Completion Grants: A Multi-Method Examination of Institutional Practice

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Abstract: (Purpose) Public universities are intent on increasing degree completion for many reasons. A stronger policy focus on completion and interest in removing students' financial hurdles has led to a rapid proliferation of completion grant programs. This paper reports on a mixed method implementation study of completion grant programs at seven broad- and openaccess universities. We consider how the implementation of completion grant programs vary and how these variations are associated with administrative burden. (Methods) Drawing on case studies of completion grant programs and student surveys, we examine the work of the administrators and professionals who create and implement these programs. (Results) We analyze the drivers of variation in administrative burden, and describe model elements for administering completion grants that aim to minimize administrative burden and maximize efficacy. (Implications) As it can diminish program efficacy and increase inequality, we pay particular attention to administrative burden for staff and students.

Facing increased financial and political pressure, colleges and universities working to increase college completion rates are leveraging a wide array of tools including the strategic deployment of financial aid. With the price of college higher than ever, even students far along in their coursework face bills that can derail their odds of graduation. Unmet financial need in students' last year or two of a degree, often created by escalating costs or declining financial aid, leads even hard-working and talented students to exit. A study in Ohio and Florida found that "14 percent of all degree-seeking students who enrolled in college [. . .] completed at least three-quarters of the credits typically required before withdrawing. Moreover, [. . .] the probability of withdrawal spikes near the finish line" (Mabel & Britton, 2018, pp. 3). These students become part of the "new forgotten half"— people with some college but no credential (Rosenbaum, Ahearn, Becker, & Rosenbaum, 2015).

Completion grants are a recent innovation aimed at increasing graduation rates by delivering additional financial support to college students who have made substantial progress but still face financial hurdles to degree completion. In some cases, universities use completion grants to cover a balance on the students 'college account (e.g., for tuition and fees); in other cases they may be applied to additional expenses (e.g., living costs or books). Timothy Renick, vice provost and vice president for enrollment management at Georgia State University, was among the first to deploy what he called "retention grants" starting in 2011. He explained the purpose of those grants to *Diverse*: "We were dropping more than one thousand students a semester from their classes because the students could not cover the full

costs of their tuition and fees. When we looked at the data, we found that many of the students were academically on track and doing everything they needed to do to complete their programs, but they were seniors who were running out of eligibility for other types of aid" (Abdul-Alim 2016a). At the time (2015) the average unmet financial need among Georgia State students with senior standing was \$8,300 (up from \$6,660 in 2008), and for students with freshman, sophomore, and junior standing it hovered at just over \$6,000 (up from about \$4,000 in 2008) (Abdul-Alim, 2016b).

In 2016 Renick reported the institution had awarded almost 7,300 Panther Grants over the program's first five years, with an average grant award of \$900. Eighty-eight percent of the students receiving grants graduated or were still enrolled 12 months later. Renick asserted that "hundreds of students are graduating every year who otherwise would have dropped out or stopped out of college" (Abdul-Alim, 2016b). Based on Georgia State's tuition and fees of \$9,800 in 2016, Renick said that a one-percentage-point increase in the retention rate (325 students) translated into the university receiving an additional \$3.18 million. A recent program report indicates that the grants more than double graduation rates over three terms, and Ithaka S&R is now leading a quasi-experimental program evaluation (Georgia State University, 2018).

With this narrative of success it is no wonder that many other institutions of higher education were not only paying attention to what Georgia State University was doing but many were interested in adapting the program. But what are the full costs of completion grant programs; specifically in addition to the financial aid funds necessary, what are the real administrative resource costs to start and maintain these programs? These are critical questions since completion grants are also an increasingly popular tool among philanthropists. In 2015, the Lumina Foundation and Ascendium (then the Great Lakes Higher Education Foundation) funded a completion grant pilot project run by the Coalition of Urban Serving Universities (USU) and Association of Public and Land-grant Universities (APLU), described in greater detail below. It was in that initiative that the phrase "completion grant" was first used, as the Lumina Foundation asked that the funds be focused on "near-completers."

In 2017, the Bill and Melinda Gates Foundation and Ascendium invested \$4 million in a completion grant program run by the University Innovation Alliance (UIA), which are a subset of APLU members. A 2018 press release from Iowa State University (a UIA member) reported: "Iowa State awarded \$31,794 to the 60 students, an average of \$530 per student. In its initial semester, the grants did their job: 54 of the students enrolled for spring semester and three more graduated in December." The press release quoted Iowa State Director of Financial Aid Roberta Johnson, who said "We know what kind of a difference these grants make. For

students who've exhausted all other possibilities and are between a rock and a hard place, this is it—\$500 for them was huge" (Krapfl, 2018).

The University of North Carolina at Charlotte also reported success with completion grants delivered via their Gold Rush program (created in 2016 within APLU & USU's pilot project), which amount to approximately \$1,000 per student served. "95 percent of Gold Rush recipients have graduated or remained enrolled on track toward graduation," according to the Hechinger Report (Eller, 2018). The University of Missouri-St. Louis is similarly satisfied. Forbes reports that over its first three years, the Finish Your Degree scholarship program spent \$70,000 on an average grant of \$573, and the "graduation rate for the more than 100 recipients was 95%" (Nietzel, 2019).

In spring 2019, Ascendium reported that the UIA initiative was succeeding, noting that 79% of fall 2017 awardees, 83% of spring 2018 awardees and 85% of fall 2018 awardees had either graduated or were still enrolled. The philanthropy noted that a playbook and online platform describing best practices for completion grants was forthcoming (Ascendium, 2019).

Cost-effective investments are critical for sustainable financial aid practice. Using grants in a cost-effective manner requires deploying them to increase the likelihood of graduation or reducing time to degree, not simply rewarding those already likely to graduate. To effectively examine this, the independent contribution of completion grants to degree attainment goals must be clearly identified. This is best accomplished with a rigorous study that compares the graduation rates (and other academic outcomes) of students awarded completion grants within a randomized control trial. That study is now taking place at 11 public universities across the nation, with support from the U.S. Department of Education's Institute of Education Sciences (U.S. Department of Education, 2017).

