and take the first step to claim **your** scholarship!

Grant ID number:

CSAC ID number: [REDACTED]

As you research different college options, remember that **the Cal Grant is designed so that tuition cost doesn't determine which college you choose to attend**. The maximum amounts you would receive are listed below:

College Segment	Maximum Cal Grant Award Amount
California Community College (CCC):	\$1,672
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Non-WASC accredited For-Profit Colleges:	\$4,000

In addition you may be eligible for a living stipend of up to \$1,672 per year, and for other grants, such as an estimated \$ 5920 in a Federal Pell Grant.

Good luck with your applications! You are already on your way to becoming a college graduate!

Sincerely,

Lupita Cortez Alcalá

Executive Director
California Student Aid Commission

E1TG22 (11/17)