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College Academic Coaching Can Increase College Success and Later Earnings

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EMPLOYMENT RESEARCH

ARTICLE HIGHLIGHTS

■ To boost college graduation rates, policymakers often advocate programs such as coaching or mentoring, but many of these programs are costly and difficult to scale.

■ We evaluate a relatively low-cost (and potentially scalable) group coaching program targeted at first-year college students who are placed on academic probation.

■ The program is mandatory, and participants attend a workshop in which coaches aim to normalize failure and improve self-confidence.

■ We show that the program raises students' first-year GPAs and decreases the probability of their dropping out in the first year of college.

■ The coaching/mentoring may have substantial long-run effects: we document significant gains in lower-income students' earnings 7–9 years following entry to the university.

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College Academic Coaching Can Increase College Success and Later Earnings

Pierre Mouganie, Serena Cnaan, Stefanie Fischer, and Geoffrey C. Schnorr

The college wage premium—the additional earnings of college graduates over high school graduates—has increased in recent decades. Although college graduation rates have also been increasing recently, the disparity in graduation rates between lower- and higher-income students has been growing. This puts low-income students at a disadvantage in the labor market. Policymakers and researchers have recognized this issue, and an often-proposed solution is to enhance academic support services in both high schools and colleges in order to improve college graduation rates, particularly for groups that have traditionally struggled.

Academic support services such as coaching and mentoring programs have shown the most promise, but only when they are implemented in a very proactive manner—when they provide students with personalized follow-up and attention. Unfortunately, these programs are often expensive, making them hard to implement or scale at a regional or national level. We analyze a relatively low-cost but targeted-group coaching program that has the potential to scale. This program was rolled out at a large public university in California starting in the year 2009. The program targeted first-year students most at risk of dropping out—those placed on academic probation during their first semester at university.

We find that the coaching program significantly increased students' first year grade-point average by 16 percent of a standard deviation (about 0.1 GPA points on a 4.0-point scale) and lowered first-year dropout rates by 8.6 percentage points, from approximately 26 to 18 percent. We also find that these changes correspond to a higher likelihood of graduating from university. These effects seem to be concentrated among men, STEM majors,

and lower-income student groups. This pattern is not surprising, as lower-income students and men persist in and complete college at much lower

An academic-support coaching program at a large California university significantly increased at-risk students' first-year GPAs while lowering dropout rates from 26 percent to 18 percent.

rates than higher-income students and women. Additionally, college attrition rates for STEM majors tend to be high.

In a [recent paper](#), we also provide some of the first causal evidence that coaching and/or mentoring programs can lead to significant gains in the labor market. While we find that coaching had no overall effect on employment and wages, we do document substantial wage gains for men and lower-income students. Our findings are timely and relevant, as policymakers and researchers aim to address the college “completion crisis” in the United States.

Measuring the Impact of the Targeted Academic Coaching Program

Using rich administrative data for all first-year students entering a large public university in the state of California, our approach centers on understanding the effects of targeted coaching programs for academically vulnerable students. Specifically, we use student-level data for 11 cohorts of students entering the university

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between 2007 and 2017. By linking these data to administrative files from the state of California's Employment Development Department, we are able to also investigate the program's effect on students' eventual labor market outcomes.

The college benefits of the program were concentrated among groups typically with lower college graduation rates: lower-income students, men, and STEM majors.

Our data and setting are ideal for our analysis for three reasons. First, the way the coaching program was rolled out at the university we examine provides an ideal way to establish a causal link between the program and students' outcomes. We touch on this point in more detail below. Second, the structure of the program is interesting in that it has many of the key components of previously successful programs but without the added costs. Indeed, the program rollout was targeted at academically vulnerable students, involved personal supervision, required follow-up visits, and was mandatory. We estimate that the program cost of inducing an additional student to remain at university is \$1,667. Third, our data are both detailed and extensive, spanning many years of individuals' lives. This enables us to offer a broad look at potential outcomes through various stages of life (early university, graduation, labor market outcomes) to try to understand why the program was successful.