A key part of program impact stems from how institutions structure the goals, eligibility criteria, rules, timelines, awarding procedures, and requirements of their completion grant programs. A deeper understanding of program implementation is especially important since financial aid programs do not operate in a vacuum; rather, they are the product of institutional context and professional decisions and such program attributes are critical for program efficacy. Innovating in financial aid is often difficult given the many rules, series of processes, and requirements associated with the practice. Subsequently, administrative burden is a common problem experienced by both financial aid staff and students. There is a growing body of evidence that administrative burden can hinder program efficacy and increase inequality (Christensen, Aarøe, L., Baekgaard, M., Herd, P., Moynihan, D.P., 2019; Herd & Moynihan 2018; Lipsky, 2010).

In this paper we report on a mixed method implementation study of completion grant programs at seven broad- and open-access universities. Drawing on case studies of completion grant programs and student surveys, we examine the work of financial aid administrators and other professionals who created and carried out completion grant programs. We pay particular attention to an often unexplored but very important issue: administrative burden. We consider how the implementation of completion grant programs varies and how that is associated with administrative burden for staff and students. We analyze the drivers of variation in that administrative burden, and describe model elements for administering completion grants that aim to minimize administrative burden and maximize efficacy.

Since it is a nascent practice in higher education, the strategic deployment of completion grants deserves careful consideration, even as evidence on program efficacy is still emergent. The findings in this article will be useful for institutions considering whether and how to implement completion grants, and higher education researchers will benefit by from increased understanding of the complexities of financial aid processes and aid strategies.

HISTORY OF COMPLETION GRANTS

In the 20th century, a period in which real family income for many families declined and the price of higher education grew, studies have shown that reducing financial barriers can help students make more progress in college (Bettinger, 2015; Bettinger, Guarantz, Kawano & Sacerdote, 2016; Castleman & Long, 2016; Dynarski & Scott-Clayton, 2013). Indeed, the only randomized experiment conducted at public universities like those in this project demonstrated that reducing unmet need with grant aid leads to reductions in student employment (especially work off-campus and at night) and some improvements in retention and on-time bachelor's degree completion rates (Broton, Goldrick-Rab, & Benson, 2016; Goldrick-Rab, Kelchen, Harris, & Benson, 2016; Anderson, Broton, Goldrick-Rab & Kelchen, 2019).

A 2016 survey by NASPA (Student Affairs Administrators in Higher Education) of 436 colleges and universities across the country revealed that one-third—146 institutions—had something resembling a completion grant program, including 38% of public 4-year institutions and 28% of community colleges. But none of those programs were called "completion grants" at the time and most were informal pockets of aid that were intended to support near-completers as a form of "emergency aid." Seventy percent of those programs were funded by institutional operating budgets or their foundations (Kruger, Parnell, & Wesaw, 2016).

Completion grants may be especially important in states like Georgia where financial aid programs include performance requirements that some students struggle to meet, leading to a loss of financial support as academic work becomes more advanced in higher-level courses (Goldrick-Rab, 2016). For example, only about 30% of students who enter a Georgia public college with the state's HOPE

Scholarship keep it throughout their studies; 70% lose the grant because they fail to maintain a 3.0 GPA (Diamond, 2011). In Tennessee, about 42% of recipients of the HOPE scholarship lose that award because of grades (Carruthers & Ozek, 2016). In West Virginia, just 32% of students retain the Promise grant in their fourth year (Gross, Bell, & Berry, 2016). About half of all states distribute almost \$2 billion in grants using such merit criteria, creating the potential for loss of financial aid funding and growing unmet need in later years of college for students who may still meet institutional SAP requirements (Gross, Bell, & Berry, 2016; Sjoquist & Winters, 2015; Zhang, Hu & Sensenig, 2013). Further threatening critical populations and likely contributing to the reality that low-income students and students of color are disproportionately likely to lose their merit scholarships (Gross, Bell, & Berry, 2016).

Need-based aid also frequently diminishes over time as students move through college. The Pell Grant includes several performance requirements, and many recipients lose eligibility because they cannot continue to meet them as coursework grows more difficult (Schudde & Scott-Clayton, 2016). In addition, recent changes to Pell Grant eligibility means that students may now receive only six years of funding over their lifetimes, down from nine (Mabel, 2015). Yet nearly 40% of Pell recipients take longer than six years to graduate (NCES 2011). As such, this policy change means about 100,000 continuing students nationwide (Institute for College Access and Success, 2011) face an average of \$3,600 less support per year (Mabel, 2015).

The APLU and USU reported that this drop in aid was a major cause of institutional interest in completion grants: "Half of the institutions [in a completion grant pilot] were motivated by new Pell Grant limits, which left students facing financial shortfalls or financial aid ineligibility as they neared graduation" (2016, p.3). While data on the exhaustion of Pell eligibility are difficult to come by, information from community college students in Alabama, Arkansas, and Mississippi reveals that 12.7% of students who received Pell Grants had exhausted their eligibility or would lose it within two semesters due to the time that had elapsed during their academic progress (Katsinas, Davis, Friedel, Koh, & Grant, 2013). This is not without consequences, as Mabel (2015) writes:

Using ten years of annual data from the October Current Population Survey and a difference-in-differences research design that compares income-eligible Pell students impacted by the rule change to income-eligible students not affected by the lifetime eligibility reduction, I find that eliminating Pell Grant eligibility decreased late-stage persistence to any college by 10-12 percentage points and 16 points at four-year institutions (p.1).

To the best of our knowledge, completion grants were first deployed at scale in the context of a pilot project led by APLU and USU at nine universities. To engage more institutions in creating completion practices, APLU held a workshop at its annual meeting in November 2015 at which four universities detailed their micro-grant programs. Following that meeting, APLU & USU opened a competitive grant process in which public universities applied to each receive \$50,000 in grant funding to replicate a loosely designed completion programs or scale up pilots in 2016-17 and 2017-18.

The project's stated goal was to increase completion rates among recipients by a minimum of 40 percent. The results are described in a report titled, "Foiling the Drop Out Trap: Completion Grant Practices for Retaining and Graduating Students" (APLU, 2016). In that project, many of the program decisions were prescribed. The grants varied in amount between \$500 and \$1500. Students had to be 30 credit hours or less from the needed credit hours to complete, had to come from low-to-middle income families, and had to have "genuine unmet financial need and an unpaid university balance."

