



**Making the Grade:  
The Academic Side of College Life among Financial Aid Recipients**

Peter Kinsley  
Senior Researcher  
Wisconsin HOPE Lab  
University of Wisconsin-Madison  
&  
Sara Goldrick-Rab  
Professor of Educational Policy Studies and Sociology  
University of Wisconsin-Madison

June 2015

Acknowledgements: This study was made possible by the Bill and Melinda Gates Foundation, Great Lakes Higher Education Guaranty Corporation, Spencer Foundation, William T. Grant Foundation, Wisconsin Center for the Advancement of Postsecondary Education, and an anonymous donor. It was conducted in partnership with the Fund for Wisconsin Scholars, the Higher Educational Aids Board, the University of Wisconsin System, and the Wisconsin Technical College System. The authors would like to thank the following individuals for significant contributions: Alison Bowman, Julie Minikel-Lacocque, Derria Byrd, Courtney Luedke, Frank Honts, Robert Kelchen, Douglas Harris, and James Benson. All opinions and errors are those of the authors. Direct all questions and other correspondence to the first author at [pkinsley@wisc.edu](mailto:pkinsley@wisc.edu).

## **Abstract**

College enrollment rates among students from working class families are at an all-time high. Yet time to degree completion and overall completion rates for this group—particularly those who qualify for need-based financial aid—continue to lag behind students from more affluent families. Increasingly, higher education leaders and policy-makers have turned to performance-based financial aid programs as one way to address this disparity. By tying financial aid eligibility to minimum academic performance standards in college, it is thought that greater academic commitment can be promoted. Underlying these programs is the untested assumption that students who rely on aid need incentives because they lack academic focus and care insufficiently about academic performance. In this chapter we present evidence from a mixed-methods study of federal Pell Grant recipients which directly challenges this assumption. Further, we leverage a randomized experiment of additional need-based financial aid to show that tying aid to performance standards may unintentionally induce students to reduce enrollment intensity and thereby extend time to degree in an effort to “make the grade.”

## Introduction

During the first decade of the 21<sup>st</sup> century, college enrollment rates hit an historic high, as 70 percent of high school graduates went on to enroll in some form of postsecondary education. First-time college students were a more diverse group than ever before, as representation of people from low to moderate-income families and racial/ethnic minorities had increased substantially. Many of the new undergraduates were the first in their family to attend college. Policymakers, community organizations, schools, teachers, and parents were all proud of this accomplishment, which stemmed from more than two decades of work to increase opportunities for higher education.

But quickly, new concerns arose. The “college completion challenge” emerged, as statistics indicated that many of these new students were starting but not finishing degrees (Bailey & Dynarski, 2011). College costs, which were higher than ever before, added to these concerns. An unfinished degree was not simply a goal not met, but was also accompanied by debt that was not easy to pay off.

Moreover, a new and widely promoted study sounded warning bells: today’s students were “academically adrift,” unfocused on school, and not learning much at all (Arum & Roksa, 2011). They were spending more time in college but not accruing more credits, and this raised questions about what they were doing with their time (Bound, Lovenheim & Turner, 2009). One analysis suggested that perhaps these new undergraduates were focused more on leisure than academics, and simply did not prioritize their studies (Babcock & Marks, 2011). And so the focus, many argued, had to shift in order to create incentives for students to get “on track” to degrees, enrolling for more credits, and establishing “academic momentum” (Attewell et al., 2012, Complete College America, 2011).

While the national data included students from across the socioeconomic landscape and all types of colleges and universities—public and private—the discourse and increasingly the policy recommendations focused attention on one group of students: financial aid recipients. For

as college enrollment expanded, the economy also contracted during the Great Recession, and expenditures on financial aid swelled. These two new concerns—college completion and academic focus on the one hand, and spending on financial aid programs on the other—were brought together in conversations among higher education leaders across the nation. The focus on bringing more students from low and moderate-income families to graduation, we were told, meant taking steps to push them to focus on school. Helping them pay for college was not enough—we had to create incentives for them to achieve. The most popular recommendation for how to do this is to tie eligibility for financial aid to academic performance. As prominent financial aid analyst Sandy Baum put it, “Just giving money to those students is not enough...It’s more about providing incentive and support than it is about just rewarding people” (Woodhouse, 2015).

### **Degree Completion and Academic Commitment among Financial Aid Recipients**

To be sure, rates of college attainment among recipients of financial aid are lower than those of other students. Forty-five percent of Pell recipients do not persist from their first year of college to their second (Schudde & Scott-Clayton, 2014). Decades of research studies have documented the reasons for this, describing in great detail how growing up without sufficient resources compromises academic and social preparation for college, how living without enough funds in college changes the college experience, and how the pulls of work and family sometimes divert financial aid recipients from finishing degrees (Goldrick-Rab, Kelchen, Harris, & Benson, 2015; Lareau & Cox, 2011; Long, Conger, & Iatarola, 2012; Belley & Lochner, 2007; Benson & Goldrick-Rab, 2011; Bozick, 2007; Roksa & Velez, 2010). So it is entirely unsurprising that recipients of the federal Pell Grant—the nation’s largest and most generous

program for students with financial need—complete bachelor’s degrees at a rate far lower than their non-Pell counterparts.<sup>1</sup>

College students are also taking longer than ever to complete their degrees, and this is particularly the case among students from working class families (Bound, Lovenheim, & Turner, 2009). Although four years has traditionally been considered the standard time necessary to complete a bachelor’s degree, evidence indicates that relatively few students are able to meet that benchmark. Among the cohort of students entering public four-year colleges and universities in 2003-04, for example, only 28 percent had attained a bachelor’s degree four years later.<sup>2</sup> Among Pell recipients that rate was just 21 percent, compared to 31 percent among their more affluent counterparts. One response to this trend has been a greater emphasis on getting students to maintain a consistent enrollment intensity of 15 credits per term in order to keep them “on track” to timely degree completion.<sup>3</sup> Reducing overall time to degree, it is hoped, will lessen the considerable burden of financing college placed on families, and cut the social costs borne by taxpayers when students must depend on federal and state financial aid for longer periods.

