

DOCUMENTATION FOR THE PRINCETON UNIVERSITY PBS TIME-USE SURVEY

Lisa Barrow
lbarrow@frbchi.org
Federal Reserve Bank of Chicago

Cecilia Elena Rouse
rouse@princeton.edu
Princeton University

December 2013

We thank Eric Auerbach, Laurien Gilbert, Ming Gu, Steve Mello, and Lauren Sartain for expert research assistance, Leslyn Hall and Lisa Markman Pithers with help developing the survey, and Reshma Patel for extensive help in understanding the MDRC data. Any views expressed in this paper do not necessarily reflect those of the Federal Reserve Bank of Chicago or the Federal Reserve System. Any errors are ours.

The MDRC study of performance-based scholarships (PBS) is designed to assess whether providing scholarships with explicit incentives (e.g., maintaining a particular grade-point average while enrolling for a minimum number of credits) increases the academic performance and persistence of college students. A critical question that remains is *why* the scholarships would generate such improvements. Given that course grades presumably reflect better understanding of the course content and that enrolling for more credits requires more time for studies, a key mechanism by which performance-based scholarships should improve student outcomes is by increasing their effort while in school.

The objective of the Princeton Time-Use Survey addition to the MDRC PBS study is to test whether the incentives built into the scholarships induce students to exert more effort in their studies. As such, the hypothesis to be tested is whether students randomly assigned to receive a PBS are observed spending more time in activities that would improve their academic outcomes (e.g., attending class, studying) and spending less time in activities that would detract from their academics (e.g., working, socializing with friends). We do so by asking participants in the MDRC study about their time use over a specified period of time. In this survey documentation, we provide details about sample selection and administration, response rates on the survey, and content of the time-use survey.

Experimental Design and Participants

In order to identify the impacts of PBSs on academic outcomes, as well as how students spend their time, the study relies on comparisons of students who

were randomly assigned to program and control groups. Students in the program groups in New York City and California were eligible to receive incentive payments upon meeting designated benchmarks. Tables 1a and 1b outline the incentive payments and benchmarks offered to students in the program group.

Table 1a. Structure of the New York Program

Benchmark	Incentive Payment
Register for six credits	\$200
Enrolled at mid-semester	\$450
Final grade of a C or better in at least six credits	\$650
<i>Possible scholarship: \$1300 per semester for two semesters (\$2600 total)</i>	

Notes. So as not to discourage students mid-semester, if a student missed the mid-semester payment it could be recouped at the end of the semester if the final requirement was met. Students were eligible for the same incentive payments for a second semester independent of having met any of the first semester benchmarks.

Table 1b. Structure of the California Program

Scholarship Type	Total Value	Performance Based?	Duration	Fall 2009		Spring 2010	Fall 2010		Spring 2011
				Initial	Final		Initial	Final	
1	\$1,000	No	1 term	\$1,000					
2	\$1,000	Yes	1 term	\$500	\$500				
3	\$1,000	Yes	1 year	\$250	\$250	\$500			
4	\$2,000	Yes	1 year	\$500	\$500	\$1,000			
5	\$2,000	Yes	2 years	\$250	\$250	\$500	\$250	\$250	\$500
6	\$4,000	Yes	2 years	\$500	\$500	\$1,000	\$500	\$500	\$1,000

Source: Ware and Patel (2012). The dates refer to the incentive payouts for the 2009 cohort but the structure is the same for the 2010 cohort. The schedule shown applies to institutions organized around semesters; for institutions organized into quarters the scholarship value is the same in total but the payments are divided into three quarters in the academic year. During fall semesters of eligibility, one-half of the PBS was paid conditional on enrolling for six or more credits at an accredited, degree-granting institution in the U.S., and one-half was paid if the student met the end-of-semester benchmark (a final average grade of "C" or better in at least 6 credits). During spring semesters of eligibility, the entire scholarship payment was based on meeting the end-of-semester benchmark.

The programs in New York City and California targeted different types of students. In NYC, eligible students were aged 22-35, had tested into (and not yet passed) at least one developmental course, were eligible for a federal Pell Grant, enrolled in at least 6 credit or contact hours (at the time of “intake”), and lived away from their parents. The California participants looked more like “traditional” students—they were in their senior year of high school at the time of random assignment—and were selected from participants in “Cash for College” workshops at which attendees were given assistance in completing the Free Application for Federal Student Aid (FAFSA). The California participants also met the low-income eligibility standards based on the Cal Grant income thresholds.

At the time of random assignment, individuals who agreed to participate completed a baseline survey conducted by MDRC. The Princeton Time-Use survey was fielded during the first two program semesters and consisted of two components: non-time-use questions and a time diary. (See Appendix A for a copy of the survey.) The non-time-use sections included questions about employment, post-secondary school enrollment, participant attitudes toward school, and items used to construct non-cognitive indices. We discuss the time diary in further detail below.

Survey Administration

We surveyed participants, via a web-based survey, 2–4 times over the course of the study. Table 2 shows the survey schedule for each site and cohort; an “X” indicates a survey administration. Our intent was to survey participants in the New York City site a total of four times—midway between the beginning and midterm of

the first semester, midway between the midterm and end of first semester, midway between beginning and midterm of the second semester, and midway between midterm and end of second semester.¹ In California we only surveyed the students once in each of the two semesters.

Table 2: Schedule for Survey Administration

Cohort (Semester of Random Assignment)	Survey Semester				
	Spring 2009	Fall 2009	Spring 2010	Fall 2010	Spring 2011
New York					
Cohort 1 (Fall 2008)	X				
Cohort 2 (Spring 2009)	X	XX			
Cohort 3 (Fall 2009)		XX	XX		
California					
Cohort 1 (Spring 2009)		X	X		
Cohort 2 (Spring 2010)				X	X

Note: Two Xs indicates that participants were surveyed two times in the semester, while one X indicates only one survey administration that semester.