Across the nine universities, administrators identified 75,206 seniors and discovered that 59% had unmet need *after* accounting for all grants, work-study, and federal loans. Eleven percent of those students (N=8,062) met the other program criteria and were therefore eligible for the pilot. Ultimately, just over 1,200 grants were distributed, and 93% were retained or completed their degrees one year from being awarded. A student in the project said, "[Completion grants] made something impossible, possible! I'm actually so grateful for this grant that I hope to donate money to a scholarship over time. It was a blessing and as I call them, "true Santa Claus moments" that make you believe" (APLU, 2016, p.4).

PROGRAM IMPLEMENTATION, ADMINISTRATIVE BURDEN, AND FINANCIAL AID

While there is a robust body of research on the efficacy of financial aid programs, there are far fewer that attend to program implementation, and particularly the work and decisions made by staff. Goldrick-Rab (2016) is an exception, exploring in detail how financial aid administrators' beliefs and dispositions affect how they engage with students in providing aid. She notes the disconnect between increased spending on student financial aid and the lack of corresponding investments in financial aid offices, resulting in overworked and demoralized staff.

Studies of public administration point to administrative burden as a key problem undermining program access and efficacy (Heinrich, 2016; Heinrich & Brill, 2015; Herd & Moynihan, 2018). While that literature mainly attends to the experiences of clients (students, in the case of financial aid programs) administrative burden must also be considered in relation to the frontline workers—

the staff who operate the programs. While disadvantaged students have the most difficulty navigating their encounters with government programs, it is also likely that some universities have more trouble than others administering the programs. For example, those serving larger numbers of disadvantaged students tend to also have fewer resources with which to support students. As Bell and Smith noted, "it is possible that despite the desire of street-level bureaucrats to use discretion in ways that help clients overcome administrative burden, the constraints they face from administrative capacity may override their efforts on behalf of students" (2019, p. 13).

Administrative burdens restrict access to program benefits and, in so doing, help to ration scarce resources and exert social control (Soss, Fording, & Schram, 2011). Herd and Moynihan delineated three types of burdens: (1) learning burdens which students face as they seek to learn about and understand eligibility requirements that determine whether they will gain access to the program; (2) psychological burdens; and (3) compliance burdens, associated with the programs rules and requirements. When administrators have discretion over program design, as in the case of innovations like completion grants, their discretion shapes how administrative burden is distributed. In this way, college staff act as "street-level bureaucrats" who distribute opportunities and determine who gets what (Lipsky, 2010).

We found just one other study examining administrative burden and frontline staff in the context of higher education. Bell and Smith (2019) studies the Oklahoma Promise program, dissecting environments of administrative burden and the role of staff in the setting of that financial aid program.

METHODS

In order to understand how universities implemented completion grant programs we engaged seven public universities with completion grant programs in varying stages of implementation during the 2017-2018 academic year. Four were part of the APLU/USU pilot project, two began prior to that project, and one was newly created. Critically, all of the programs we studied functioned independently of the UIA completion grant project, which had particular processes and eligibility criteria stipulated by its funders. Participants included: Arizona State University, Florida International University, Indiana University - Purdue University Indianapolis, Kent State University, Ohio State University's Regional Campuses (Lima, Mansfield, Marion, & Newark), University of North Carolina at Charlotte, and Virginia Commonwealth University.

All of the universities are broad or open-access, with Fall 2015 admissions rates ranging from 50% to 86%. The four-year degree completion rates at these

universities ranges from 11% to 38%, while the six-year degree completion rates range from 32% to 62%.

Two researchers spent one day on site at each university charged with constructing and deploying completion grant programs to learn how and why they reach key decisions about program attributes such as eligibility and performance criteria, grant amounts, and timing and messaging of the awards. Interviews included project directors (usually a Vice President of Enrollment or Vice Provost for Student Success), Directors of Financial Aid, Project Staff (often 1-2 professionals tasked with the day-to-day operations of the program), and any institutional researcher(s) assisting with the institutional data requests. The researchers used a semi-structured interview protocol with a total of 56 persons across the seven institutions in addition to gathering project communications and any other project documents detailing the award criteria, eligibility, or process requirements. Finally, we conducted a comprehensive cost-analysis of each program to understand the start-up and ongoing costs (both financial, personnel and other resources). From an analytic standpoint, we sought to understand the intricacies of each university's program while also placing them into a comparative framework to examine similarities and differences across universities.

We followed an inductive process beginning with the development of preliminary codes based upon the research questions which segmented the data by topic. We coded the interview data thematically and according to types of administrative burden. We initiated this process by coding an initial set of transcripts and then conferred to ensure the coding scheme was sufficient to capture the range of implementation challenges we observed, adding codes to accommodate emergent issues. Given the small number of institutions involved, we coded by hand (using Excel spreadsheets) rather than using coding software. We sorted data by codes for analysis and found that four themes drove the initially coding:

- Origin, Context, Purpose: Why was a completion grant program developed, how did it fit into a broader student success initiative at the university, and who ran the program?
- Eligibility: How were programmatic decisions made about program eligibility?
- Execution: How was the program implemented, especially with regard to timing, number of students served, and grant amounts?
- Resources: Where do the resources (financial and otherwise) for the program come from? What were the performance requirements, if any? What additional resources were provided to students who receive the grant?

With regard to administrative burden, we followed Herd and Moynihan's (2018) framework, considering three areas of potential burden for staff and students:

- Learning burdens: Effort associated with helping eligible students learn about and access the program
- Psychological burdens: Effort associated with stress or strain associated with engaging in administering and/or participating in the program
- Compliance burdens: Effort associated with abiding by the program's rules and requirements

Following Lincoln and Guba (1985), our analysis focuses on identifying points of convergence and divergence, illustrating the extent to which institutional practice of completion grants varies. We also gained diverse perspectives by involving multiple professional peers throughout the project design, data collection, and analysis processes to provide greater accuracy, reduce potential biases, and promote alternate lines of questioning to investigate emerging themes as they developed. For example, our broader research team includes sociologists, student affairs experts, an institutional research expert, and a former financial aid officer. We do not identify universities by name in the analyses, as institutional identity is not salient to the understanding produced.