### *Academic Commitment*

The questions raised by recent debates over how to improve rates of degree completion—and specifically “on time” degree completion—are in some ways new. They focus on a factor that has received less attention in the past—academic commitment. The commitment to school, to studying, and to making good grades is implied by this debate to be

<sup>1</sup> Among dependent students in the federal Beginning Postsecondary Students Longitudinal Study (BPS: 04/09), Pell grant recipients who started at public 4-year institutions earned bachelor’s degrees at a rate of 54 percent within six years compared to a rate of 66 percent among non-Pell students.

<sup>2</sup> Authors’ calculations using 2003-04 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS: 04/09). Sample limited to dependent students starting college at public 4-year institutions.

<sup>3</sup> Enrollment in 15 credits per term is based on the 120 credits typically required to complete a bachelor’s degree. National programs such as Complete College America’s “15 to Finish” program emphasize providing incentives for enrollment in 15 credits including through financial aid policies. (Complete College America, 2014).

lacking among college students. That challenge is given precedence in this discussion, as it is thought to *cause* declines in degree completion, in part by slowing progress through college. Before reviewing the evidence for and against this claim, let us first consider how a relationship between academic commitment, family income, and degree completion might play out. What are the underlying mechanisms of that relationship, and how do they operate?

Research by Richard Arum and Josipa Roksa, popularized in their book “Academically Adrift,” suggests one very popular explanation: colleges and universities are not challenging students to focus on academics, and students are responding to that message by allocating their time and effort elsewhere (Arum & Roksa, 2011). The authors look to data from a paper Philip Babcock and Mindy Marks called “Leisure College USA,” which suggests that over time, undergraduates are spending less time studying (Babcock & Marks, 2010). If we assume that time spent studying is productive and leads to greater learning and academic performance, then time spent not studying will reduce degree completion. The critical factor, then, is effort directed at schooling. If students lack it, they will not succeed.

There are alternative reasons, however, why financial aid recipients might appear to have less academic commitment in school and complete fewer degrees, and these have little to do with effort per se. Jeffrey Arnett describes the multiple purposes of college today, and notes that because of the lengthening of childhood (facilitated by economic changes that lead fewer families to send their children to work at very young ages), many students are making a transition to adulthood while enrolled in college (Arnett, 2014). Because children from working class families become adults at younger ages than their wealthier peers, it may be that their roles as adults in their families compete with their time for school activities (Burton, 2007; Furstenburg, 2010; Settersten, 2012). Their commitment to school may still be strong, but their time commitment is less.

Other constraints facing financial aid recipients may have similar effects. Students with less ability to pay the price of attending college are more likely to work long hours (Benson &

Goldrick-Rab, 2011; Schudde, 2013). While lower-income students receive more grant aid, their net price of attendance relative to their financial resources is much higher than it is for their better-off peers. A substantial body of research indicates that this inhibits their ability to spend time on school activities and instead diverts them off-campus to work (Stinebrickner & Stinebrickner, 2003; Bozick, 2007; Roksa & Velez, 2010).

Finally, the hypothesized relationships between financial aid receipt, lower academic commitment, and reduced degree completion might have something to do with financial aid policy itself. While most aid distributed based on financial need is commonly assumed to include no academic requirements, in fact the Pell Grant includes a strong requirement for continued receipt in the form of “satisfactory academic progress” standards (SAP). In effect, this standard means that in order to maintain their Pell Grant from one year to the next, students must keep their grades above a designated threshold (usually a 2.0 average) and also complete a certain fraction of their coursework in order to make progress towards degrees. The former requirement is clearer and more easily communicated than the latter—the message “You must get at least a C in your classes” is simpler than “You must complete two-thirds of your classes in a given term.” It is possible that these requirements, and perhaps even more importantly, a partial understanding of these requirements, alter student behavior by creating incentives to focus on grades first—rather than pace of progress, time-to-degree, or even degree completion itself.

In the mid-1960s, sociologist Howard Becker explored the academic lives of college students in a study that sought to examine the student perspective on college life (Becker & Hughes, 1995). In a study of students at the University of Kansas conducted over a two-year period, Becker and his colleagues found that central to student life was what he called “The Grade Point Average Perspective.” Recognizing that they could not stay in college or progress towards degree completion without making “adequate” grades and understanding that “doing good work” meant getting a “good” grade point average, undergraduates felt that:

“...a student should do whatever is necessary to get ‘good’ grades, not expending effort on any other goal in the academic area until that has been achieved” (1995, p. 34).

Becker’s ethnography revealed that students were deeply fearful of the consequences of “failing,” and focused on their GPA above all else, sometimes taking actions that compromised other priorities, or even their integrity (e.g. by engaging in cheating).

The conditions facing students have changed over time, and in ways that might exacerbate a focus on the GPA perspective. Rather than modify the ways in which grades are attained, or turn away from the use of grades entirely, colleges and universities are now quite focused on grades—and federal policy has tied financial aid to grades as well. Given the growing difficulties many students face in paying for college, it may be that via these channels, the GPA perspective is a driving force in college life that works against stated college completion goals. That is the key hypothesis we investigate in this chapter.

### *Empirical Evidence*

Are financial aid recipients really learning less in college? Are they studying less? Existing research does not tell us much. Neither Arum and Roksa nor Babcock and Marks disaggregate their data to examine whether financial aid recipients are less challenged by their colleges and universities or spend less time studying. To the best of our knowledge, there are no studies exploring the time use of Pell recipients or their academic efforts. All that we know is that they have longer time-to-degree and lower rates of degree completion.

There is, however, a recent study that indicates that Pell recipients are struggling with satisfactory academic progress (SAP) standards.<sup>4</sup> Lauren Schudde and Judith Scott-Clayton (2014) outline those challenges using national and state-level data. They find that almost one-fifth of Pell recipients fail to meet the GPA requirement associated with SAP, and that failing that requirement reduces the chances that students will persist to their second year of college. The

<sup>4</sup> As noted earlier, SAP requirements typically specify maintaining a minimum 2.0 cumulative GPA and completing at least two thirds of attempted courses.

authors are careful to point out that “poor performance is by no means limited to Pell recipients; the rates of low academic achievement (i.e., falling below a 2.0 cumulative GPA) are only modestly lower among first-year students not receiving the Pell” (p. 2). But the stakes are much higher for Pell recipients, who could lose access to more than \$5,000 in Pell grant support, along with other federal, state, and private grants, and access to student loans if they do not meet SAP standards.

