

NUDGES, NORMS, AND NEW SOLUTIONS →

Evidence-based strategies to get
students to & through college



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INTRODUCTION

The Case for Behavioral Solutions in Postsecondary Education



Practitioners who work on postsecondary education access and success know that students face many obstacles on the path to and through college. Whether large or small, these obstacles result in distressingly familiar outcomes that often seem avoidable but are stubbornly persistent. These outcomes include things like:

- › *A talented high school student does not apply to college because she doesn't perceive herself as "college material."*
- › *A student who got good grades in high school struggles academically in college and drops out without ever working with a tutor or otherwise seeking help.*
- › *A student gets into college and through the first year but can't continue because he loses access to financial aid after he doesn't refile the FAFSA.*

Schools, nonprofits, state agencies, and others invest time, energy, and money to combat these problems. They offer assistance with the college application process, make tutoring and academic advising available on campus, and flag important administrative deadlines. Yet despite all the hard work, college access remains a challenge, college completion rates remain low, and racial and socioeconomic disparities persist.¹

These problems are stubborn in part because they're rooted in patterns of human cognition and behavior that operate outside of our conscious awareness. In recent years, researchers and innovators have begun exploring how insights from behavioral science—the science of how we make decisions and take actions—can be brought to bear on these challenges. The results have been promising: new solutions that target the hidden drivers of student behavior have successfully mitigated a range of obstacles to students' progress. A strong evidence base now exists for these innovations. **The next step is for practitioners like you to put them into practice. That's why we created this guide.**



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the Nudge Hotline
for free assistance:**

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

**See page 11 for more
information**

This guide presents 13 cost-effective, evidence-based behavioral innovations that can help more students reach, complete, and make good financial choices before, during, and after college. For example:

- *Ten minutes of one-on-one help with the FAFSA and pre-populated financial aid information can improve the likelihood of both FAFSA submission and college enrollment.*
- *Myth-busting emails can increase sign-up for work-study programs and other campus resources.*
- *Warnings offered at the right time along with a clear path to fixing the problem can have surprising impacts on students' ability to avoid academic violations.*

For each behavioral innovation we offer concise information on what it is, what it can do for students, and what steps are needed to carry it out. Our hope is that practitioners like you will use this guide as a first step to incorporating evidence-based behavioral innovations into your programs. The Nudge Hotline offers free support to help you take the next step towards putting these techniques into action with your students.

What is Behavioral Science?

Behavioral science is the study of how people make decisions and act in the context of a noisy, complicated world. It draws on decades of research in psychology and behavioral economics to create more realistic models for understanding and predicting human behavior. Behavioral science emerged as a dissenting view within the economics profession by challenging the belief that people behave as if they are perfectly rational actors who consider all available information, weigh the pros and cons of all options, make the best choice, and act on it. Instead, behavioral science sees people as mostly rational much of the time, but with significant exceptions that follow predictable patterns.

The behavioral approach leads to two particularly important insights:

Our intentions don't always translate into actions. We're often thrown off track by seemingly inconsequential factors that prevent us from following through on our intentions, even when we want to. We *intend* to stick to our diets, save money, visit the doctor regularly, and meet all our deadlines at work, but we don't always manage to do those things.

Context matters, often far more than we think. We're not always aware of the extent to which we are swayed by the way information is presented to us, the tone in which a message is conveyed, or tiny hassles in a process. But these seemingly minor contextual features often influence what we think and do in subtle but powerful ways.

These insights can be used to create effective solutions by designing programs, processes, and policies on the basis of how people actually behave.

WHAT'S IN THIS GUIDE?

How it's Organized: Three Big Challenges

This guide organizes thirteen behavioral innovations within three big challenges in postsecondary education:

- 1. Access to College:** Increasing the number of students who are admitted to and enroll in quality colleges suited to their academic abilities.
- 2. College Life & Academics:** Guiding students through the many challenges of college—social, academic, financial, and logistical—and on to graduation.
- 3. Student Finances:** Making college affordable and supporting financial decisions before, during, and after college that will help students graduate and set them up for financial health as adults.