We deepened our understanding of program implementation administrative burden faced by students using a survey sent to students who were eligible for completion grants at six of the seven universities. The survey was sent during the 2017-2018 year to 2,935 students, and 610 students responded, for a response rate of 21% - which is on the higher end for contemporary electronic surveys of college students at public institutions (Betancourt and Wolff-Eisenberg, 2019; Gierdowski, 2019; Kolek, 2012). Among those students, 62% had received a completion grant while the rest were eligible but did not receive a grant constituting our control group. Identification of these students was conducted differently between the participating institutions. Half of the institutions (3 of 6) awarded grants to the eligible population via random assignment; whereas, the other half awarded based upon the institution's ability to maximize the available funds to serve the largest number of students¹. These differentiated approaches constitute one of the areas of divergence the team examined within the findings.

Two-thirds of the respondents were women, and 43% identified as Caucasian. Almost one-quarter of respondents were African-American, 12% were Hispanic, and 12% were multi-racial. Notably, these students were not

¹ At first glance it may seem that institutions who enacted this approach (which was not outlined in the program design) would have created a bias sample by prioritizing awards for eligible students with the lowest amounts of unmet need; however, we found this to be incorrect. Like many financial aid processes, this approach was actually far more complex. Instead, financial aid officers appeared to be maximizing total aid packages by first taking the pool of eligible students and examining alternative aid sources that were usually restricted in some way. This, in effect, served to narrow the pool of eligible students to those who really had no other financial aid options. Interestingly, this likely had a side benefit of making the participant and control groups even more similar.

predominantly traditional-age undergraduates—just 37% were between 18 and 21 years old. Thirty-nine percent were 22 to 25 years old, 11% were 25 to 29 years old, and 12% were 30 or older. Twenty-four percent did not have a parent who attended college, while 22% had at least one parent who attended college but did not complete a degree, 11% had a parent with an associate degree, and 43% had a parent with a bachelor's degree or higher.

We analyzed the survey data in STATA and examined it in conjunction with the interview data in order to identify points of convergence and divergence in the following discussion of results.

FINDINGS & DISCUSSION

ORIGIN, CONTEXT, PURPOSE

Public universities are intent on increasing degree completion rates for many reasons both internal and external to the institution. Three of the universities we studied explicitly mentioned the impetus created by performance-based funding from the state legislature, while two described a strong leadership emphasis on finding effective approaches to increasing institutional efficiency by moving more entering students through to degree completion. Completion grants were selected as an initiative mainly because administrators had heard of them (either through engagement with APLU or via word of mouth) and thought the idea was promising. Prior evidence of the effectiveness of completion grants was rarely mentioned as a rationale for their implementation. In the words of one financial aid administrator, "There is no cut-and-dry way do this. There have to be judgment calls, and everybody is making them."

Some completion grant programs were created because administrators wanted to help students who had balances on their bursar accounts, which might mean that they could not re-enroll for the next term and continue to progress towards a degree. At three universities, the completion grant aimed to clear those holds and enable continued enrollment. One university used completion grants to clear account balances even though the university did not place financial holds on students' account and would not prevent re-enrollment based on a balance. Even so, completion grants may have relieved the psychological and financial burden that students felt from the balance.

Bursar accounts include tuition and fees, the cost of on-campus parking and sometimes other services, and costs associated with on-campus housing and food. Four of the seven universities allowed the grants to go to other expenses associated with the cost of attendance even when the student did not have an outstanding balance. This decision seemed to be associated with an interest in helping students

who lived off-campus or who might have incurred increased unmet need due to some sort of emergency.

The location of leadership for completion grant programs varied widely across the seven universities and most often included a cross-campus team. The Office of the Provost, Enrollment Management (or an office within EM, such as the Office of Financial Aid or Financial Services or Strategic Initiatives), Student Life and Retention, Academic Diversity Office, Learning Center, and the Registrar were all involved at different institutions. However, irrespective of leadership site, Institutional Research, the Registrar's Office, and Financial Aid were always involved in administering completion grants, and often Academic Advising was as well.

ELIGIBILITY

All seven universities intended to target completion grants to students "near completion." All agreed that this meant that a student should have no more than 25% of their degree requirements left to complete. But they quantified that progress in different ways, and all reported struggling to accurately determine how close students were to the "finish line". While predictive analytics are a recommended practice for identifying eligibility for completion grants (Nietzel, 2019), none of the universities we studied employed that tool for this purpose, and only one of the universities used predictive analytics at all, citing cost concerns.

Counting credits struck staff as an insufficient approach to identifying near-completers, since specific academic requirements associated with majors and programs must also be met. A few universities employed degree audit software but administrators frequently noted that the software's assessments were significantly flawed which then led to required re-checking by academic advisors and financial aid staff. Seeking to ensure that completion grants were only awarded to eligible students, they often learned that students were further from the degree than the audit software suggested. Only one institution had all eligible students' transcripts checked by their advising staff by hand. This institution had some of the most strict eligibility requirements. Subsequently, their staff noted that if they loosened their eligibility requirements they would be unable to accommodate the administrative burden of the process to serve more students – despite having unused aid dollars reserved for the project.

The student survey revealed this challenge as well. Forty-five percent of survey respondents receiving completion grants said that they had attended college for six or fewer semesters, including the current term. Moreover, 14% said that they had four or more terms remaining in college, 35% said that they had two or three terms to go, and only 51% said they had one or fewer terms remaining. Almost one-quarter of students receiving the grant had been enrolled for 7 or 8 terms, 13% for

9 or 10 terms, and 18% for 11 or more terms; however, 88% of survey respondents said that it was very or extremely likely that they would complete the degree they were working on.

Frustration over using unreliable or effort-intensive degree audits to target completion grants led some university staff to employ credit and grade point average benchmarks (e.g. between 80-105 credits and Satisfactory Academic Progress or at least a 2.0 GPA) or the year in college as a proxy for "near completion." Two universities required students to have applied for graduation. Other eligibility criteria included:

- Residency: five universities restricted completion grants to in-state students
- Enrollment intensity: six universities restricted completion grants to full-time students
- Financial need: At three universities this was proxied by a balance on the student's bursar account, while at the other four universities it was based on unmet need and/or Expected Family Contribution (EFC). Three of those universities reserved completion grants for Pell recipients, while the other allowed students with unmet need but a higher EFC (for example up to 150% of the Pell cutoff) to qualify.
- Use of student loans: Six of the seven universities required students to accept federal student loans (not including PLUS loans) and use those funds towards their expenses before they could become eligible for a completion grant. The other university did not require this, expressing concern that doing so would restrict eligibility for students of color. Loan aversion is more common among Latinx and Indigenous students (Boatman, Evans, & Soliz, 2017; Goldrick-Rab & Kelchen, 2015).