Research on financial aid programs that ties continued receipt of financial aid to academic performance in college suggests that the approach may result in unintended consequences. The Georgia HOPE program is a statewide effort to increase college attainment and keep more talented students in state. Studies of the HOPE program indicate that it has modest, positive impacts on those outcomes (Dynarski, 2000; Sjoquist & Winters, 2013). At the same time, the program’s requirements—which include a 3.0 average—also seem to push students to take easier courses, and may even lead to a reduction of students majoring in science, technology, mathematics, and engineering fields. Dee and Jackson (1999) studied the likelihood of losing the HOPE scholarship among all the HOPE Scholars who enrolled at the Georgia Institute of Technology, and concluded that those who enroll in science, computing, and engineering were significantly more likely to lose HOPE.

Cornwell, Lee, and Mustard (2005) used data from the longitudinal records of all undergraduates who enrolled at the University of Georgia between 1989 and 1997, and identified the scholarship’s influence on academic outcomes by comparing the behavior of in-state students before and after HOPE was implemented with the behavior of comparable out-of-state students, who are ineligible for the award. They found that HOPE decreased full-load enrollments and increased course withdrawals among resident freshmen. Moreover, the scholarship’s influence on course-taking behavior was concentrated on students whose GPAs placed them on or below the scholarship-retention margin.

The evidence obtained from the Georgia HOPE scholarship, however, may not generalize to Pell recipients. Since HOPE requires a strong high school academic record, and many students from working class families do not obtain those records, relatively few students on HOPE also received Pell. It is possible that differential impacts would be observed for students with even more economic need. It is also possible that the results from Georgia are biased, given that the HOPE scholarship was not randomly assigned among students. It may simply be that in-state students receiving HOPE were more likely, a priori and independent of the scholarship, to be less academically engaged.

In the only randomized experiment conducted with financial aid tied to academic performance—MDRC’s performance-based scholarship demonstration currently being implemented in six states—researchers are examining what happens when Pell recipients are given *additional funds* tied to specific performance criteria, which often includes a GPA requirement and/or credit requirements (Richburg-Hayes, et al., 2013). Early results indicate that students receiving these scholarships earn some additional credits during the first year of college, but do not appear more likely to remain in school. Effects on the pace of progress towards degrees or course-taking patterns have not yet been examined.

### **Research Questions**

In response to clear concerns about the academic performance of financial aid recipients, the robust hypotheses generated from prior research and described above, and the limited body of empirical evidence available to date, we pose the following research questions in this chapter:

1. Do Pell recipients appear to care about academic performance? How do they talk about academic performance—how important is it to them?
2. To what extent do Pell recipients appear to utilize grades in their decisions to maintain or change their enrollment intensity from one term to the next, and thus make timely progress to degree completion?

3. How does financial aid affect the relationship between academic performance and subsequent enrollment intensity decisions from term to term? Does this relationship differ for students with marginal academic performance, and thus most affected by the SAP standards in financial aid policy? How does it affect the time students spend on school?

## **Methods**

In order to examine these questions, we use a mixed-methods research design with an uncommonly rich longitudinal study of Pell recipients, the Wisconsin Scholars Longitudinal Study (WSLS). We analyze data from college transcripts, financial aid records, surveys, and in-depth interviews to explore how low-income undergraduates talk about their academic performance in college, and examine how their term-to-term credit enrollment decisions may be affected by grades and financial aid requirements. We do this by leveraging a randomized experiment embedded within the WSLS in which an additional grant from a private foundation (amounting to \$3,500 per year) was distributed to a fraction of study participants.<sup>5</sup> That additional grant shared the Pell grant requirements: students had to meet SAP standards, or they would not be able to retain the grant. A student who lost that private grant because of a failure to meet SAP would see their price of attendance for the next year rise by \$3,500 in addition to whatever other financial aid they also lost.

### *Sample*

The full WSLS sample includes a stratified random selection of 1,500 students starting college at 13 public four-year universities in the state of Wisconsin in the fall of 2008. The WSLS participants were chosen at random from among all Wisconsin public high school graduates who enrolled full time for at least 12 credits during their first term at a Wisconsin public university in fall 2008, and who received the federal Pell Grant with at least one dollar of

<sup>5</sup> For a comprehensive description of the WSLS, see (Goldrick-Rab, Kelchen, Harris, & Benson, 2015). <http://www.irp.wisc.edu/publications/dps/pdfs/dp139312rev.pdf>.

remaining unmet need. WSLs participants are therefore generally representative of the population of Wisconsin high school graduates from low-income families who attend public colleges and universities in Wisconsin.

In this chapter we use data from three subsamples of WSLs participants (Table 1). The first of these—Subsample 1—is comprised of 879 students who completed a comprehensive baseline survey during the fall term of their freshman year, as well as a follow-up survey the fall term of their sophomore year. We use survey data from this group to examine the academic attitudes of students in our sample, and whether those attitudes remained consistent from freshman to sophomore years. The second subsample—Subsample 2—is comprised of 778 WSLs participants who consented to the use of their college administrative records, including grades and enrollment data, and who were recorded as enrolled in classes during the first two weeks of their second term during their first year. We use data from this sample to address the question of whether grades play into students' decisions about the number of credits to take, as well as the question of whether financial aid grade requirements moderate that relationship. Finally, we draw on interview data from 37 WSLs participants during their first two years of college, and specifically how they talk about their grades and academic performance. This group represents a stratified random sample of WSLs participants selected at the time of study intake in fall 2008.