The protocol for contact and follow through with the participants was as follows:

1. A week before survey administration, we contacted the participants via regular mail (i.e., there was a pre-notification letter informing the participant that he or she will be receiving an invitation to go online and take a short survey.) This also included an incentive check (see below) and the website for the survey access.
2. On the day of survey administration (day T), we sent an email with instructions and a link to the website.

¹ For a variety of reasons we were unable to begin surveying participants until the middle of spring semester 2009. This means that only cohort 3 was surveyed four times. The first cohort was only surveyed once at the end of their second program semester; cohort 2 was surveyed three times, once at the end of their first program semester (Spring 2009) and twice in Fall 2009.

3. On day T+4, we sent an e-mail notification (this served as both a thank you notification for those who had already participated and a reminder for those who had not).
4. On day T+5/T+6, those who had not started the survey 5 or 6 days into the survey administration process were contacted via telephone and reminded to complete the survey.
5. On day T+7, we sent a second e-mail notification (once again this served as both a thank you for those who had already participated and a reminder for those who had not).
6. On day T+10/T+11, we made a second and last telephone contact to remind respondents to participate.
7. On day T+13, the third and final e-mail was sent.
8. On day T+14, the survey administration was closed.

Although we originally proposed closing the survey 14 days after the initial e-mail invitation was sent, the survey website continued to accept surveys up to 21 days after the initial e-mail contact. In order to increase response rates, we offered participants compensation to complete the survey. Specifically, participants were given \$30 for completing the first survey (\$20 was sent with the pre-notification letter and \$10 was offered upon completion of the survey). We also offered them \$35 for the second, \$40 for the third, and \$45 for the final survey; in all cases we split the incentive between an amount that was “pre-paid” and a second amount they received upon completion of the survey.²

We implemented the surveys in addition to any data collection on the part of MDRC. In the New York City program, MDRC did not implement a follow-up survey but relied exclusively on administrative data to study the impact of the program on educational attainment. In contrast, in California MDRC also surveyed participants

² In fact, due to an administrative error by the survey contractor, respondents were not offered (or paid) increasing amounts until April 2010; those surveyed before April 2010 were all offered a total of \$30 for completing the survey regardless of how many times we had surveyed them in the past.

during the spring semester. We coordinated with MDRC in order to minimize survey fatigue on the part of participants.

Survey Response Rates

For our main analysis, we focus on student surveys from the end of students' first program semester (survey round 2). We present information on survey response rates by site in Table 3. For more detailed information on response rates for all survey rounds by site and cohort, see appendix table 1.

We attempted to survey 1,132 study participants in the New York City site and 6,660 study participants in the California site toward the end of their first program semester.³ Of these, 640 in NYC and 2,971 in CA reported at least some time diary data. When we limit the sample to only surveys with a full 24 hours of time diary data and fewer than four hours of time with missing/other activity, we are left with 613 respondents in NYC and 2,874 respondents in CA corresponding to 54 and 43 percent of the original number surveyed.⁴

³ The California sample includes 1500 supplemental control group participants who were randomly selected from MDRCs non-study sample, namely workshop participants who were eligible and willing to participate in the study but who were not randomly selected by MDRC to participate in the study as a program group and who were not randomly selected to be followed as part of the control group. We have verified that the responses by these individuals are neither qualitatively nor statistically different from those of the original control group in the MDRC study.

⁴ Due to a survey contractor error, we lose 87 respondents for whom data from the first part of the survey was not saved. Also due to survey contractor error, we unintentionally surveyed members of the first NYC cohorts for a 5th survey round (i.e. the semester one year after their random assignment).

Table 3. Survey Completion in New York City and California

	New York City Sample	California Sample
Participants surveyed	1,132	6,660
Number of respondents	656	2,999
Number with any time diary data	640	2,971
Number with complete time diary data	613	2,874
<i>Response rate</i>	<i>54.1%</i>	<i>43.2%</i>

Notes. Numbers in the table are for the end of first program semester survey round, which is the survey round primarily used for analysis in the main paper. For New York cohort 2, this is the second wave of the survey administration in Spring 2009; for cohort 3 it is the second wave of the survey administration in Fall 2009. For California cohort 1, this is Fall 2009. For California cohort 2 this is Fall 2010. Complete time diary data includes only responses from participants who reported 24 hours of activities, and reported fewer than four hours of time with missing/other activity.

Time Diary Rationale

We implemented a time diary for which we used the *American Time Use Survey (ATUS)* as a template. The ATUS collects data on time use through a 24 hour “time diary.” The respondent is asked to list his or her activities, describe where the activities took place, and with whom.

Focusing on a recent 24 hour period and asking for a time diary has many advantages. First, with more stylized questions in which respondents are asked to report how much time they spent doing a particular activity over a period of time (for example a week), there is a tendency for respondents to over-report socially “acceptable” activities and under-report socially “bad” activities. Second, with more stylized questions asking about a “typical” period of time, respondents often have a

difficult time understanding conceptually what a “typical” or “average” week (or day) might be, especially for activities that do not necessarily take place on a regular basis. Third, stylized measures of time use generally do not allow one to capture simultaneous activities (such as studying for an exam while watching TV). Finally, stylized questions must be carefully worded so that respondents understand the types of activities for which he or she is to report time use. This is not to suggest that stylized questions cannot be valid and useful, only that a time diary approach can be extremely valuable by reducing recall bias and internal inconsistencies.