The student survey revealed that the program eligibility criteria effectively identified students who needed financial support. Table 1 describes the frequency of financial challenges the respondents faced. Seventy percent of the students surveyed were employed (not shown), and yet two-thirds had trouble buying their books or supplies, almost half exhibited signs of food insecurity, about one in four exhibited signs of housing insecurity, and six percent of the 610 students had been homeless in the last year.² Forty-four percent of the employed students worked more than 20 hours per week, 61% worked between 10 pm and 8 am, and half of the students who were not employed were nonetheless looking for work.

Table 1. Financial Challenges among Students Eligible for Completion Grants

² We employed validated measures of basic needs insecurity, including the U.S. Department of Agriculture's measure of food insecurity. See Baker-Smith et al. 2019 for more information.

Financial Challenge	Frequency
	(%)
Did not buy all of the books or supplies needed for class	65
Did not pay tuition on time	50
Did not have enough food to eat - even for one day -due to lack	46
of money	
Did not pay the full amount of a utility bill	27
Did not have safe and reliable transportation to campus	24
Did not pay, or underpaid, rent or mortgage	22
Did not pay the full amount of an internet bill	21
Did not have a safe, secure place to sleep - even for one night	6

Sample: Students eligible for a completion grant at one of six universities. N=610

When asked to indicate their agreement with the statement "I come to class well-rested, fed, and ready to learn," about half (49%) of students surveyed somewhat or strongly disagreed. More than three-quarters (78%) said that they were experiencing a great deal or lot of stress or anxiety about paying for college.

These evident financial challenges are notable given that in interviews, staff expressed uncertainty about the efficacy of the eligibility criteria the completion grant programs employed. They explained that they were not working from any particular evidentiary basis, but rather doing their best to estimate who needed the support. In interviews, university staff consistently demonstrated a desire to learn and improve completion grant programs in order to effectively meet students' needs.

EXECUTION

At six of the seven universities we studied, completion grants did not have to be repaid. But one university offered a completion loan that was forgivable if the student graduated on time. This approach was driven by the funding source— a private donor offered to fund loans and these were the resources available to deploy.

In most cases, each student received a completion grant of a different amount under a maximum award threshold. The specific award maximums varied. Four universities capped the grant at a value between \$1,000 and \$1,500, while two universities allowed for grants between \$2,000 and \$2,500. The loan maximum was \$5,000.

Institutions also varied in terms of when students were assessed for grant eligibility and the timing of the award process varied as well. Some universities evaluated students for eligibility during the spring for the fall term, others evaluated eligibility during the summer, while others waited as long as the middle of the fall

term to examine eligibility and make the award. This variation was often related to the grant eligibility criteria or whether the institution's policy would drop students from classes with unpaid balances and, in particular, whether the program's goal was to clear a balance owed to the institution. Universities that required a student to have an account balance in order to receive a completion grant tended to wait longer to assess eligibility, giving students more time to pay their bills. At two universities, staff worried that they did not wait long enough, suggesting that some families with financial means wait to pay their bills until the last possible moment. For example, an administrator said, "There are students literally who are paying at 11:59 PM the evening before the drop-date." The evident fear was that relying on account balance information would lead them to award a completion grant in error to a student who did not need it.

Rather than applying for the support, students were selected using administrative records and notified via email that they had been chosen. Five of the seven universities required students to respond to that email in order to receive funds. At the other two universities, the financial aid office automatically packaged the grant and the funds were disbursed regardless of whether or not the student acknowledged the grant. A financial aid director at one of those universities said "we just *gave* it," explaining that he did not want to create any additional barriers for students who needed funds. At the other university, students received a carefully worded motivational email notifying them the grant had been awarded. "The finish line is in sight," the email read. "The completion grant is awarded to support students who have worked and studied hard over the past years."

RESOURCES

Funding is the central program resource requirement for completion grants. Programs used a variety of funding sources including dedicated institutional monies from senior leaders (i.e., President or Provost), funds set aside from state appropriations, and privately donated funds. One university used leftover "end-of-year" funds from units across campus – dollars swept by the University's central office to be used for investments in innovation. Two universities (both of whom had been in APLU's pilot project) used previous grant funding to launch development campaigns targeted at young alumni wanting to give direct dollars to support current students.

Some of the universities devoted resources to improving program communications, amplifying the grant funding with additional messaging to students. One university aimed to impress upon students receiving completion grants the importance of building life skills and financial literacy. Another aimed to use the grants to demonstrate that they understood financial shortfalls, increasing students' sense of belonging at the institution.

Going beyond the financial support, four of the seven universities required students to engage in additional activities in order to receive the grant. These activities included meetings with a student success coaches or advisors, a financial literacy program, or a career planning exercise. One institution populated a menu of choices from existing support programs for students to choose two activities from. This is a recommended practice. Nietzel (2019) writes,

Require academic and student services staff to communicate frequently with students. Academic advisors, student affairs staff, faculty mentors and financial aid officers need to develop personal relationships with students that keep them focused on completion. A steady hand, a sympathetic ear, a push here, a pull there — continuing, caring connections with struggling students are essential to success.

While some staff clearly felt that this was important advice, others did not add this to their program, often citing the staff time involved.

PROGRAM IMPLEMENTATION AND ADMINISTRATIVE BURDEN

Staff running completion grant programs consistently expressed a belief that they were a promising tool to boost degree attainment but were unsure precisely how effective they would be. However, they also indicated that they wanted to expend less energy administering the program and devote the money to the grants and that they wanted clear evidence regarding how effective this strategy was compared to other strategies for awarding aid. Therefore, we next consider how program implementation relates to administrative burden for both staff and students.

Following Herd and Moynihan (2018), Table 2 breaks down program implementation into elements and then explores how those elements relate to learning burdens, psychological burdens, and compliance burdens. Panel A describes the burden facing program staff, while Panel B describes the burden for students.