Table 1: Demographic and financial characteristics of the full WSLS sample and research subsamples

	Full Sample (n=1,500)	Subsample 1 (n=879)	Subsample 2 (n=778)	Interview (n=37)
<i>Demographic</i>				
Female (%)	57.4	61.7	61.4	56.8
Race/Ethnicity (%)				
White	70.0	71.5	72.5	38
African American	9.3	7.9	8.2	16.2
Hispanic	6.9	6.3	5.9	21.6
Asian	10.0	10.7	9.9	16.2
Other	3.9	3.7	3.5	8.1
First generation college student (%)	42.8	39.5	40.1	45.9
Age	18.25 (0.63)	18.19 (0.46)	18.23 (0.48)	18.46 (0.87)
<i>Financial</i>				
Zero expected family contribution (%)	32.7	30.1	30.6	32.4
Expected family contribution (\$K)	1.34 (1.37)	1.39 (1.36)	1.35 (1.34)	1.08 (1.31)
Parents' adjusted gross income (\$K)	28.63 (18.45)	29.42 (18.49)	28.89 (18.98)	27.19 (18.95)
Parents' cash/checking/savings (\$K)	2.60 (7.07)	3.02 (8.19)	2.71 (7.54)	2.14 (4.50)

Notes: Data from student's 2008/09 Free Application for Federal Student Aid (FAFSA). Race/ethnicity from year 1 survey (full sample n=1,142).

- (1) Asian category includes East Asian and Southeast Asian.
- (2) First-generation status defined as neither parent having a college degree.
- (3) Standard deviations in parentheses.
- (4) Percentages may not add up to 100 due to rounding.

### *The Wisconsin Scholars Grant*

Our third research question asks how financial aid affects the relationship between academic performance and subsequent enrollment intensity decisions from term to term. To answer this question, we examine how offer of the Wisconsin Scholars Grant (WSG) may have affected enrollment intensity decisions among study participants.

The Wisconsin Scholars Grant is a privately funded grant started in 2008 and supported by a \$175 million endowment from the Fund for Wisconsin Scholars (FFWS).<sup>6</sup> The WSG

<sup>6</sup> More information on the Fund for Wisconsin Scholars is at [www.ffws.org](http://www.ffws.org).

program provides students a \$3,500 grant per year that is renewable for up to five years, with a total potential maximum award of \$17,500 per student. On average, for students in the entering class of 2008, this amounted to 20 percent of the estimated costs of attendance (defined as tuition and fees, room and board, books, transportation, and other expenses), including 56 percent of tuition and fees at the median university. Students were eligible for the WSG if they were Wisconsin residents who attended and graduated from a state public high school within three years of matriculating to one of the state's 13 public universities, where they enrolled for at least 12 credits, completed the Free Application for Federal Student Aid (FAFSA) and qualified for a federal Pell Grant, while still possessing unmet need (excluding loans) of at least \$1.

An important requirement for maintaining Pell eligibility, and therefore for maintaining the WSG from one year to the next, is to make satisfactory academic progress (SAP) each year. The potential financial consequences of not making SAP among are therefore much higher for WSG recipients. Not only does failure to make SAP mean losing the Pell award, but also losing the WSG—a total amounting to over \$8000 per year for WSLs students who qualified for the maximum Pell grant in 2008-09. Given the considerable rise in stakes, we hypothesize that concern over making SAP—and particularly in maintaining a 2.0 GPA—was even stronger among WSLs students offered the WSG, thereby creating an incentive to focus on grades before pace of progress, time-to-degree, or even degree completion itself.

### *Data*

The quantitative analyses rely on data from several sources. The descriptive analysis of academic attitudes during early college presented in Table 3 are derived from two surveys, a year 1 survey administered to the full WSLs sample during their first fall term at college, and a follow-up survey administered one year later during the fall of their second year. Approximately three-quarters (76 percent) of the full WSLs sample completed the year 1 survey (n=1,142), and 77 percent of those participants also completed the year 2 follow up survey (n=879).

The variables used in our regression models (Table 2) are based on student-level administrative data taken from a combination of state and national student records. Term credit enrollment and term grade point averages are measured using centralized student academic record data obtained from the University of Wisconsin System. Student demographic and financial information come from the student's Free Application for Federal Student Aid (FAFSA) for the academic year 2008-09. ACT scores come directly from ACT records.

We also employ data from semi-structured in-depth interviews with 37 WSLs participants. A stratified random sample of WSLs participants was selected for interviewing from all those who agreed to an interview at the time of study intake in fall 2008. The sampling process consisted of constructing "cells" based on participant status as a financial aid recipient, race, and gender. From within those cells, students were selected at random and invited for interviews. A team of five interviewers, including both authors of this chapter, subsequently contacted and gained consent to interview the students in the sample. As an incentive, students were given \$20 per interview to thank them for their time. Between fall 2008 and fall 2010, we conducted interviews at six month intervals, and an average of three total interviews were completed with each respondent.

### *Analytic Strategy*

The analyses in this chapter primarily use a parallel mixed data analysis strategy (Teddlie & Tashakkori, 2009) where quantitative and qualitative analyses were conducted independently. We used an inductive categorical approach (Thomas, 2006) to code the interview data in order to facilitate comparisons across interviews. This involved iteratively coding interviews for themes related to academics at college, and checking those themes against the quantitative data in an attempt to cross-confirm what we were seeing and to provide deeper contextual information on the results of the quantitative models.

To address the first research question on whether college students from low-income backgrounds appear to care about academic performance, we report descriptive statistics on a

number of key academic attitude measures taken from the WSLs year 1 survey. If the measure was repeated on the second year survey, we also report year 1 to year 2 change scores, as well as the significance of those changes via simple paired sample t-tests. Finally, to examine how low-income college students talk about the importance of academic performance, we turn to the qualitative interview data and highlight specific common themes identified via the data coding procedure described above.

The second and third research questions ask whether low-income students appear to utilize grades in their decision to maintain or change their enrollment intensity from one term to the next, and whether being offered additional financial aid moderate that relationship. To address these questions we use logistic regression models to examine whether GPA and/or WSG offer during the first term of college were related to the probability of enrolling in a “four-year” graduation track (i.e. 15 or more credits) the following term.<sup>7</sup> To account for potential confounding factors between term 1 GPA, WSG offer, and term 2 credit enrollment, we include a number of covariates as controls in our final models (Table 2). We also account for unobserved institutional heterogeneity associated with academic performance and enrollment intensity by including campus fixed effects in our final two models.