Thirteen Proven Innovations that Help Students

This Guide presents 13 evidence-based behavioral innovations that address one of the three big challenges. Each of the 13 innovations is presented in a two-page summary that looks like this:

1

INNOVATION 1

COST/BENEFIT CLARITY

Clarify the costs and benefits of college to shape college-going intentions

2

THE INNOVATION

Low-income students are less likely to apply to college than their higher-income peers, even though they are just as likely to be admitted, enroll, and graduate when they do apply. This is particularly true with selective colleges, which many students view as unaffordable but may not be with financial aid. As a result, many students miss out on opportunities to attend college—or to attend the high-caliber colleges they are qualified for—because they:

- focus on the “sticker price” of college rather than the actual cost with financial aid
- choose where to go based on arbitrary rules of thumb, like where family members went
- don’t focus enough on the long-term financial benefits of college

illuminate the financial costs and benefits of postsecondary education—and of specific colleges—to spark college-going intentions among prospective students. You can do this by showing students the estimated price they would pay for college once financial aid is factored in, by providing estimates and examples of the benefits of college, and by providing additional information to distinguish among schools (colleges’ graduation rates, for example).

3

HOW IT'S HELPED STUDENTS

- College-going intentions
- College admission
- Applications submitted
- College match

The evidence is **highly compelling** that this approach benefits academically successful students who might not otherwise attend college and students from low-income families.

See the case studies that follow for concrete examples of these effects. See page 7 for an explanation of how we evaluate evidence.

4

WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Send students personalized information about college costs and benefits	○○○	\$	Case 1.1
Send students general information about college costs and benefits	○	\$	Case 1.2

See page 8 for an explanation of these cost and resource estimates.

5

COLLEGE ACCESS

HOW IT'S DONE

- Identify a population of college-ready people who are likely not to apply or to apply only to lower-quality colleges (e.g., high-achieving, low-income high school students).
- Identify colleges that these prospective students might not otherwise apply to that are appropriate for their capabilities. This could be either a single college or a full list of safety, match, and reach schools.
- Choose a channel to communicate the information. One study found that families prefer to receive materials in the mail rather than online (Case 1.1). Videos have also been effective (Case 1.2). The “best” channel will likely change over time, as technology and personal preferences evolve.
- Send the prospective college students a message that illuminates the costs and benefits of college, which may include:
 - An explanation of the difference between “sticker” price and the estimated actual cost (including financial aid) of attending the college.
 - Statistics and/or personal anecdotes about the benefits of college, especially for future income and professional opportunities.
 - Information about financial aid and scholarship opportunities that could help the student attend college at a lower-than-expected cost.

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KEEP IN MIND

- It's always tempting to include more information about college options (student body size, for example), but it's important to keep it simple. Too much information can dilute the core message.
- Making the decision to apply is only the first step, and prospective students who intend to apply don't always follow through. Including guidance on deadlines and the steps involved can increase the likelihood that students submit an application. See Innovation 4 for a broader approach to supporting students through the application process.
- The College Board's Big Future resources may be helpful in identifying appropriate prospective colleges.

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If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at hotline@nudge4.org 434.233.0165 (phone) 434.233.0165 (SMS)

See page 11 for more information.

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 1.1: Application guidance and information about the actual cost of college

CASE 1.2: College benefits video and financial aid calculator

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What it is and what it achieves

- 1 The challenge:** The problem that the innovation addresses and why it's difficult to solve using traditional tools.
- 2 The innovation:** The behavioral innovation itself, described in broad terms. (Details of how it was done in specific cases are presented in the examples that follow.)
- 3 How it's helped students:** The benefits the innovation has delivered for students. See page 6 for how we assess the quality of evidence associated with each innovation.
- 4 What it costs:** Guidance on the cost and staffing requirements to develop and implement the innovation. See page 8 to learn how we estimate the resource intensity of each innovation.

How you can do it

- 6 How it's done:** An overview of the choices and steps required to carry out the innovation.
- 7 Keep in mind:** Practical tips about where and how the innovation might be most effective, as well as pitfalls to avoid and references to complementary approaches.
- 8 Get started:** For help getting started, contact the Nudge Hotline or other experts. See page 10 for more information on available support.