That said, there are also sampling issues inherent in time diary approaches as well. For example, while asking about activities over the past 24 hours may reduce recall bias, it will not eliminate it entirely. This recall bias can be exacerbated when respondents – who are often designated a day of the week on which to report to ensure that across the sample all days of the week are represented – do not complete the survey soon after their designated day (Ver Ploeg et al. 2000 and Hamermesh, Frazis, and Stewart 2005).

With these advantages and disadvantages in mind, in designing our survey we started with the basic structure of the ATUS in the core of the survey, but also included questions about time use over the last 7 days to accommodate those activities that are particularly relevant to students and for which it would be valuable to measure over longer periods (such as time spent studying over the past week). The survey instrument is in Appendix A.

Reporting Time Use

We allowed the respondent to enter between 15 minutes and 4 hours for any one activity with the exception of sleeping for which they were allowed to enter up to 8 hours. If the respondent did not enter an activity, he or she was prompted for what he or she did the following hour. Respondents could choose multiple activities within a single reporting timeframe, but they designated one of the activities as the primary activity. Table 4 lists the activity options from which respondents could choose, and it also shows how these activity categories map to larger, more encompassing categories of time (based on the ATUS). In addition to specific activities, participants reported who they were with (e.g., alone, spouse/partner, children), where they were (e.g., home, workplace, coffee shop), and mode of transportation (when applicable).

Table 4. Time Use Activity Categories

Time Diary Activity	Corresponding ATUS-like Category
Sleeping	Personal care
Personal care	
Drinking/eating	Eating and drinking
Work and work-related activities	Working and work-related activities
Household activities	Household activities
Attending traditional classes	Educational activities
Participating in online classes	
Studying/homework/projects	
Preparing for tests	
Extracurricular activities	
Meeting with professors or instructors	
Registering for class and other administrative school-related tasks	
Caring for own children	
Caring for someone else	
TV, movies, or music	Leisure and sports
Computer for leisure	
Time with friends	
Playing sports or exercising	
Other leisure activity	
Talking on the phone or texting	Telephone calls, mail, and email
Cultural/educational events	Organizational, civic, and religious activities
Volunteering or mentoring	
Religious or spiritual activity	
Commuting to/from work or school	Other
Other	

Some checks on the data were built into the survey. For example, if the respondent did not report eating or drinking during the 24-hour period, we prompted the respondent about the reporting. We also provided a similar probe if the respondent reported being currently enrolled in school but did not report attending class in-person or online. We also dropped respondents from the sample because of data quality concerns (as shown above in Table 3). Namely, we

constrained the sample to include only complete time diaries with 24 hours reported, and we excluded time diaries with more than 4 hours of missing/other activity reported.

Definitions and Imputation

A. Race and ethnicity.

For consistency across baseline surveys, MDRC defines Hispanic/Latino and race categories as mutually exclusive. Before 2010, the MDRC baseline survey asked about race and Hispanic/Latino ethnicity in two questions: (1) “Are you Hispanic/Latino?” (Yes, No, or Decline to Answer) and (2) “What is your race? (Mark all that apply)” (White, Black/African American, Asian or Pacific Islander, American Indian or Alaska Native, or Other with space for writing in a response). In 2010, the MDRC baseline survey asked about race and ethnicity in a single question: “What is your race/ethnicity? (Mark all that apply)” (White, Hispanic/Latino, Black/African American, Asian or Pacific Islander, American Indian or Alaskan Native, Other with space for writing in a response, or Decline to Answer). We adopt MDRC’s following coding strategy: any respondent who reports Hispanic/Latino is included in the Hispanic category regardless of any other race categories reported. Any respondent who does not report being Hispanic but reports more than one race is included in the multi-racial category. We imputed baseline race categories of Hispanic/Latino, White, Black/African American, Asian, and Multi-Racial where possible based on written responses for respondents choosing race equal to “Other.” This affects 1.2 percent of all baseline observations.

B. Primary language.

MDRC baseline surveys ask respondents to write in what language the respondent usually speaks at home (if not English). Based on these answers, we categorize primary language as “English,” “Spanish,” or “Other.”

C. Sex

Where possible we impute male and female for observations missing sex using first names (8 respondents in NYC and 7 in CA; 17 remain missing).

D. Motivated Strategies for Learning Questionnaire (MSLQ) Index

To measure learning strategies that should help students perform better in class, we included questions from the MSLQ (Pintrich et al. 1991). The scale consists of five questions on a seven-point scale such as: “When I become confused about something I’m reading, I go back and try to figure it out” (responses range from not at all true (1) to very true (7)). We order responses for all questions so that a higher number is associated with good learning strategy behavior and assign each respondent their mean score across all five questions.⁵ For students who never enrolled in post-secondary education after random assignment, we set their index equal to the 25th percentile of the control group within site (14 percent of the analysis sample). We then standardize the index using the mean and standard deviation for the control group within survey round and site.

E. Self-Efficacy

Researchers have also documented a link between perceived self-efficacy (e.g., an individual’s expectations regarding success or assessment of his or her

⁵ For students who are missing a subset of MSLQ responses, we impute their missing response as equal to their average response on the remaining questions (1.1 percent of the analysis sample).

ability to master material) and academic performance (see, e.g., Pintrich and De Groot 1990). Therefore we included five questions that form a scale to capture perceived academic efficacy (the *Patterns of Adaptive Learning Scales* (PALS) by Midgley et al. 2000). These questions are of the form, “I’m certain I can master the skills taught in this class this year.” with responses on a similar seven-point scale. The index is the mean response across all five questions.⁶ Again, for students who never enrolled in post-secondary education after random assignment, we set their index equal to the 25th percentile of the control group within site (14 percent of the analysis sample). We then standardize the index using the mean and standard deviation for the control group within survey round and site.