Since the completion grant programs were fairly new, staff often had discretion over their construction. Some of those decisions about program implementation had the potential to create substantial burdens for both students and staff. For example, the process for determining student eligibility could be simple and straightforward, or it could be complex and time-consuming. A simple program sets a date for evaluating eligibility, applies the criteria using a small number of data sources, runs a confirmation check, and then moves to distribution. A complex program examines eligibility on an ongoing basis; uses multiple data sources to apply the criteria; runs multiple checks; relies on computations, checks, or

processes conducted individually instead of automated systems; and, then moves to distribution. The first approach (i.e., a simple program) involves more learning and compliance burdens for staff and comes with more stress, though since it is a back-office process it does not necessarily impose any burden on students.

Table 2. Program Implementation and Administrative Burden

Panel A. Program Staff			
Program Element	Learning Burden	Psychological Burden	Compliance Burden
Grant Amount	Amount must be explained; burden increases with more variation	Associated with explaining information to students	Amount must be considered in relation to student's full aid package
Eligibility Criteria	Every element must be explained; burden increases with more elements/complexity	Associated with explaining information to students	Each criterion must be checked; increases with complexity
Eligibility Process	Staff must learn the process; if ongoing there is additional learning	Associated with ensuring process is implemented properly	Associated with ensuring process is implemented properly
Requirements for initial receipt	Requirements must be communicated to students	Associated with communicating with students	Requirements must be enforced
Requirements for continued receipt	Requirements must be communicated to students	Associated with communicating with students	Requirements must be enforced
Panel B. Student	S		
Program Element	Learning Burden	Psychological Burden	Compliance Burden
Grant Amount	Must learn about how much help is available	Stress associated with uncertainty about value of the grant	N/A
Eligibility Criteria	Must learn about how to qualify	Stress associated with not knowing if	Must prove one meets the requirements

		one will qualify; attempts to	
		quality	
Eligibility	N/A	N/A	N/A
Process			
Requirements	Must learn the	Stress	Must meet the
for initial receipt	requirements	associated with	requirements
		fulfilling	
		requirements	
Requirements	Must learn the	Stress	Must meet the
for continued	requirements	associated with	requirements
receipt		fulfilling	
		requirements	

In contrast, other program elements such as eligibility criteria and requirements associated with initial and/or continued recent receipt create burden for both staff and students. For example, if processes required an application, staff must implement the requirements, answer students' questions, and ensure compliance. Students must learn about the requirements, figure out how to comply, and undergo stress associated with showing up for meetings or doing trainings, per the requirements. Surveys revealed that completion grant programs can involve substantial learning burdens for students. At three of the six universities surveyed, one in three respondents said that they did not know who to contact at their financial aid office if they had questions. At the other three universities, that figure was one in five.

There is a substantial difference between contacting the financial aid office, knowing *who* to contact in the office, and feeling comfortable making that contact. At one of the universities overall awareness of the aid office was high—86% of respondents had made contact. But one in three of those students said that they did not know exactly who to speak with or where to direct their questions. Further, more than one-third of those students said that they were only "slightly comfortable" or "not at all comfortable" contacting the aid office. The survey also revealed that many students were unsure why they received a completion grant, even though they thought they might have received information about it. Georgia State experienced this challenge as well. Staff who called students said that initially "Students hung up on us. They didn't believe we were calling from the university, and we were here to help" (Mason, 2015). Administrators had to call again. Almost half of the participants noted fielding questions from students who suspected their award email communication might have been a scam.

This uncertainty is both a learning and a psychological burden. Some students in this study thought that the grant was meant to help them complete college. One said, "I am a senior so they gave me a small grant to help me finish my degree," and another said "It's the final year and it [the grant] is an incentive to help me finish." Other students believed they received the grant because they lacked money, or because they transferred from a community college or were a single parent. A few students thought they received the grant because of good grades, academics, or "creative excellence." Others were simply confused. Said one, "I have no idea, honestly [why I got the grant]. I probably do not deserve it, but it will be money well spent by whoever allowed me the opportunity. I promise that."

Similarly, students were unclear what they had to do to retain the financial support. Most respondents said they had to stay in school or complete the degree to keep the completion grant. Some thought that they had to maintain good grades, or continue to have a low income, and others said they had no idea. The bottom line is they wanted and needed the support. As one student concluded: "I do not care what is required. I do what I feel is necessary to better myself."

Table 3 examines variation in program design and administrative burden across universities. We classified administrative burden as low, moderate, or high and did this separately for staff and students. Programs with low burden involved just one or two elements from Table 2 that create burden, whereas moderate institutions involved three, and those with high burden involved four or more. Despite having a fair amount of autonomy over program design, five of the seven universities ran programs that involved a great deal of administrative burden for their teams.

Table 3. Program Design and Level of Administrative Burden across Universities

Site	Program Design	Staff Burden	Student Burden
1	Single grant amount; numerous eligibility criteria, eligibility process includes multiple steps and 3 offices, students must respond to invitation, sign a contract, and meet with an administrator	High	Moderate
2	Variable loan amount; numerous eligibility criteria, simple eligibility process, students must respond to invitation and sign form	Moderate	Moderate
3	Variable grant amount; numerous eligibility criteria, eligibility process includes multiple steps and 3 offices, students must respond to invitation and must create an academic success plan	High	Moderate

4	Variable grant amount; numerous eligibility criteria, eligibility process includes multiple steps, students must respond to invitation and meet with an advisor, sign a form, and complete financial wellness training	High	High
5	Single grant amount; numerous eligibility criteria, simple eligibility process, student must respond to invitation and complete two "future-building" activities	High	High
6	Variable grant amount; numerous eligibility criteria, ongoing intensive eligibility process, auto-awarded—no response, no contracts, no other requirements	High	Moderate
7	Single grant amount; numerous eligibility criteria, simple eligibility process, auto-awarded—no response, no contracts, no other requirements	Low	Low

Three key variations in administrative burden for staff stemmed from (1) whether universities decided to require students to respond to the grant invitation versus auto-award, (2) whether they required activities in order to receive the award, and (3) whether institutions conducted a degree audit to determine eligibility versus choosing a credit threshold. Those decisions were intentional and related to a desire to ration effectively. Staff who required a response from students and those who added additional activities articulated a desire to ensure that students were aware of the support and engaged in the process of getting to the degree. Some echoed Nietzen (2019), "Recipients need to take ownership of the completion goal. An effective means to put some student skin-in-the-game is to have them sign a contract that specifies the terms and requirements of their grants." These requirements, however, increased the burden not only for staff but also for students.