Individual Case Studies

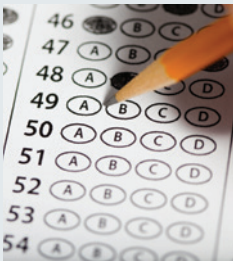
Each innovation is followed by two to four specific case studies that show how the innovation has been carried out in the past, for which students, and with what impact on college access and success:

CASE 2.1

ENTRANCE EXAM CENTERS IN HIGH SCHOOLS

WHAT: Certain high schools that hadn't previously hosted exams became college entrance exam testing centers.

WHO: High school juniors attending one of the schools that opened a testing center.



How it's helped students relative to projected outcomes if their school had not become a testing center:

for students at schools where testing centers were opened

**Exam completion:**
The likelihood of completing an exam increased by 4 percentage points

**Enrollment:**
The number of students enrolling in 4-year colleges was projected to increase by 1.6 percentage points

IMPORTANT DETAILS

- Opening a test center in a "test center desert" can be helpful to other high school students in the area; too, the researchers also found positive effects of opening a testing center for students attending neighboring schools.
- This study did not use an experimental design, but instead analyzed a large data set of test center locations and exam completion rates across the United States.

LEARN MORE

Bulman, G. (2019). The effect of access to college assessments on enrollment and attainment. *American Economics Journal*, 7(4), 136.

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CASE 2.2

POLICIES TO MAKE TAKING ENTRANCE EXAMS THE "DEFAULT" OPTION

WHAT: States or districts put policies in place that made taking entrance exams the "default" option for all students, requiring them to actively opt out if they did not want to take the exam. In addition, they:

- waived registration fees
- offered exams in school on weekdays

WHO: High school juniors at 33 schools in California, Florida, and Texas.



How it's helped students relative to peers at schools that weren't registered at a testing center:

**Exam completion:**
The likelihood of completing an exam increased by 31 percentage points

**Enrollment:**
The number of students enrolling in 4-year colleges increased by 3 percentage points

IMPORTANT DETAILS

- The impacts on enrollment were larger for students from small towns and rural areas.
- These policies eliminate the hassles of needing to register and plan for the exam, and avoid scheduling conflicts that arise with test-taking on the weekends. See Innovation 3 for more on eliminating seemingly small barriers that can have unexpectedly large impacts on students' behavior.

LEARN MORE

Bulman, G. (2019). The effect of access to college assessments on enrollment and attainment. *American Economics Journal*, 7(4), 136.

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WHO IS NUDGES, NORMS, AND NEW SOLUTIONS FOR?

This guide is for postsecondary education practitioners working to help students reach college, succeed once there, and do both in a way that supports their financial wellbeing. The potential audience includes a broad array of professionals: college student success leaders, financial aid officers, and other college administrators, high school counselors, staff at nonprofits that support students in high school or college, officials at relevant state agencies, and leaders and grantmakers at philanthropies supporting student success. Many of the innovations featured in this guide can be implemented by different practitioners, and we've highlighted examples of alternative approaches in the sections that follow.

A NOTE ON THE INNOVATIONS AND THE EVIDENCE

This guide presents evidence-based behavioral innovations in postsecondary education with the needs of practitioners in mind. We only included innovations where high-quality, independent research demonstrates meaningful impacts on important challenges. Nonetheless, not all innovations are right for all settings or all students, and practitioners will have to decide which are best suited for their unique situation. While substantial research has been conducted on these behavioral innovations, we can't guarantee that the results achieved in one setting or with one group of students will always be found elsewhere.



Not all innovations are right for all settings or all students, and practitioners will have to decide which are best suited for their unique situation.

It can be challenging for practitioners to choose from among similarly effective innovations. This guide aims to address that challenge by presenting clear and accessible information on how well and for whom evidence-based behavioral innovations have worked.

| How did we choose the innovations?

All of the studies featured in this guide address behavioral obstacles that stand in the way of students' access to and success in postsecondary education. Each of the innovations has been shown to work in specific, real-world settings. Nearly all of the studies that comprise the innovations were evaluated through randomized controlled trials, which are considered the "gold standard" in rigorous research, and met widely accepted standards for assessing impact.

| How did we decide what evidence to present? And what about the longer-term impacts of the innovations on student success?

In condensing the lessons from multiple academic studies into a brief summary, we've aimed to highlight the most relevant student outcomes. The case studies included with each innovation

contain more detail on the effect sizes, the context of the study, and the student populations for which they were most impactful. Except where researchers did not report aggregate results, the case studies present outcomes for both the entire population of students on whom the innovation was tested and for key subgroups of students for whom different effects were found. We've taken this approach for the sake of transparency and to avoid overstating the generalizability of the impact of the innovations to broader student populations.