F. External/Internal Motivation

Cognitive psychologists worry that while incentive payments may motivate students to do better in the short term, the students may be motivated for the “wrong” reasons. They distinguish between internal (or “intrinsic”) motivation in which a student is motivated to work hard because he or she finds hard work inherently enjoyable or interesting and external (or “extrinsic”) motivation in which a student is motivated to work because it leads to a separable outcome (such as a performance-based scholarship) (see, e.g., Deci (1975) and Deci and Ryan (1985)). A literature in psychology documents more positive educational outcomes the greater the level of “internalization” of the motivation (e.g., Pintrich and De Groot, 1990). As such, one concern among opponents of performance-based rewards in

⁶ For students who are missing a subset of PALS responses, we impute their missing response as equal to their average response on the remaining questions (1.8 percent of the analysis sample). 0.3 percent of respondents did not respond to any of the five questions and remain missing.

education is that while such scholarships may increase external motivation, they may decrease internal motivation (e.g., Deci, Koestner, and Ryan, 1999). To capture external and internal motivation, we asked questions of both current students and those not currently enrolled along the lines of, “If I do my class assignments, it’s because I would feel guilty if I did not” (also on a seven-point scale).

“External motivation” is the mean of two questions: “If I attend class regularly it’s because I want to get a good grade” and “If I raise my hand in class it’s because I want to receive a good participation grade.” We impute equal responses if one is missing (2.1 percent of the analysis sample) and leave the index as missing if both responses are missing. “Internal motivation” is the mean two questions: “If I turn in a class assignment on time it’s because it makes me happy to be on time” and “If I attend class often it’s because I enjoy learning.” Again, we impute equal responses if one is missing (1.3 percent of the analysis sample) and leave the index as missing if both responses are missing. We then standardize each index using the mean and standard deviation for the control group within site and survey round.

G. Other

We set hours worked in past 7 days to zero for individuals who report not working in the past 7 days and having no jobs in the past 7 days (62 percent of the analysis sample). We set hours studied in the past 7 days to the 25th percentile of the hours studied distribution for the control group (within site) for those who are not currently enrolled in post-secondary education (17 percent of the analysis sample).

For students who never enrolled in post-secondary schooling after random assignment (14 percent of the analysis sample), we impute that they were not prepared for their last class and that they never asked an instructor to reconsider a grade. For students not currently enrolled in school (17 percent of the analysis sample) we impute that they did not attend most or all of their classes in the past 7 days and that they do not strongly agree with the statement that they try to take challenging classes.

References

- Deci, Edward L. (1975). *Intrinsic Motivation*. New York: Plenum.
- Deci, Edward L., Richard Koestner, and Richard M. Ryan (1999). "A Meta-Analytic Review of Experiments Examining the Effects of Extrinsic Rewards on Intrinsic Motivation." *Psychological Bulletin* 126, no. 6 (November): 627-668.
- Deci, Edward L. and Richard M. Ryan (1985). *Intrinsic Motivation and Self-determination in Human Behavior*. New York: Plenum.
- Hamermesh, Daniel S., Frazis, Harley., and Stewart, Jay. 2005. "Data Watch: The American Time Use Survey." *Journal of Economic Perspectives*, 19(1), 221-232.
- Midgley, Carol, Martin L. Maehr, Ludmila Z. Hruda, Eric Anderman, et al. 2000. "Manual for the Patterns of Adaptive Learning Scales." University of Michigan monograph.
- Pintrich, Paul R., David A. F. Smith, Teresa Garcia, and Wilbert J. McKeachie. 1991. *A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ)*, Office of Educational Research and Improvement/Department of Education (OERI/ED) Technical Report No. 91-B-004.
- Ver Ploeg, Michele, Altonji, Joseph, Bradburn, Norman, DaVanzo, Julie, Nordhaus, William, and Samaniego, Francisco. 2000. *Time-Use Measurement and Research: Report of a Workshop*. Washington, DC: National Academic Press.

Appendix A. Princeton University PBS Time Use Study Web Survey

Princeton University PBS Time Use Study Web SurveyS1. RADATE: (Code from Sample File)

Welcome. This time use survey is part of the MDRC Performance Based Scholarship Study where you will have the opportunity to tell us about your daily life, including your employment, school experiences, and social life. The survey results will be used to better understand the daily lives of young people today. Your responses are very important to this research.

We ask that you answer each question that appears on your screen, although you may skip any question you prefer not to answer. Please be assured, however, that your participation in this study will be kept completely confidential and no individual responses will ever be reported.

The survey should take 25 minutes or less to complete. If at any point you feel like taking a break from this survey, you may close your browser and come back to complete it at a later point. The next time you log in, you will be automatically taken to the point in the survey where you left off.

NOTE: Some questions are particularly time-sensitive and hence we request you to complete the entire survey today, or at the latest tomorrow.

Finally, after recording your completed survey, we will send you \$XX as a thank you for your participation.

EMPLOYMENT and SOCIAL LIFE

We would like to ask a few questions about work-related and social activities in the LAST SEVEN DAYS. By the LAST SEVEN DAYS, we mean the seven days beginning on [NOTE: Insert today's date minus eight in day/month/date/year format)], and ending yesterday.

1. In the LAST SEVEN DAYS, did you do ANY work for either pay or profit?

- 1 Yes
- 2 No
- 3 Disabled
- 4 Unable to work
- 5 Retired

(If code 1 in #1, Skip to #4; Otherwise, Continue)

2. In the LAST SEVEN DAYS, did you have a job, either full or part time? Include any job from which you were temporarily absent.