While administrative burden was lower for students than staff across the board—it was moderate at four universities, low at one, and high at two others—it was still common. The potential benefits of that burden include more targeted support to students who are most engaged; the potential drawback is that students who may need the support more are less likely to receive it due to administrative burden. This is consistent across research on other programs. For example, in the Iowa State University program described earlier, of the 98 students deemed eligible, just 60 received funding. The financial aid office reported that the other 38 "either paid their bill using other means or failed to complete a required financial aid counseling session" with a staff member in the Student Loan Education Office (Krapfl, 2018).

The use of variable grant amounts and multiple eligibility criteria were especially common across universities. This creates burden for staff and students, as there is less clarity on who receives exactly how much money and why. At the same time, it may be necessary in order to comply with Title IV rules and not overaward students, and also in order to ration resources when demand exceeds supply. Virtually all staff we spoke with felt it was important to carefully examine progress towards the degree, unmet need, and financial strength—at minimum—in order to award completion grants.

NEXUS

Emerging practices in higher education often trend rather quickly, setting off widespread adoption even before much evidence on efficacy is available. This is somewhat less common in financial aid administration, since the number of rules and requirements tends to impede innovation. Nonetheless, a growing focus on completion and interest in removing students' financial hurdles has led to a rapid proliferation of completion grant programs.

This study is among the first to take a close look at how completion grant programs are administered. While often described as if they were a single practice, this study shows that completion grant programs are hardly a monolithic practice. Rather, they are institutionally constructed efforts that reflect the knowledge, beliefs, and dispositions of their creators and those who administer them. In fact, even when institutions are given a structured program model the intricacies involved in awarding aid at each institution make it extremely difficult to have common implementation. The resulting variation is meaningful for the experiences of both staff and students. We illustrate that by exploring variation in how program design relates to administrative burden. There are clearly many mechanisms increasing burden for both staff and students and some of this relates to staff discretion.

A key question is whether it is possible to develop and implement a simplified completion grant program design that involves minimal administrative burden while maximizing impact. Would such a program effectively support students and promote degree completion? Table 4 describes the elements of a simplified model that based on our research, we posit would enhance program efficacy, diminish inequality, and minimize administrative burden. While these elements maintain some complexity in terms of grant amount and eligibility criteria, the approach simplifies the rest of the program. Importantly, the model identifies the intent of each element, which allow institutions flexibility to implement according to their institutional context. For example, we suggest a timeline for the process focusing on key financial aid process points rather than on specific dates.

Table 4. Simplified Completion Grant Program Elements with Minimal Administrative Burden

Program Element	
Grant Amount	Variable within a limited range: \$1,000-
	\$2,000
Eligibility Criteria	Numerous but chosen to maximize
	automation
Eligibility Process	Simple; single assessment
Requirements for initial receipt	Auto-award; encouragement to do activities
	but no requirement
Requirements for continued	Encouragement to do activities but no
receipt	requirement

We urge higher educational professionals to attend to elements of program design as they create completion grant programs, and in particular to note that at this point there is no single right way to run these innovations. Perhaps most importantly, we recommend those seeking to implement completion grant programs consider the intent and aims behind any programmatic element chosen and critically consider how unconscious bias or unfounded beliefs might unintentionally limit the effectiveness of a program (Fording & Schram, 2011). For instance, eligibility criteria that require students to have maxed out their available student loans will disproportionally limit awards to student populations who may have well-founded cultural aversions to borrowing, specifically Black and Latinx students. Other efforts to eliminate "bad apples" for the program may backfire, as administrative burden for staff and students taxes both (Schuck & Zeckhauser, 2010). Researchers evaluating financial aid programs should also attend to this concern, as financial aid is about more than money—it is an experience driven by an implementation process (Goldrick-Rab, 2016). That process may have important effects for students that amplify or diminish the effects of the funds.

Indeed throughout this ongoing study, the research team and institutional partners wrestled with the difficulties of developing equitable financial aid strategies that effectively achieve institutions inclusion. Such structures are often times, on their face, may be perceived as being 'unfair'. Realistically, all need-based aid is purposefully unequally applied and thereby targets limited resources to those most in need to maximize communal impact and societal benefit. Herein lies a fundamental challenge and opportunity for higher education leaders – transforming the structures, practices, and policies that make up the system of

higher education to meet the evolving needs of our society – namely access, success, and equity for the $21^{\rm st}$ century and beyond.

REFERENCES

- Abdul-Alim, J. (2016a). <u>'Completion Grants' Best Way to Assist Students Lacking Cash</u>. *Diverse Issues in Higher Education*.
- (2016b). <u>Retention grant keeping dreams alive at Georgia State</u>. *Diverse Issues in Higher Education*.
- Anderson, D.M., Broton K.M., Goldrick-Rab, S., & Kelchen, R. (2019).

 <u>Experimental evidence on the impacts of need-based financial aid:</u>

 <u>Longitudinal assessment of the Wisconsin Scholars grant</u>. *Journal of Policy Analysis and Management*, 39, 720-739.
- Ascendium Education Group. (2019). UIA Completion Grants.
- Association of Public and Land-grant Universities (APLU) & Coalition of Urban Serving Universities. (2016). Foiling the drop-out trap: Completion grant practices for retaining and graduating students. Washington, DC.
- Baker-Smith, C., Coca, V., Looker, E., & Goldrick-Rab, S. (2019). <u>Guide to Assessing Basic Needs Insecurity in Higher Education</u>. Hope Center for College, Community, and Justice.
- Bell, E. & Smith, K. (2019). Perspectives from the Front-line: Street-level Bureaucrats, Administrative Burden and Access to Oklahoma's Promise. *EasyChair Pre-Print 1093*.
- Betancourt, N. & Wolff-Eisenberg, C. (2019). <u>Surveying Community College Students: Strategies for Maximizing Engagement and Increasing Participation</u>. Ithaka S&R.
- Bettinger, E. (2015). Need-based aid and college persistence: The effects of the Ohio College Opportunity Grant. Educational Evaluation and Policy Analysis, 37(1), 102-119.
- Bettinger, E., Gurantz, O., Kawano, L., & Sacerdote, B. (2016). <u>The long-run impacts of merit aid: Evidence from California's Cal Grant</u>. NBER Working Paper No. 22347.