- **Innovation summaries present headline results**
- **Cases give more detail on the context and the size of the effects**
- **Appendix A summarizes the results across all innovations**

The innovations in this guide aim to improve students' long-term outcomes related to college access, college completion, and/or financial health. For innovations with evidence of longer-term impacts, we describe those findings. But long-term effects take years to measure, and many of these studies have been conducted only recently or for other reasons don't measure long-term effects. In these cases, we describe more immediate impacts that may translate to longer-term outcomes, such as first-to-second year persistence rates. We also note where and why innovations could potentially lead to unanticipated negative effects for students.

What details are left out?

For simplicity, we've only included the most important information from the research studies in the brief summaries in this guide. If you're interested, you can find much more detail in the papers cited in each case study.

What does this evidence mean for you and the students you serve?

Extrapolating evidence from a study to new and different contexts can be tricky. For each of the innovation summaries in this guide, we note the strength of the evidence, how reliably the results might apply across settings, and any particular populations or contexts for which you might not expect the same results. The evidence for each innovation falls into one of the following three categories:

- **Highly compelling:** *There is strong evidence from multiple studies in different contexts that the innovation helps students. Note, however, that this does not mean that it will necessarily be effective everywhere or for all students.*
- **Limited but promising:** *The innovation has demonstrably improved student outcomes but has so far only been studied in a narrow context or student population.*
- **Uncertain:** *Positive impacts have been found for some students, but there is evidence of or potential for negative effects for other students. Think carefully about whether it makes sense to expect positive outcomes in your particular context. Where applicable, we will provide suggestions to help you with this decision.*

These classifications appear in each of the thirteen innovation summaries that follow, and a compilation of the evidence for all the innovations is available in Appendix A.



Contact the Nudge Hotline for free assistance:

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434.233.0165 (SMS)

See page 11 for more information

A NOTE ON COSTS AND RESOURCES

For each innovation, we estimate both the **direct costs** and **staff time** necessary to carry it out. These estimates appear in the individual innovation summaries and are consolidated in Appendix B. They are included to help you assess the cost of a particular innovation and to enable comparisons between alternatives.

There is often more than one way to carry out an innovation, and we provide estimates for alternative approaches. For example, you could implement a coaching intervention by contracting with external professionals, which is relatively expensive but wouldn't burden your internal staff. Alternatively, you could use internal staff, students, or volunteers as coaches to limit out-of-pocket costs, which would require more staff time to train and supervise non-professionals. (See Innovations 4 and 10 for more on coaching programs.)

All the innovations featured in this guide are low-cost, efficient approaches to improving outcomes in comparison to more traditional, resource-intensive approaches.

The cost and staff time estimates that follow are intended to inform decisions, but we encourage you to independently look into the time and money implications before committing to an innovation. Your costs may be higher or lower than what we report for various reasons, including the size of the student population you serve, the flexibility of your existing infrastructure, and the availability of your staff to take on customization and implementation responsibilities.

To account for variation in innovation cost, we've classified each into one of **three cost categories**:

Innovation Costs

\$	\$\$	\$\$\$
<i>Less than \$10 per student</i>	<i>\$10 - \$100 per student</i>	<i>More than \$100 per student</i>
Examples: ➤ <i>Messaging campaigns that leverage existing systems</i> ➤ <i>Adapting existing communications or forms</i> ➤ <i>Integrating online resources and exercises into an existing portal</i> ➤ <i>Eliminating small fees</i>	Examples: ➤ <i>Mailing printed materials</i> ➤ <i>Producing original media like a video or audio recording</i> ➤ <i>Developing new technology, such as a smartphone app</i> ➤ <i>Subsidizing college entrance exams</i>	Example: ➤ <i>Contracting with external professionals such as coaches</i>



We encourage practitioners to independently look into the time and money implications before committing to an innovation.

The following are a few of the most common direct costs:



DIGITAL MESSAGE DELIVERY: While all forms of digital outreach are generally low-cost, digital messaging still ranges in price. Email tends to be the least expensive, while targeted social media outreach or interactive texting campaigns cost more. At the low end of the spectrum, sending an email to an additional student costs nearly nothing. At the high end, digital messaging may cost \$1-2 per student per month for fully interactive texting campaigns.