<sup>7</sup> We specify our outcome as total attempted credits (i.e. measured at the end of the course add/drop period) rather than total completed credits (i.e. measured at the end of the term).

Table 2: Regression model variables

	Mean	SD	Range
Outcome and Predictors			
Term 2: Enrolled in 15+ credits	0.55	0.50	0-1
Term 1 GPA	2.72	0.86	0.1-4
Wisconsin Scholars Grant offer	0.43	0.49	0-1
Covariates			
<i>Demographics</i>			
Female	0.61	0.49	0-1
Race/Ethnicity			
White	0.72	0.45	0-1
African American	0.08	0.27	0-1
Hispanic	0.06	0.24	0-1
Asian	0.10	0.30	0-1
Other	0.03	0.18	0-1
First generation college student	0.40	0.49	0-1
<i>Academics</i>			
ACT composite score	21.85	3.76	13-33
Needs remediation	0.36	0.48	0-1
Pre-matriculation college credits	0.21	0.41	0-1
Term 1: Earned 15+ credits	0.49	0.50	0-1
<i>Finances</i>			
Expected Family Contribution (\$K)	1.35	1.34	0-4.03
Academic Competitiveness Grant	0.79	0.41	0-1

N=778

### The Academic Orientation of Pell Recipients

Table 3 describes how WSLs participants viewed academics during their initial semesters in college as represented by responses on surveys conducted during their first two years. We group survey responses according to four themes—goals, ability, organization, and rules/rewards.

The first of these themes, *goals*, refers to the role that academics play in a student's decision to attend college, to attend a particular institution, and more broadly, in the student's degree aspirations. Contrary to the notion that working class students enter college strictly for instrumental reasons to enhance employability and earnings, more than two-thirds (69 percent) of the study participants cited love of learning as an important factor in their decision to pursue

postsecondary education. Further, approximately two-thirds (67 percent) entered college with the intention to pursue a graduate degree after completing a bachelor's. Graduate degree aspirations cooled somewhat after the first year when the academic demands of college often set in. But at over 60 percent, they remained quite high into the second year of college.

Table 3: Student academic attitudes during early college

	Year 1	Year 2	Change
	%	%	%
<i>Goals</i>			
Entered college b/c likes learning	68.6	--	--
Plans to pursue a graduate degree	66.7	62.4	-4.3 **
<i>Ability</i>			
Believes is just as smart as classmates	68.9	70.1	1.2
Makes sure grades are good	60.1	59.7	0.4
Confident in getting 4.0 GPA	16.8	18.5	1.7
Organizes time and schedule well	49.5	55.7	6.2 ***
Confident in earning B.A.	88.9	87.8	-1.1
<i>Organization</i>			
Believes classes are interesting	40.4	41.7	1.3
Believes classes are difficult	34.4	51.1	16.7 ***
Not getting as much help as expected	14.3	--	--
Grades are lower than expected	45.6	--	--
<i>Rules &amp; Rewards</i>			
Believes effort and grades are connected	89.7	--	--
Believes college performance and life success are connected	87.8	--	--
Believes education pays off in future	93.6	--	--
Willing to sacrifice for better future	83.3	--	--

Notes: N=879. Reported significance based on paired sample t-test. \*\*p<.05; \*\*\*p<.01

We next examined, *ability*, which refers to the student's self-assessment of their ability to succeed academically in college. Most students in this sample believed that they were intellectually on par with their college peers—a belief which remained consistent into the second year. Most of the students also began college with an orientation to maintain good grades—an orientation they kept into the second year. Nevertheless, relatively few believed that they would

earn a 4.0 GPA in college. This may mean that WSLs participants brought with them a fairly realistic sense of their own academic abilities relative to the academic demands they would face.

When asked to assess their time management skills, less than half felt that they organized their time and schedule well during the first year. Though by the second year the rate had climbed to 56 percent, indicating that some of these skills had been developed, at least among a subset of students, during the previous twelve months. Those gains notwithstanding, a sizeable percentage of the sample continued to view time management as a challenge into their second year at college. Nearly all of the students (89 percent) felt confident in their ability to actually earn a bachelor's degree. There was little change in these feelings after they had attended college for a year.

The theme of *organization* refers to how students assess the academic demands placed upon them at college, as well as the academic resources available to them. Even though most study participants cited a desire to learn as a primary reason for pursuing postsecondary education, only around 40 percent found their classes interesting once they were enrolled. An even smaller percentage found classes challenging during the first year, though that number had significantly increased by year 2 to over half of the sample. The vast majority of the students (86 percent) felt that they were getting as much academic support as they had expected from their institution. Though to what extent that number reflected general satisfaction with the levels of support provided by the institutions, or simply low expectations of support on the part of the students, is not entirely clear. For the most part, students felt that their academic performance during their first term (as reflected by their test grades) was about what they had expected upon entry. Yet a sizeable percentage (46 percent) felt that they were underperforming academically relative to the expectations they had of themselves coming out of high school.

A few of the survey questions posed to the students touched on the *rules* and *rewards* of college academics—how students perceive the consequences of their academic performance during college. Nearly all of them expressed clear meritocratic beliefs about the relationship between individual academic effort in college and later life success. Nine out of ten, for example, strongly agreed with the statement that grades are directly connected to individual effort. Meanwhile, 88 percent strongly agreed with the statement that college performance and later life success are connected. The belief that a college education pays off financially in the future was nearly unanimous among students in the sample at 94 percent. Moreover, a clear majority of the students (83 percent) expressed a strong willingness to make sacrifices and work hard in college for that desired future.

### **The Centrality of Academic Performance**

The average WSLs participant entered college with ambitious postsecondary degree goals and a focus on maintaining good grades. In general, the Pell recipients we surveyed viewed college as a meritocratic undertaking where personal effort would not only lead to academic success in college, but by extension, to future life success. Nearly all expressed a strong willingness to work hard and make sacrifices to achieve their goals.