A complicating factor in estimating the causal effects of any mentoring program is that students generally self-select into these programs. In particular, students from higher-income households or those with more parental involvement may be more likely to take up these opportunities.

As a result, simply comparing students who are mentored to those who are not conflates the causal effect of mentoring with the type of student who selects into mentoring. In order to estimate the causal impact of the program, we take advantage of the first-year GPA eligibility criterion. Specifically, students scoring below a 2.0 GPA in their first semester were required to participate in the coaching program, and those scoring above it were not. By comparing students who were just below and just above the threshold, we are able to estimate the causal impact of the program, as students around this threshold tend to have, on average, similar characteristics and are academically comparable.

A final complicating factor is that the coaching eligibility GPA threshold of 2.0 is the same as the probation threshold at the university. In other words, students scoring below a 2.0 GPA in their first semester are required to attend the coaching program but are also placed on academic probation. Luckily, we have data for three years prior to the rollout of the program. In these years, students below the program threshold were put on probation but were not required to attend a coaching program. Intuitively, our research involves estimating the effects of scoring below versus above the 2.0 GPA cutoff for cohorts exposed to both coaching and probation, relative to the effect of scoring below versus above the 2.0 GPA cutoff for cohorts exposed to only probation.

The results are striking. We find that the coaching program increased students' GPAs by approximately 0.1 points and led to large reductions in first-year college dropouts on the order of 8.6 percentage points, a 33 percent decrease. We also provide evidence that the program increased six-year graduation rates among program participants by around 4 to 7 percentage points. Importantly, we are also able to check whether these impacts endure past graduation by

examining labor market outcomes. Overall, we find no significant effects of the coaching program on the average student's earnings and employment at ages 24 to 26.

Our analysis reveals some interesting patterns that are further relevant for policymakers. The majority of the effects we estimate, for example, are driven by lower-income students, men, and students in STEM majors. Figure 1 summarizes effect sizes for these groups for three main outcomes of interest: GPA, first-year college dropout rates, and quarterly earnings. Even though we found no overall impact on earnings for the average student in the coaching program, we do find large and significant effects on earnings for these three groups of students. In particular, low-income students had approximately 30 percent higher earnings at ages 24 to 26 as a result of program participation.

Why Did Students Benefit So Much from Academic Coaching?

The detail of our data allows us to speculate on why the coaching program was so successful. While the program was designed as a coaching intervention, it includes a bundle of treatments (i.e., emotional support, information, goal-setting, and time management skills) which all have the potential to individually boost students' academic success. Further analysis from student surveys conducted at the university shows that students who participated in the program felt significantly more supported by a faculty or staff member, were less likely to feel that they were the only ones struggling, were more familiar with the university's student services, and were better at managing their time. Given these findings, we believe that the coaching program was successful because it increased participants' social-emotional state. Most importantly, it seems to have increased students' perceptions regarding the

level of support they felt from the university.