PRINTED MATERIALS: Printing costs for high-quality color brochures and similar printed materials can range from less than 50 cents to a few dollars each, depending on the size and number of copies. Be sure to budget for graphic design costs if you don't have that capacity in-house. Design may cost between \$500 and \$1,000 (or more) for a 4-5 page brochure.



CREATING A SMARTPHONE APP: Software development for a smartphone application can cost anywhere from a few thousand dollars to well into six figures. The wide variation is due to the range of app complexity, which impacts the developer time needed to create it. While developing an app might be the right approach in some cases, it's usually better to tap into existing channels that students already use. If you build a new app, you'll face the challenge of getting students to download and use it. But if you integrate messages into a familiar channel such as email, SMS, or a college's intranet, you'll bypass this initial hurdle.



PROFESSIONAL COACHING SERVICES: The cost of professional coaching services also varies, from as low as \$200 per student to more than \$1,000 per student, depending on the coaching provider, size of the student body, length and intensity of the coaching engagement, and breadth of services offered.

The **staff burden** of each innovation may be either Low, Moderate, or Elevated. This estimate includes the time needed to adapt and integrate the innovation into a new context—for example, customizing the text of a messaging campaign to fit your context or collecting students’ contact information. It also includes the time needed to carry out the innovation, for example by sending messages, delivering coaching services, or training and supervising service providers.

Innovation Staff Burden

⌚ Low	⌚⌚ Moderate	⌚⌚⌚ Elevated
Examples: ➤ Broadly applicable messages and tools that can be replicated with limited adaptation from the examples provided	Examples: ➤ Staff time to onboard and/or supervise external professionals or volunteer advisors or coaches ➤ Innovations that depend on heavily context-specific details (such as semi-customized advice on college options or loans) ➤ Responding to questions or providing other low-touch advice or support to students by text, email, or phone.	Examples: ➤ In-person interactions between students and staff that require creating a new touchpoint with students (e.g., a counseling session)

FOR HELP GETTING STARTED

| You don’t have to do it on your own.

At first glance innovations can seem simple and easy to implement. A reminder about a financial aid deadline, a prompt to plan which courses to take in the coming semester, or a testimonial from current students about their experiences in college may seem straightforward, but the details matter a lot and getting them right can be difficult. Behavioral innovations are grounded in decades of research aimed at understanding the complexities of human behavior and how context influences what we think and do. As a result, designing an effective innovation requires a deep understanding of the context and behavioral obstacles at play and substantial attention to getting the details right. Small changes to the tone of a reminder, the timing of a message, or the amount of detail provided can make the difference between a solution that helps students and one that is ineffective or even backfires. This guide is the first step in bringing behavioral innovations into your programs. It can’t answer all the questions you may have about how to effectively implement the innovations we highlight. But our support for you doesn’t end here.



Small changes to the tone of a reminder, the timing of a message, or the amount of detail provided can make the difference between a solution that helps students and one that is ineffective or even backfires to an innovation.

| The Nudge Hotline offers free support to practitioners.

A collaboration between ideas42 and Nudge⁴, the Nudge Hotline offers support at no cost to practitioners implementing behavioral innovations. Our behavioral design experts are available to answer your questions and provide more detailed guidance on how to implement behavioral innovations in your context and with your student population. We are here to support you in whatever ways you need. The following is just a sample of the ways we can assist you:

- *Help identify the most important behavioral obstacles impeding your students' progress.*
- *Assist in determining which innovation(s) will maximize impact for your students, given your organization's unique capacities, constraints, and additional programming.*
- *Provide sample design materials that have been used effectively by others, such as the text of messages to students, activity guides, and optimized delivery schedules.*
- *Answer questions about implementing a particular innovation.*
- *Help customize an innovation design for your organization's context.*
- *Link you to service providers ranging from messaging platforms to coaches.*
- *Give you tools to make the case for investing in behavioral innovations within your organization.*



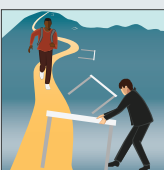
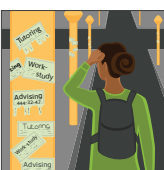
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for free assistance:**