Interviews with study participants were consistent with the survey results, and revealed the extent to which academic performance and maintaining a strong GPA were central concerns to these students. Pell recipients often held themselves to high academic standards, and GPA was an important marker of success or failure in meeting those standards. Melanie,<sup>8</sup> a non-Hispanic white first-generation college student pursuing a business degree reflected on her academic performance:

“I feel really pretty good. I mean looking back there’s times when I wish I had studied harder for this test, or I wish I had worked harder in this class. [But] I think I’m sitting at a

<sup>8</sup> All names are pseudonyms.

pretty solid GPA. I'm at a 3.47 and I really want to be at a 3.5 or a little bit above because then that's honors."

Getting good grades was important to Melanie, and her financial aid depended on it. Although Melanie didn't receive the WSG, she did have a full Pell grant of \$4,731. The consequences of losing that aid were high—without the Pell Grant, Melanie's net price of attending college for the 2008-09 academic year would have been \$10,212.<sup>9</sup> Yet the adjusted annual gross income of her parents was less than \$1,000.<sup>10</sup>

Many students found it difficult, however, to do well in school. Even those few who had been high academic achievers in high school often found themselves struggling academically in college. Molly, a white student who had excelled in high school, described her experience taking an upper-level Spanish class at her academically selective university:

"I'm taking a higher level Spanish class right now that is absolutely killing me. It's so difficult... I go to office hours all the time and I'm still getting these grades on my tests, like I failed two tests in a row. I am so upset. How is this even possible? Usually this came so easily in high school."

In these situations, students often felt forced to lower their expectations. Some described the strategies they employed to maintain their grades (and sanity) during college. Many took a conscious approach to improving their study skills once they recognized that the old ways they had studied were no longer effective to tackle the academic workload in college. Kia, a multi-racial female student pursuing a degree in elementary education, highlighted the importance of pacing and psychological rewards to successful studying:

"[I used to] try to do all my homework [at once] by going from one thing to the next thing to the next thing. I've learned that I kind of need at least a little break between each

<sup>9</sup> Net price is calculated as the total cost of attendance adjusted for place of residence minus grants and scholarships. We were unable to calculate Alicia's net price due to missing data.

<sup>10</sup> Data from 2008 FAFSA. Adjusted gross income is total gross income minus allowances for personal exemptions and itemized deductions.

[assignment]. So I'll set a goal to finish a certain assignment, and then when I finish that I'll give myself like 30 minutes of TV watching or something. Then after that I'll do another assignment and then once I finish that assignment I'll give myself another little reward."

By pacing her studies and rewarding herself for completed work, Kia adopted an approach to academics that helped motivate her, and which appeared to reduce her overall stress level. Other students we talked to also noted improvements in their study skills and time management during the first two years of college. Yet these new skills weren't typically gained through explicit instruction, but instead devised by students out of necessity.

Some WSLs participants, however, used other strategies to get good grades. For example, they opted to enroll in fewer classes (and credits) in a given term in order to "boost" a flagging GPA by allowing more time to focus on fewer classes. In interviews, without prompting, they described a process in which they would decide on the number of credits they would take each term based on how well they felt they were doing academically at that point in time. The perceived rigor of the courses also factored into the decision. In this interview excerpt, Celina, a Latina student who aimed to become a pharmacist, described how she worked to maintain a reasonable GPA:

*Interviewer:* How many credits are you taking this term?

*Celina:* This term, like 14.

*Interviewer:* So is that the same for last term as well?

*Celina:* I think last one I had 12. Because my main focus was to bring everything up, like my GPA, straight up. It was like a booster, cause I took three science classes.

*Interviewer:* You decided to take 12 because you thought that would help boost your GPA?

*Celina:* Yeah, and it did—I took three classes so it was good. I could dedicate much more time to what I needed to do.

Only after first securing her GPA did Celina feel that she could take more credits. She had a lot to lose— her GPA was around a 2.42 and if she did not meet the SAP requirements, she would no longer be able to retain her \$3,100 Pell grant. However, she was able to make SAP, and by the next term had pulled her GPA up to a 2.57.

This finding suggests that at least some students are willing to make the tradeoff, whether consciously or unconsciously, to extend the time it takes to earn their degree in return for graduating with a higher GPA and it raises the question of whether academic performance requirements associated with the Pell Grant and other forms of aid may further influence this calculus.

### **Grades, Financial Aid, and Enrollment Intensity**

Table 3 presents our logistic models of four-year track enrollment in term 2. As expected, a student's first term GPA was a strong predictor of whether that student enrolled in enough credits to be on the "four-year track" to graduation in the next term. Moreover, this relationship persisted even after controlling for students' demographic characteristics, academics, finances, and the institution the student attended (Model 2). On average, each grade point increase in first term GPA was associated with a 74 percent increase in the odds of enrolling for 15 or more credits the subsequent term net of other factors. Although the WSG offer was positively associated with the likelihood of four-year track enrollment in our first model, once we added model controls there was no longer any indication of a direct relationship.<sup>11</sup>

We tested whether offer of the WSG may have had heterogeneous effects on enrollment based on first-term academic performance by adding an interaction term to our final model (model 3) between a student's GPA and WSG offer status. Unlike in the prior two models, the GPA coefficient in this model represents the association between GPA and four-year track enrollment for students who were not given the WSG. And the WSG coefficient is the impact of

<sup>11</sup> Both the significant likelihood ratio comparison test ( $\chi^2=60.44$ ;  $p=0.00$ ) and the drop in AIC and BIC values indicate a clear improvement in model fit once controls are added.

the WSG on four-year track enrollment at the mean GPA level (2.72).<sup>12</sup> The positive and statistically significant interaction term indicates that the effect of GPA on four-year track enrollment did indeed differ based on whether or not the student was randomly assigned an offer of an additional \$3,500 grant.

<sup>12</sup> All continuous variables in the model are mean-centered to allow interpretation of coefficients as representing the relationship for the “average” student in our sample on those measures.