- 1 Yes
- 2 No
- 3 Disabled
- 4 Unable to work
- 5 Retired

(If code 1 in #2, Continue; Otherwise, Skip to #6)

3. What was the main reason you were absent from work during the LAST SEVEN DAYS?

- 01 On layoff (temporary or indefinite)
- 02 Reduced hours due to slow business
- 03 Waiting for new job to begin
- 04 Vacation/personal days
- 05 Own illness/injury/medical problems

- 06 Child care problems
- 07 Other family/personal obligation
- 08 Maternity/Paternity leave
- 09 Labor dispute
- 10 Weather affected job
- 11 School/training
- 12 Civic/military duty
- 13 Other (Fill in response) (Allow

100 characters)

4. In the LAST SEVEN DAYS, did you have more than one job (or business), including part-time, evening, or weekend work?

- 1 Yes
- 2 No

(If code 1 in #1 AND code 1 or 2 in #4,
Continue;
Otherwise, Skip to #6)

5. How many hours did you work at your job, or all of your jobs together in the LAST SEVEN DAYS? Please enter hours below.

- 00-70
- 70+

(If No Response in #5, Skip to #6;
Otherwise, Continue)

- 5a. Just to confirm, you indicated you worked a total of (response in #5) hours in the last seven days. Is that correct?

- 1 Yes
- 2 No

(If code 2 in #5a, Reset to #5;
Otherwise, Continue)

6. In the LAST SEVEN DAYS, on how many evenings did you go out for fun and recreation?

- 1 None
- 2 One
- 3 Two
- 4 Three
- 5 Four or Five
- 6 Six or Seven

ENROLLMENT

7. Since **(Response in S1)**, were you ever enrolled in a two or four-year college, a vocational school, or another learning institution beyond high school?

- 1 Yes
2 No

**(If code 2 in #7, Skip to #9;
Otherwise, Continue)**

8. Are you currently attending a two or four-year college, a vocational school, or another learning institution beyond high school?

- 1 Yes
2 No

**(If code 1 in #8, Skip to Text before #10;
Otherwise, Continue)**

9. Which of the following best describes the reason why you are not currently enrolled in a two or four-year college, a vocational school, or another learning institution beyond high school?

- 1 Received degree, graduated
2 Finished taking desired classes
3 Lack of money
4 Wanted to make some money
5 Inability to get a student loan
6 Inability to get a scholarship, grant, stipend, or fellowship
7 Didn't want to incur any more debt
8 Classes being unavailable
9 Not being focused on my school
10 Needing to work or find a job
11 Childcare or family responsibilities
12 Transportation issues

- 13 Lack of support from family or friends
- 14 HOLD
- 15 Poor health
- 16 Bad experiences with college staff (e.g., instructors, administrators) during the application process
- 17 Other (Fill in response) **(Allow 200 characters)**

(If code 1 in #7, Skip to #13; Otherwise, Skip to Text before #19)

CLASSES

The next questions are about school-related activities in the LAST SEVEN DAYS. By the LAST SEVEN DAYS, we mean the seven days beginning on [**(NOTE: Insert today's date minus eight in day/month/date/year format)**], and ending yesterday.

10. In the LAST SEVEN DAYS, did you attend none, some, most, or all of your classes? If you take classes online, did you regularly log on and/or participate not at all, some of the time, most of the time, or all of the time?

- 1 None/Not at all
- 2 Some/Some of the time
- 3 Most/Most of the time
- 4 All/All of the time

(If code 4 in #10, Skip to #12; Otherwise, Continue)

11. What was the main reason you did not attend all of your classes in the LAST SEVEN DAYS?

- 1 I've been sick or had other health problems
- 2 Classes canceled by instructor
- 3 Had to work
- 4 No child care available
- 5 Child was sick
- 6 Other family responsibilities
- 7 Was not prepared for class
- 8 Class material not interesting
- 9 Class material too difficult/can't follow lectures
- 10 Out of town
- 11 No longer enrolled in school
- 12 Problems with transportation
- 13 School not in session

- 14 Just did not feel like it
- 15 Socializing
- 16 Computer problems (couldn't log on)
- 17 Family death
- 18 Other (Fill in response) (Allow 200 characters)

12. In the LAST SEVEN DAYS, approximately how many hours, on average, did you study **PER DAY**? Please enter hours below.

Hours:

0.0

0.5-24.0

(If No Response in #12, Skip to Text before #13; Otherwise, Continue)

12a. Just to confirm, you indicated you studied an average of (response in #12) hours **PER DAY**. Is that correct?

1 Yes

2 No

(If code 2 in #12a, Reset to #12; Otherwise, Continue)

EFFORT

Now, we would like to ask you some questions about your education-related activities since **(Response in S1)**...

13. Using a scale of one-to-seven, where 1 means it is not at all true and 7 means it is very true, please indicate, IN GENERAL, how true each of the following statements is for you.

A. During class time, I often miss important points because I'm thinking of other things.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

B. When I become confused about something I'm reading, I go back and try to figure it out.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

C. I ask myself questions to make sure I understand the material I have been studying.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

13. (Continued:)

D. I often find that I have been reading for a class but don't know what it was all about.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

E. When studying, I try to determine which concepts I do not understand well.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

14. Now, think about your education-related activities since (Response in S1). Please think about the last time you attended class or participated in a class online. How long ago was this? Was it: [Deleted Programmer Note]

- 1 Today
- 2 Yesterday
- 3 During the past week
- 4 2-3 weeks ago
- 5 A month ago
- 6 2-3 months ago
- 7 More than 3 months ago

15. Thinking about the last time you attended THIS class or participated online, were you prepared for class

(e.g., had you done the reading or assignments before class)?