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434.233.0165 (phone)
434.233.0165 (SMS)

In addition to the Nudge Hotline, you may find other resources helpful:

- *The authors of the studies cited in this guide may be willing to answer questions about the innovations they tested.*
- *Public Policy, Education, Economics, and Psychology departments at many colleges and universities have designed and evaluated behavioral science interventions and may be able to offer support.*
- *In some of the innovation summaries below, you'll find additional information about resources that may be particularly helpful for that innovation.*

SUMMARY TABLE

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	INNOVATION 2. ENCOURAGE ENTRANCE EXAMS Improve college entrance exam completion to boost enrollment Challenge: Many potential college students don't take required entrance exams (SAT/ACT).	PAGE 20 Cases 2.1 & 2.2	
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	INNOVATION 7. MOBILIZE RESOURCE USE Prompt students with timely reminders to make the most of campus resources Challenge: Many students don't utilize campus resources that could support them through college.	PAGE 48 Cases 7.1, 7.2 & 7.3	



INNOVATION 8. FACILITATE GOAL-SETTING

Prompt students to set goals and then follow through

Challenge: Many students don't plan for the future of their academic success or financial health.

PAGE 54

Cases 8.1, 8.2 & 8.3



INNOVATION 9. POINT OUT PITFALLS

Use warnings to help students recognize and avoid pitfalls to college success

Challenge: Many college students suffer major consequences due to avoidable or fixable mistakes that prevent them from succeeding.

PAGE 60

Cases 9.1 & 9.2



INNOVATION 10. COACH THROUGH COLLEGE

Coach students through the academic and personal challenges of college

Challenge: Many students get confused, overwhelmed, and discouraged by the complexity of getting through college.

PAGE 64

Cases 10.1 & 10.2

STUDENT FINANCES

PAGE 69



INNOVATION 11. PROMPT FAFSA COMPLETION

Help students meet FAFSA deadlines with targeted messages and assistance

Challenge: Many students miss out on financial aid because they submit the FAFSA late or don't submit it at all.

PAGE 70

Cases 11.1, 11.2, 11.3 & 11.4



INNOVATION 12. REFRAME BORROWING CHOICES

Encourage students to make active decisions about whether and how much to borrow

Challenge: Some students borrow too much for college, and others borrow too little.

PAGE 76

Cases 12.1, 12.2 & 12.3



INNOVATION 13. IMPROVE REPAYMENT

Guide students to consider (and reconsider) the best repayment option for them

Challenge: Many students who are graduating or otherwise leaving college don't choose the best repayment option for their circumstances.

PAGE 82

Cases 13.1, 13.2 & 13.3





COLLEGE ACCESS.

Remove barriers to college



High school graduates from low-income families are less likely than their wealthier peers to enroll in college.¹ Gaps in college enrollment contribute to growing gaps in degree completion: 60% of high school graduates from families in the top income quartile attain a bachelor's degree within 8 years of high school graduation, compared to only 15% of those from the bottom quartile.²

Some students don't apply: many who are prepared for college and intend to apply never complete their applications. The college application process is complex. It consists of a long series of opaque steps like registering and preparing for the SAT/ACT, filling out financial aid forms, and deciding where to apply. Up to 15% of students—often from low-income families—have taken the SAT or ACT, are academically prepared for college, and aspire to enroll in a 4-year school, but don't apply.³

Some students don't enroll: many fail to take the final steps to college. “Summer melt” describes a dynamic where a student who has been admitted to college and accepted the offer doesn't enroll. Even after working so hard to get there, 20% of students who have been accepted to college don't matriculate. Low-income students and those from large urban school districts are most affected.⁴

Some students “undermatch”: Many high-achieving, low-income students attend less selective institutions than their performance suggests they could.⁵ Students who attend more selective colleges are more likely to graduate and to thrive in the job market than peers who go to less selective schools.⁶ Low- and moderate-income students sometimes assume that more selective colleges are unaffordable, but with financial aid they may have more options than they realize.⁷

In this section, you'll find behavioral strategies to:

- *Clarify the costs and benefits of college to shape college-going intentions* (Innovation 1)
- *Increase the number of students taking the SAT/ACT to boost enrollment* (Innovation 2)
- *Increase the number of schools students apply to by removing small hassles* (Innovation 3)
- *Coach students through the application process for better outcomes all around* (Innovation 4)
- *Use information and reminders to reduce “summer melt”* (Innovation 5)