- Boatman, A., Evans., J.E., & Soliz, A. (2017). <u>Understanding loan aversion in education: Evidence from high school seniors, community college students, and adults</u>. *AERA Open, 3*(1), 1-16.
- Broton, K., Goldrick-Rab, S., & Benson, J. (2016). Working for college: The causal impacts of financial grants on undergraduate employment. *Educational Evaluation and Policy Analysis*, 38(3), 477-494.
- Carruthers, C. K., & Ozek, U. (2016). <u>Losing HOPE: Financial aid and the line</u> between college and work. *Economics of Education Review*, 53, 1-15.
- Castleman, B. L., & Long, B. T. (2016). Looking beyond enrollment: The causal effect of need-based grants on college access, persistence, and graduation. *Journal of Labor Economics*, 34(4), 1023-1073. Also available as *NBER Working Paper No. 19306*.
- Christensen, J., Aarøe, L., Baekgaard, M., Herd, P., Moynihan, D.P. (2019).

 <u>Human capital and administrative burden: The role of cognitive resources in citizen-state interactions</u>. *Public Administration Review*, 80(1), 127-136.
- Diamond, L. (2011). Few hold onto HOPE for whole time in college. Atlanta Journal-Constitution.
- Dynarski, S., & Scott-Clayton, J. (2013). Financial aid policy: Lessons from research. *The Future of Children*, 23(1), 67-91.
- Eller, E. (2018). For students teetering on the edge financially, micro-grants help them finish college. *Hechinger Report*.
- Fording, R. & Schram, S. (2011). Disciplining the Poor: Neoliberal Paternalism and the Persistent Power of Race. University of Chicago Press.
- Georgia State University. (2018). Panther Retention Grants.
- Goldrick-Rab, S. (2016). Paying the price: College costs, financial aid, and the betrayal of the American dream. Chicago, IL: University of Chicago Press.
- Goldrick-Rab, S., & Kelchen, R. (2015). Making sense of loan aversion: Evidence from Wisconsin. In Hershbein, B., & Hollenbeck, K. M. (Eds.). *Student*

- Loans and the Dynamics of Debt (pp. 317-378). Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Goldrick-Rab, S., Kelchen, R., Harris, D. N., & Benson, J. (2016). Reducing income inequality in educational attainment: Experimental evidence on the impact of financial aid on college completion. American Journal of Sociology, 121(6), 1762–1817.
- Gierdowski, D.C. (2019). ECAR Study of Undergraduate Students and Information Technology. Research report. Louisville, CO: ECAR.
- Gross, J., Bell, A., & Berry, M. (2016). Keeping the PROMISE: Factors affecting time to merit scholarship loss. *Journal of College Access*, 2(1), 31–56.
- Heinrich, C. (2016). The Bite of Administrative Burden: A Theoretical and Empirical Investigation. Journal of Public Administration Research and Theory, 26(3), 403–20.
- Heinrich, C, & Brill, R. (2015). Stopped in the Name of the Law: Administrative Burden and Its Implications for Cash Transfer Program Effectiveness. World Development, 72, 277–95.
- Herd, P, & Moynihan, D.P. (2018). *Administrative Burden: Policymaking by Other Means*. New York, NY: Russell Sage Foundation.
- Katsinas, S., Davis, J., Friedel, J., Koh, J., & Grant, P. (2013). *The impact of new Pell Grant restrictions on community colleges: A three state study of Alabama, Arkansas, and Mississippi*. University of Alabama Education Policy Center.
- Kolek, Ethan A. (2012). <u>"The Silent Majority: An Examination Of Nonresponse In College Student Surveys."</u> Open Access Dissertations. 613.
- Krapfl, A. (2018). <u>Sixty ISU seniors receive first completion grants</u>. *Inside Iowa State for faculty and staff*.
- Kruger, K., Parnell, A., & Wesaw, A. (2016). *Landscape analysis of emergency aid programs*. National Association of Personnel Administrators.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newburg Park, CA: SAGE Publications.

- Lipsky, M. (2010). Street-Level Bureaucracy: Dilemmas of the Individual in Public Service, 30th Anniversary Expanded Edition. New York: Russell Sage Foundation.
- Mabel, Z. (2015). <u>Aiding or dissuading? The effect of need-based aid on late-stage progress to degree completion</u>. Working paper.
- Mabel, Z., & Britton, T. (2018). Leaving late: Understanding the extent and predictors of college late departure. *Social Science Research*, 69, 34-51.
- Mason, K. C. (2015). The difference \$900 can make in college graduation rates. *PBS News Hour*.
- NCES. (2011). 2004/09 Beginning Postsecondary Students Longitudinal Study (BPS:04/09). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education Washington, DC.
- Nietzel, M. (2019). <u>College Completion Grants: The Financial Aid Every College Should Offer</u>. *Forbes*.
- Renick, T. (2016). Targeting aid using analytics: Impacts on at-risk populations. Presentation to Gates Foundation's Expanding Our Commitment to Emergency Aid, Washington DC.
- Rosenbaum, J., Ahearn, C., Becker, K., & Rosenbaum, J. (2015). *The new forgotten half and research directions to support them*. New York: William T. Grant Foundation.
- Schuck, P. & Zeckhauser, R. (2010). *Targeting in Social Programs: Avoiding Bad Bets, Removing Bad Apples*. Brookings Institution Press.
- Schudde, L., & Scott-Clayton, J. (2016). Pell grants as performance-based scholarships? An examination of satisfactory academic progress requirements in the nation's largest need-based aid program. *Research in Higher Education*, 57(8), 1-25.
- Sjoquist, D. L., & Winters, J. V. (2015). State merit-based financial aid programs and college attainment. *Journal of Regional Science*, 55(3), 364–390.

- Soss, J., Fording, R., & Schram, S. (2011). *Disciplining the Poor: Neoliberal Paternalism and the Persistent Power of Race*. London: University of Chicago Press.
- U.S. Department of Education. (2017). Affording degree completion: A study of completion grants at accessible public access universities. Washington, D.C.: Institute of Education Sciences.
- Wei, C. C., & Horn, L. (2009). A profile of successful Pell Grant recipients: Time to bachelor's degree and early graduate school enrollment. Statistical Analysis Report. NCES 2009-156. National Center for Education Statistics.
- Zhang, L., Hu, S., & Sensenig, V. (2013). The effect of Florida's Bright Futures

 Program on college enrollment and degree production: An aggregatedlevel analysis. Research in Higher Education, 54(7), 746-674.