Table 4: Logistic regression model of four-year track enrollment during second term

Predictors (term 1)	Model 1				Model 2				Model 3			
	Coef.	S.E.	O.R.	<i>p</i>	Coef.	S.E.	O.R.	<i>p</i>	Coef.	S.E.	O.R.	<i>p</i>
GPA	0.60	0.07	1.81	<b>0.00</b>	0.55	0.09	1.74	<b>0.00</b>	0.36	0.07	1.43	<b>0.00</b>
WSG	0.30	0.21	1.34	0.16	0.03	0.19	1.04	0.87	0.02	0.21	1.02	0.92
GPA X WSG									0.46	0.19	1.59	<b>0.02</b>
Constant	0.09	0.23	1.09	0.40	-0.58	1.32	0.56	0.59	-0.62	1.07	0.53	0.56
<b>Controls</b>												
Demographics	no				yes				yes			
Academics	no				yes				yes			
Finances	no				yes				yes			
College Attended	no				yes				yes			
<b>Model Fit</b>	<i>x</i> <sup>2</sup>	<i>df</i>	<i>p</i>		<i>x</i> <sup>2</sup>	<i>df</i>	<i>p</i>		<i>x</i> <sup>2</sup>	<i>df</i>	<i>p</i>	
Likelihood ratio test	77.73	2	<b>0.00</b>		60.44	24	<b>0.00</b>		5.41	1	<b>0.02</b>	
Hosmer & Lemeshow	17.42	8	<b>0.03</b>		2.83	8	0.94		4.36	8	0.82	
Pseudo R2	0.05				0.10				0.11			
AIC	1024.46				982.01				976.60			
BIC	1038.42				1037.89				1032.48			

Notes: N=779. Robust clustered standard errors. Likelihood ratio test for Model 1 is a Wald Chi-Square comparison to the null model.

To aid in the interpretation of this result, consider Figure 1, which graphs the predicted probabilities of four-year track enrollment in term 2 according to term 1 GPA and WSG offer. The offer of the grant clearly appears to have affected the relationship between grades and the decision to subsequently enroll in 15 credits. For those with lower first term GPAs, the grant offer appears to have exerted a strong negative impact on the probability of four-year track enrollment. Yet for students earning higher GPAs, the WSG appears to have had no impact, or even to have exerted a positive impact at the highest GPA levels. Figure 2 displays the absolute magnitude of those impacts in terms of marginal probability differences.

For the approximately 13 percent of Pell recipients with first term GPAs near or below 1.5 (i.e. just under the SAP standard), the offer of additional grant aid *reduced* the probability that students would enroll for 15 credits the next term, cutting their chances of pursuing the four-year degree track by between 12 and 20 percent ( $p < .10$ ). For students at the SAP-required GPA of 2.0, the WSG offer cut their chances of four-year track enrollment by 7 percent. However, this estimate was not statistically significant ( $p = .22$ ). For the approximately 70 percent of Pell recipients who earned between a 2.0 and a 3.5 GPA in their first term, the WSG offer does not appear to have had any effect. Yet among the high performing Pell recipients who earned between a 3.5 and 4.0 (around 17 percent of students in this sample), the grant appears to have *increased* the chances that students would attempt 15 credits during their second college term by between 8 and 12 percent. This result was statistically significant at the 4.0 margin ( $p = .03$ ), and approached significance at the 3.5 margin ( $p = .11$ ).

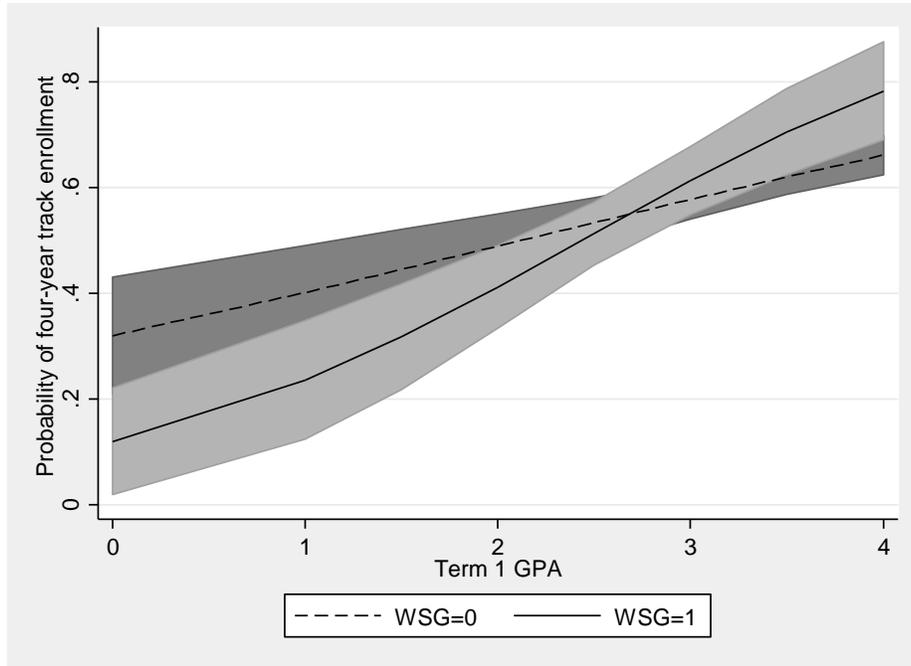


Figure 1: Predicted probability of four-year track enrollment by GPA and WSG receipt.