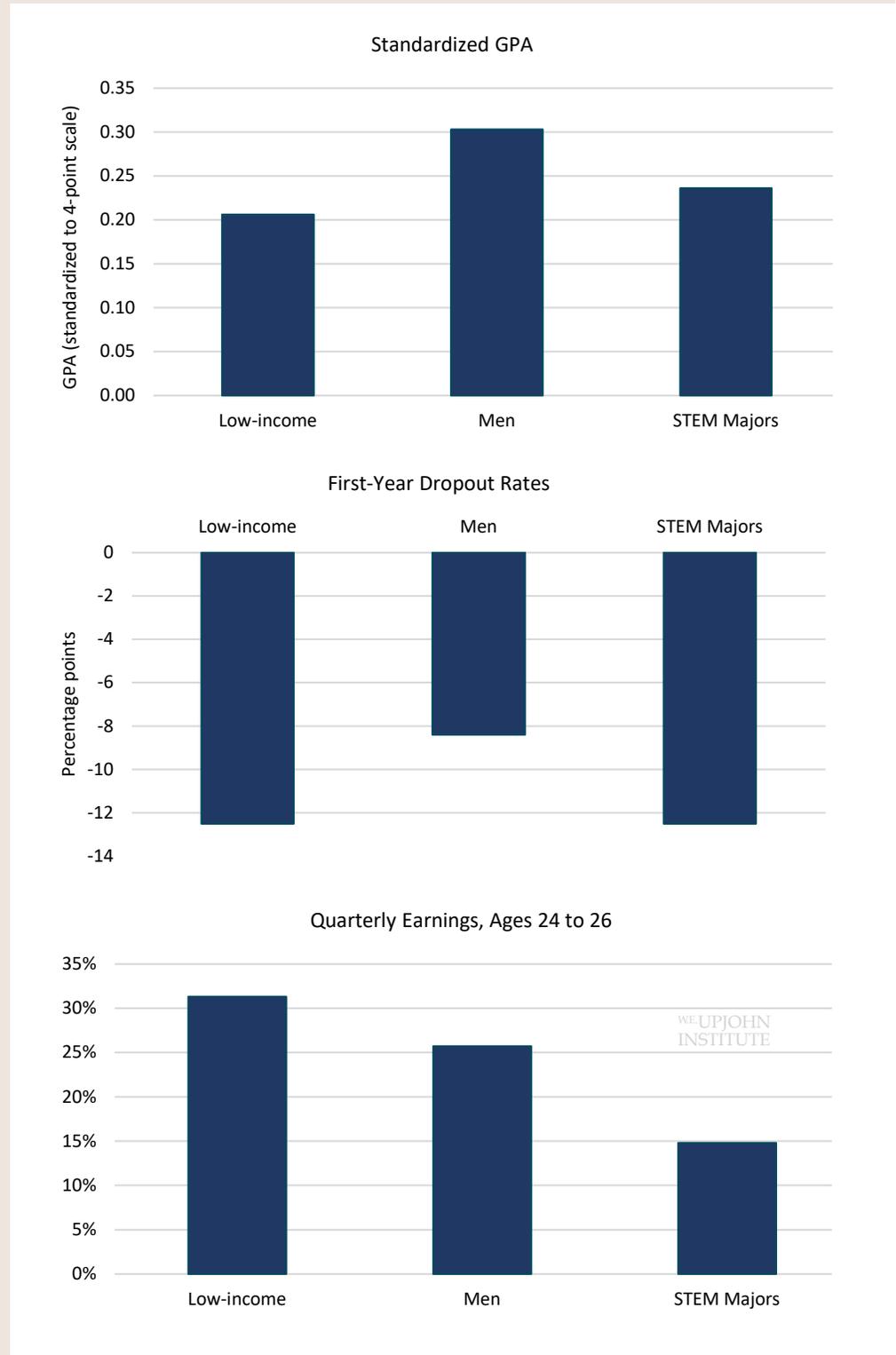
Conclusion (Scalability of Coaching Program)

A final consideration is the nature of the program we analyze. Traditionally, mentoring or coaching programs have been expensive, making them extremely difficult to roll out or scale up. A particularly attractive and important feature of our program is that it has a much lower cost structure than previously successful interventions. We estimate that the program cost of inducing an additional student to remain at university is \$1,667. This compares favorably to other successful college coaching programs, which can cost anywhere from \$4,000 to \$19,000 per student induced to stay at university. From a policy perspective, our program’s lower cost and less complex structure make it potentially easy to implement and scale at a larger level. While the degree to which our findings can be replicated at other universities remains an open question, the results from this coaching program are quite promising. We conclude that even less-proactive coaching programs can prove successful as long as they are personalized, mandatory, and include follow-up visits.

For additional details, see the full working paper at https://research.upjohn.org/up_workingpapers/370/.

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Figure 1 Effects of the Coaching Program on Low-Income Students, Males, and STEM Majors



NOTE: The figure shows estimated effects of participation in the coaching program on the indicated outcome for each of three groups: low-income students, male students, and students majoring in STEM fields. For methodological details and full definitions of the outcomes and groups, please see the [full paper](#).

SOURCE: Authors’ calculations from administrative data from the state of California.