- 1 Yes
- 2 No

Still thinking about THIS LAST CLASS you attended...

16. Using a scale of one-to-seven, where 1 means it is not at all true and 7 means it is very true, please indicate how true each of the following statements is for you.

A. I'm certain I can master the skills taught in this class this year.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

B. I'm certain I can figure out how to do the most difficult class work.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

C. I can do almost all the work in this class if I don't give up.

- 1 Not at all true
- 2
- 3

4 Somewhat true
5
6
7 Very true

16. (Continued:)

D. Even if the work is hard, I can learn it.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

E. I can do even the hardest work in this class if I try.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

Still thinking of THIS LAST CLASS YOU ATTENDED...

17. Using a scale of one-to-seven, where 1 means you REALLY DISLIKE this class and 7 means you REALLY LIKE this class, please rate how much you like or dislike this last class you attended.

- 1 REALLY DISLIKE THIS CLASS
- 2
- 3
- 4
- 5
- 6
- 7 REALLY LIKE THIS CLASS

18. Thinking about all of the courses you ever enrolled in since (Response in S1) (whether you completed the course or

not), did you ever ask an instructor or teaching assistant to reconsider a grade on an assignment or exam?

- 1 Yes
- 2 No

DIARY

(The respondent details his/her activities from 4:00 A.M. the previous day to 4:00 A.M. on the interview day. Pre-coded activities will be used. The length of activity is recorded with start and stop times.)

Now we'd like to find out how you spent your time yesterday, [**Display yesterday's day and date**], from 4:00 a.m. in the morning until 4:00 a.m. this morning. We'll need to know where you were and who else was with you. If an activity is too personal, there's no need to list it.

If you need help navigating around the screen, please click on the HELP button.

If you need to add an activity after the current row, please click on the "+" sign to the right of the listed activity.

If you need to delete an existing activity, please click on the "x" sign to the right of the listed activity.

If you need to reset the current activity, please click on the " " sign to the right of the current activity.

If you need to edit an existing activity, please click on the activity and edit the information on each of the screens displayed.

If you need to add "eating and drinking" as an activity, click on the "Help" button below.

19. Yesterday, [*(Display yesterday's day and date)*] at 4:00 a.m., what were you doing? (Check all that apply.)

- 1 Sleeping
- 2 Personal care activities (e.g., grooming, health-related self care)
- 3 Eating/drinking
- 4 Work and work-related activities (including job search activities)
- 5 Household activities (e.g. cooking, cleaning, grocery shopping, paying bills, walking the dog)
- 14 Caring for and helping children under 13 (including activities related to child's education and health)
- 15 Caring for and helping someone else
- 6 Attending (traditional) Classes
- 7 Participating in online Classes
- 8 Studying/Homework/Special projects for school
- 9 Preparing for Test/Mid-term/Finals
- 10 Participating in extracurricular Activities for school (sports, clubs, rehearsals, music practice, etc)
- 11 Meeting with Instructor, Teaching Assistant, Counselor
- 12 Registering/other Administrative issues related to school
- 16 Participating in Cultural/Educational activity not school related (e.g., visiting a museum, reading, attending lectures)
- 13 Commuting to/from work or school
- 17 Watching TV/Movies or Listening to music or playing video games
- 18 Using Computer for Leisure (e.g. shopping, games, downloading music, e-mail)
- 19 Spending time with friends (including partying/clubbing)

- 20 Playing sports or other exercise
- 21 Talking on the Phone or Texting
- 22 Participating in other Leisure activity (such as shopping, attending sports events)
- 23 Volunteering/Mentoring (including community service and political activities)
- 24 Participating in Religious/Spiritual activities
- 25 Other (Fill in response) **(Allow 100 characters)**

20. How long did you spend (on) [ACTIVITY]?
(Please enter the time you spent to the nearest 15 minutes.)

Enter duration (hours, minutes):

_____ hr. (Fill in response) (0-8)

_____ min. (Fill in response) (00, 15, 30, 45)

- 20a. Just to confirm, you indicated that you were sleeping from (start time) to (end time). Is that correct?

- 1 Yes
2 No

(If code 2 in #20a,
Reset to #19 and start the first activity;
Otherwise, Continue with Diary)

You entered that at (start time), you were (activity1/activity2/activity3/...). Can you indicate which one of these activities you devoted most of your attention to?

- 1 Activity 1
2 Activity 2
ETC., as appropriate
0 Can't decide

21. Who was with you or accompanied you while you were [ACTIVITY]? (Check all that apply.)

- 0 Alone
1 Spouse/Partner
2 Household child(ren) under age 13
3 Household child(ren) age 13 or older
4 Parent(s)
5 Sibling(s)
6 Other Household or family member(s)

- 7 Non-household children under age
13
- 8 Other non-household person(s) age
13 and older (including Parents-
in-law)
- 9 Friends/Date
- 10 Other students/classmates
- 11 Co-workers/colleagues
- 12 Neighbors/acquaintances
- 13 Teacher/Professor/school
counselor/coach
- 14 Roommates/apartment-
mates/housemates

22. Where were you while you were [ACTIVITY]? (NOTE: If activity is commuting [code 13 in #19] - only display MODE OF TRANSPORTATION codes)

PLACE

- 1 At home or yard
- 2 At workplace
- 3 HOLD
- 4 Coffee shop
- 5 Grocery store
- 6 In class
- 7 Library
- 8 Other store/Mall
- 9 Outdoors away from home
- 10 Place of worship
- 11 Restaurant/Bar/Cafeteria
- 12 School/On campus
- 13 Someone else's home
- 14 Other place (Fill in response)

MODE OF TRANSPORTATION

- 15 Airplane
- 16 Bicycle
- 17 Boat/Ferry
- 18 Bus
- 19 Car, truck, or motorcycle (driver)
- 20 Car, truck, or motorcycle (passenger)
- 21 Subway/Train
- 22 Taxi/Limousine Service
- 23 Walking

[NOTE: If STOPTIME is greater than 4:00 a.m., go to next section; Otherwise, Continue to next row]

(If code 03 NOT recorded for the 24-hour period, Continue; Otherwise, Skip to Note #2 before #23a)

23. You did not report any eating or drinking yesterday. Did you do any eating or drinking yesterday as your main activity?