COST/BENEFIT CLARITY

Clarify the costs and benefits of college to shape college-going intentions

THE CHALLENGE

Low-income students are less likely to apply to college than their higher-income peers, even though they are just as likely to be admitted, enroll, and graduate when they do apply. This is particularly true with selective colleges, which many students view as unaffordable but may not be with financial aid. As a result, many students miss out on opportunities to attend college—or to attend the high-caliber colleges they are qualified for—because they:

- focus on the **“sticker price”** of college rather than the actual cost with financial aid
- choose where to go based on **arbitrary rules of thumb**, like where family members went
- don’t focus enough on the **long-term financial benefits** of college

THE INNOVATION

Illuminate the financial costs and benefits of postsecondary education—and of specific colleges—to spark college-going intentions among prospective students. You can do this by showing students the estimated price they would pay for college once financial aid is factored in, by providing estimates and examples of the benefits of college, and by providing additional information to distinguish among schools (colleges’ graduation rates, for example).

HOW IT’S HELPED STUDENTS



College-going intentions



College admission



Applications submitted



College match

The evidence is **highly compelling** that this approach benefits academically successful students who might not otherwise attend college and students from low-income families.

See the case studies that follow for concrete examples of these effects. See page 7 for an explanation of how we evaluate evidence.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Send students personalized information about college costs and benefits	⌚ ⌚	\$	Case 1.1
Send students general information about college costs and benefits	⌚	\$	Case 1.2

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

- 1** Identify a population of college-ready people who are likely not to apply or to apply only to lower-quality colleges (e.g., high-achieving, low-income high school students).
- 2** Identify colleges that these prospective students might not otherwise apply to that are appropriate for their capabilities. This could be either a single college or a full list of safety, match, and reach schools.
- 3** Choose a channel to communicate the information. One study found that families prefer to receive materials in the mail rather than online (Case 1.1). Videos have also been effective (Case 1.2). The “best” channel will likely change over time, as technology and personal preferences evolve.
- 4** Send the prospective college students a message that illuminates the costs and benefits of college, which may include:
 - An explanation of the difference between “sticker” price and the estimated actual cost (including financial aid) of attending the college.
 - Statistics and/or personal anecdotes about the benefits of college, especially for future income and professional opportunities.
 - Information about financial aid and scholarship opportunities that could help the student attend college at a lower-than-expected cost.



KEEP IN MIND

- It's always tempting to include more information about college options (student body size, for example), but it's important to keep it simple. Too much information can dilute the core message.
- Making the decision to apply is only the first step, and prospective students who intend to apply don't always follow through. Including guidance on deadlines and the steps involved can increase the likelihood that students submit an application. See Innovation 4 for a broader approach to supporting students through the application process.
- The College Board's Big Future resources may be helpful in identifying appropriate prospective colleges.

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 1.1: Application guidance and information about the actual cost of college

CASE 1.2: College benefits video and financial aid calculator

If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 1.1

APPLICATION GUIDANCE AND INFORMATION ABOUT THE ACTUAL COST OF COLLEGE

WHAT: A mailer sent to students that included:

- application strategies, such as how to identify safety, match, and reach colleges
- reminders about key deadlines in the process
- information about the actual (“net”) cost of college including estimated financial aid for the recipient, compared to the full (“sticker”) price for a list of selected colleges
- user-friendly (no paperwork) application fee waivers (see Case 3.2)

WHO: High-achieving high school seniors from low-income families across the United States who were targeted because they were unlikely to apply to colleges appropriately matched to their skills. Students were selected if they:

- scored in the top 10% on their college entrance exams
- had estimated family income in the bottom third of all families with a twelfth-grader



How it's helped students relative to peers who were not sent the mailer and fee waiver:



Number of applications submitted
increased by 19%



Number of colleges admitted to
increased to 12%



College match: Likelihood of being admitted to a peer college increased by 31%
(with peer schools defined as those with median entrance exam scores close to the student's)

IMPORTANT DETAILS

- The mailer used in this study combined information about college costs, application guidance, and paperwork-free fee waivers (see Case 3.2). Each of the three intervention components had an individual effect on applications and admission, but they were most effective as a combined package.
- The application guidance in this study was highly tailored to the students who received it, using sophisticated analysis of extensive data on students' likelihood of admittance.