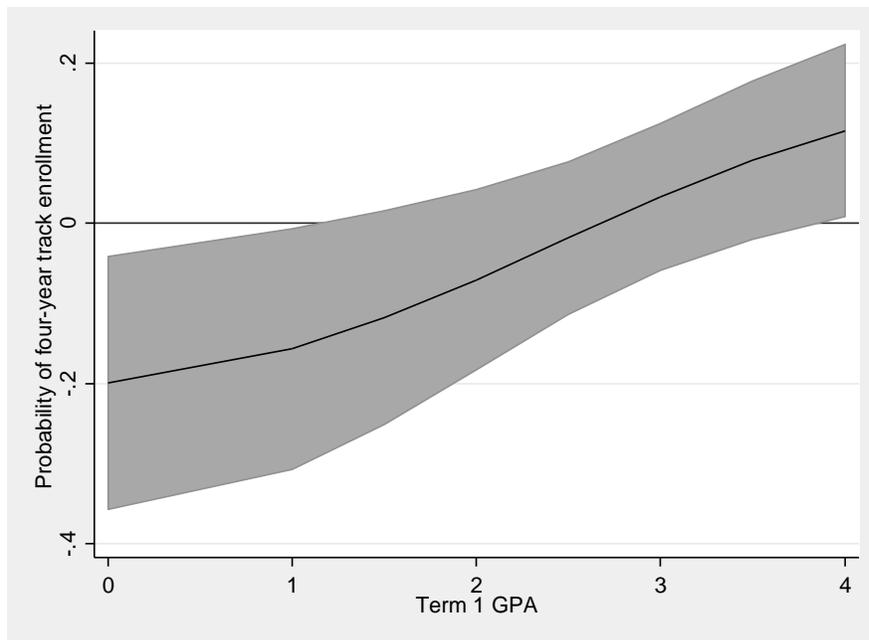


Figure 2: Marginal effects of WSG on the predicted probability of four-year track enrollment

Based on the evident interaction effects between the WSG and first term GPA just below the academic margin of 2.0, it does appear that concerns over maintaining grant eligibility by making SAP likely played a role in the more frequent decision to take a reduced course load during the second term among students offered the additional aid. Nevertheless, it is possible that there are alternative explanations for the observed relationship between grades, grant receipt and enrollment intensity. One possibility is that when lower-achieving students were offered the WSG they relaxed and focused on leisure more than school, which might explain why low-achieving WSG students tended to be less likely to enroll in a four-year track in the second term.

We examined this alternate hypothesis via additional regression models using as dependent variables the amount of time the student reported studying and spending in leisure activities (i.e. watching TV, gaming, etc.) during the fall term of year 2. Although the results (not shown but available from the authors) indicated a clear and statistically significant relationship between first term GPA and these outcomes, there was no evidence of either direct or moderating effects of the WSG such as would be consistent with the alternative hypothesis. Thus it seems unlikely that financial aid reduced credit-taking among lower-achieving students by inducing them to spend more time on leisure.

## **Discussion**

Increasing degree completion rates and reducing time to completion are important objectives for many reasons, including a national imperative to grow economic capacity and stability through educational attainment. There is good reason for concern about the relatively low rates of degree completion among financial aid recipients, in part because of the substantial resources invested in helping them to attend college. Financial aid is expensive and controversial. For these reasons, we need to know whether financial aid recipients care about college and are focused on school, and we also need to find effective ways to help them

complete degrees more quickly and at higher rates. In several respects, the results in this chapter bring good news.

Pell recipients in this study, like those students studied by Howard Becker fifty years ago, are clearly concerned about their grades. Both survey and interview data confirm that they take time to think about grades and even strategize to find ways to optimize their GPA. If a focus on getting good grades leads to more learning, this is potentially a positive step—but if efforts to get good grades lead to other approaches that undermine learning, it is not.

The statistical models suggest that this concern with grades contributes to the decisions that students make regarding their pace of progress through school. The Pell recipients we studied appear to be utilizing information about their grades to decide how many credits to attempt in the next term—the worse they are doing, the fewer credits they take. This slowdown may help improve their GPA but it may also increase the time they spend in school, adding to their debt load and prolonging their entry into the labor market. It may even reduce the likelihood that they will complete degrees.

Is it possible to intervene in that dynamic, adjusting the extent to which students utilize grades to determine credit-taking? It does seem that offering students financial aid makes the situation both better and worse. For the highest-achieving students, offering more grant support seems to increase the likelihood that students will take at least 15 credits per term, putting them on the four-year track to degree completion. However, for the lowest-achieving students, offering more grant support seems to have the opposite effect, reducing the likelihood that they will take 15 credits. Instead, students seem to slow down.

It is possible but unlikely that what we observe are pure income effects. If students use additional money to work less, or to spend more time on leisure, we should see similar positive impacts across the GPA distribution. Low and high achieving students should be affected in the same way. We do not observe GPA differences in the impact of the financial aid on how students allocate their time. Instead, the requirements associated with the financial aid could

produce this pattern of results. Students with lower GPAs face a risk that higher achieving students do not face—if they take more credits, and get low grades, their GPAs could fail to meet SAP. In that case, they would lose all grant aid tied to SAP.

Critically, we used a randomized experiment to test this hypothesis. Rather than comparing behaviors of high and low achieving students (above and below the SAP threshold), we compared behaviors of low-achieving students on Pell to low-achieving students on Pell who were offered (at random) additional grant aid tied to SAP. It is that comparison—that estimated effect—which seems consistent with this story.

If in fact what we have estimated is an effect of policy design, then it is something that can be manipulated in order to increase degree attainment. The SAP policy, while intended to ration aid dollars, and possibly to increase students' effort, may have unintended consequences. If it is slowing their time to degree, perhaps it should be revisited. The cut-point for SAP is set by schools and could be manipulated so as to discover where it is appropriately set. Alternatively, perhaps it would be more productive to allow first year students to work out their credit loads and learn about their academic abilities before conditioning continued receipt of financial aid on grades.

These are issues deserving of further scrutiny. While our approach uses a randomized experiment and thus the estimates have strong internal validity, this is one study in one place conducted at one point in time. Additional research is needed to examine generalizability to other contexts and other grant programs.

Nevertheless, the evidence should give pause to those who stereotype undergraduates. The narrative regarding the academic focus of today's students may need refining, to be more specific about which students are adrift, which are part of "Leisure College USA," and which are simply working hard to do their best under difficult circumstances. Policies that aim to support greater success should be carefully designed so that they are supportive and do not exert

unintended consequences for academic performance. More nuanced strategies may lead to better outcomes for all.

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