- 1 Yes
- 2 No

(Note #1: If code 1 in #23, Return respondent
to Edit Diary;
Otherwise, Continue)

(Note #2: If code 2 [yesterday] in #14 AND
NOT code 6 or 7 in #19, Continue;
Otherwise, Skip to #26)

23a. You did not report attending class or participating in an online class yesterday. Did you attend class or participate in an online class as your main activity yesterday?

- 1 Yes
- 2 No

(Note #1: If code 1 in #23a, Return to Edit
Diary;
Otherwise, Continue)

26. SELECTION OF RANDOM ACTIVITIES: (NOTE: Remove Activities Personal in Nature from Selection Protocol [codes 1, 2, 24, or 99 in #19])

A. (If one episode of attending classes or studying [codes 6, 7, 8, 9, 10, 11, or 12 in #19], select that activity/If more than one episode of attending classes or studying [codes 6, 7, 8, 9, or 11 in #19], randomly select one:)

First Activity Selected

B. (Randomly select one activity Non-Personal in Nature from the remaining activities [codes 3, 4, 5, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, or 23 in #19], excluding activity selected in First Activity Selection [codes 3, 4, 5, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, or 23 in #19]:)

Second Activity Selected

(If None to Select, Skip to #28)

Now we want to go back and ask you some additional questions about two of the activities you mentioned earlier. We are asking these questions to get a sense of how people felt during the day yesterday. The computer has randomly selected two episodes that we will ask about. As before, whatever you tell us will be kept confidential. Your answers will be used to paint a picture of how people feel during various activities.

(NOTE: Ask #27 A-D for response in #26-A, then ask #27 A-D for response in #26-B)

27. From [STARTTIME] to [STOPTIME], you mentioned you were [ACTIVITY]. We'd like to know how you felt during this particular episode. Please use a scale from 0 to 6, where a 0 means you did not experience this feeling at all and a 6 means the feeling was very strong. Of course, you may choose any of the numbers 0, 1, 2, 3, 4, 5, or 6 to reflect whether you experienced this feeling during this activity.

A. Happy - From 0 - 6, where a 0 means you were not happy at all and a 6 means you were very happy, how happy did you feel during [ACTIVITY]?

(Response in #26-A)

0 Not happy at all
1
2
3
4
5
6 Very happy

(Response in #26-B)

0 Not happy at all
1
2
3
4
5
6 Very happy

27. (Continued:)

- B. Tired - From 0 - 6, where a 0 means you were not tired at all and a 6 means you were very tired, how tired did you feel during [ACTIVITY]?

(Response in #26-A)

- 0 Not tired at all
1
2
3
4
5
6 Very tired

(Response in #26-B)

- 0 Not tired at all
1
2
3
4
5
6 Very tired

27. (Continued:)

- C. Stressed - From 0 - 6, where a 0 means you were not stressed at all and a 6 means you were very stressed, how stressed did you feel during [ACTIVITY]?

(Response in #26-A)

0 Not stressed at all
1
2
3
4
5
6 Very stressed

(Response in #26-B)

0 Not stressed at all
1
2
3
4
5
6 Very stressed

27. (Continued:)

- D. Interested - From 0 - 6, where a 0 means you were not interested at all and a 6 means you were very interested, how interested did you feel during [ACTIVITY]?

(Response in #26-A)

- 0 Not interested at all
1
2
3
4
5
6 Very interested

(Response in #26-B)

- 0 Not interested at all
1
2
3
4
5
6 Very interested

28. Now we'd like to know how typical yesterday was for that day of the week (i.e., for a Monday, for a Tuesday, or so on). Using a scale from one-to-five, where 1 means much worse and 5 means much better, compared to what that day of the week is usually like, yesterday was:

- 1 Much worse
2
3 Pretty typical
4
5 Much better

(If code 1 in #8, Continue;)

Otherwise, Skip to Note before #25)

Now I'd like you to think about the classes you take...

24. The following questions ask about the reasons for your actions related to your education. Different people have different reasons for doing things, and we want to know how true each of these reasons is for you. Please indicate how true each reason is for you.

- A. If I do my class assignments, it's because I would feel guilty if I did not.

1 Not at all true
2
3
4 Somewhat true
5
6
7 Very true

- B. If I do my class assignments, it's because I want to better understand my studies.

1 Not at all true
2
3
4 Somewhat true
5
6
7 Very true

24. (Continued:)

C. I follow advice on how to do well in my courses because it will help me become a better student.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

D. If I attend class regularly, it's because I want to get a good grade.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

E. If I turn in a class assignment on time, it's because it makes me happy to be on time.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

F. If I raise my hand in class, it's because I want to receive a good participation grade.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true

5
6
7 Very true

24. (Continued:)

G. If I turn in a class assignment on time, it's because I want people to think that I am a good student.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

H. If I attend class often, it's because I enjoy learning.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

**(If code 1 in #7 AND code 2 in #8, Continue;
Otherwise, Skip to Note before #29)**

25. The following questions ask about the reasons for your actions related to your education, even if you are not currently enrolled in school. Different people have different reasons for doing things, and we want to know how true each of these reasons is for you. Please indicate how true each reason is for you (when you were last enrolled in school).

A. If I do my class assignments, it's because I would feel guilty if I did not.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

B. If I do my class assignments, it's because I want to better understand my studies.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

C. I follow advice on how to do well in my courses because it will help me become a better student.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

25. (Continued:)

D. If I attend class regularly, it's because I want to get a good grade.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

E. If I turn in a class assignment on time, it's because it makes me happy to be on time.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

F. If I raise my hand in class, it's because I want to receive a good participation grade.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

G. If I turn in a class assignment on time, it's because I want people to think that I am a good student.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true

5
6
7 Very true

25. (Continued:)

H. If I attend class often, it's
because I enjoy learning.

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

(If code 1 in #8, Continue;
Otherwise, Skip to #32)

29. Do you have a best friend at school?

- 1 Yes
- 2 No

30. Are you involved in at least one co-curricular activity, such as clubs, student organizations, student government, athletics, intramurals, student employment, or any other form of student involvement outside of the classroom?

- 1 Yes
- 2 No

31. Using a scale of one-to-five, where a 1 means you strongly disagree and a 5 means you strongly agree, please indicate how strongly you agree with the following statement: I always try to take classes that are challenging to me.

1 Strongly disagree
2
3
4
5 Strongly agree

32. Have you ever been in a situation where you felt you had to cheat on a classroom assignment, homework, or exam just in order to stay ahead?

1 Yes
2 No

Finally, we want to ask you a few general questions.

33. Taking all things together, how satisfied are you with your life as a whole these days? Using a scale of one-to-five, where a 1 means you are not very satisfied and a 5 means you are very satisfied, please indicate how satisfied you are with your life these days.

1 Not very satisfied
2
3
4
5 Very satisfied

34. Which of the following best describes your current marital status?

1 Married, living with spouse
2 Married, living apart from spouse
3 Unmarried, living with partner
4 Unmarried, not living with partner

35. Do you have any children?

1 Yes
2 No

**(If code 1 in #35, Continue;
Otherwise, Skip to #37a)**

36. How many children do you have? (Fill in response)

01-99

(NOTE: Display name and address from
sample file)

37a. So that we can send you the \$XX, please
verify below whether the information is
correct.

1 Yes

2 No

3 I do not want you to send me the
\$10.

(If code 1, 3, or No Response in #37a,
Skip to Submit Survey Screen;
Otherwise, Continue)

NAME: (Fill in response) (Allow 50 characters)

STREET ADDRESS: (Fill in response) (Allow 100 characters)

CITY: (Fill in response) (Allow 30 characters)

STATE: (Drop-down of states)

ZIP CODE: (Fill in response) (Allow 15 characters)

Please submit your survey by clicking the "Submit Survey" button below. For privacy, we encourage you to close your browser after submitting the survey. Once you close your browser, you will no longer be able to view the survey or change your responses.

<Submit Survey>

Thank you very much for taking the time to complete this survey. Again, we assure you that all of your answers will be kept completely confidential. No individual responses are reported.

You may now close your browser or go to another Web page.

Appendix B. Detailed survey response rates.

We present information on survey response rates by site, cohort, and survey round in Appendix Table 1. Survey rounds correspond to the timing of the survey relative to study participants first study semester and excluding summer semesters. Round 1 surveys were administered toward the beginning of the first program semester; round 2 surveys were administered toward the end of the first program semester; round 3 surveys were administered toward the beginning of the second program semester; and round 4 surveys were administered toward the end of the second program semester. Our intent was to survey NYC participants twice in each semester in order to be able to examine changes in time use that may be related to the structure of the PBS payments. However, we were not able to begin fielding surveys until the spring semester of 2009 so cohort 1 in NYC was only surveyed in round 4, and cohort 2 in NYC was only surveyed in rounds 2 through 4. In CA, we only surveyed participants once in each semester because MDRC was also relying on survey responses in the second program semester for CA participants. For our primary analysis we rely on responses to survey round 2. Analyses on the impact of PBSs in the second semester rely on responses to survey round 4.

Appendix Table 1 Survey completion and response rates by site, cohort, and survey round.

	Survey Round			
	1	2	3	4
New York City				
<u>Cohort 1</u>				
Total surveyed	0	0	0	368
Number of respondents				199
<i>Response rate</i>				54%
Number with complete time diary data				180
<i>Time diary response rate</i>				49%
<u>Cohort 2</u>				
Total surveyed	0	514	514	514
Number of respondents		295	228	219
<i>Response rate</i>		57%	44%	43%
Number with complete time diary data		277	205	208
<i>Time diary response rate</i>		54%	40%	40%
<u>Cohort 3</u>				
Total surveyed	618	618	618	618
Number of respondents	347	361	332	306
<i>Response rate</i>	56%	58%	54%	50%
Number with complete time diary data	306	336	308	297
<i>Time diary response rate</i>	50%	54%	50%	48%
California				
<u>Cohort 1</u>				
Total surveyed	0	2810	0	2810
Number of respondents		1089		1154
<i>Response rate</i>		39%		41%
Number with complete time diary data		1064		1123
<i>Time diary response rate</i>		38%		40%
<u>Cohort 2</u>				
Total surveyed	0	3850	0	3850
Number of respondents		1910		1696
<i>Response rate</i>		50%		44%
Number with complete time diary data		1810		1620
<i>Time diary response rate</i>		47%		42%