LEARN MORE

Hoxby, C., & Turner, S. (2013). Expanding college opportunities for high-achieving, low income students. Stanford Institute for Economic Policy Research Discussion Paper, (12-014).

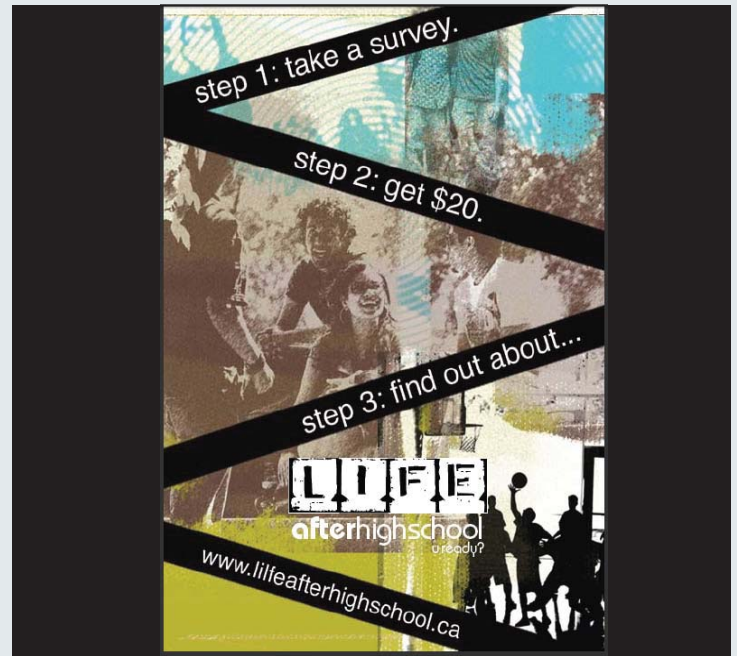
CASE 1.2

COLLEGE BENEFITS VIDEO AND FINANCIAL AID CALCULATOR

WHAT: A one-time program delivered in a high school, consisting of:

- ▶ watching a 3-minute video highlighting the fact that college graduates earn more than non-graduates
- ▶ providing access to a financial aid calculator to estimate the net cost of college

WHO: High school students from low-income neighborhoods of Toronto who were unlikely to have strong college attendance intentions.



Postcard inviting students to watch video and access survey

How it's helped students relative to peers who didn't watch the video or use the financial aid calculator:

for students who were initially unsure about college

Expected future earnings: The expected rate of return from attending college (ratio of expected earnings with college to earnings without) was 40% higher

Perceived costs: Students were 23 percentage points less likely to see costs as a barrier

College-going intentions increased by 17 percentage points¹

for students who already intended to attend college

No impact on the expected rate of return from attending college

Perceived costs: Students were not more or less likely to perceive cost as a barrier to college

College-going intentions were maintained by 3 percentage points more students

IMPORTANT DETAILS

- ▶ While the authors expect that the increase in college-going intentions may translate to an increase in college enrollment, the study did not directly measure college enrollment.

¹ Only marginally statistically significant ($p < 10\%$)

LEARN MORE

Oreopoulos, P., & Dunn, R. (2012). Information and college access: Evidence from a randomized field experiment. NBER Working Paper No. 18551

ENCOURAGE ENTRANCE EXAMS

Improve college entrance exam completion to boost enrollment

THE CHALLENGE

To be admitted to most 4-year colleges, students must take either the ACT or SAT, but only about half of all high school students do. Many of the students who don't take an entrance exam attend high schools in predominantly low-income areas where the tests are less accessible.⁸ Helping students follow through on an intention to take an entrance exam can increase the likelihood that they'll enroll at a college suited to their abilities because:

- the test scores provides students with **new information** about their college potential
- students receive college **promotional materials** they wouldn't otherwise have received from colleges, including more selective colleges they may not be familiar with

HOW IT'S HELPED STUDENTS



Entrance exam completion



College match



College enrollment

The evidence is highly compelling. It's been documented in widely varying contexts that student outcomes tend to be better where these policies are in place.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.

THE INNOVATION

Encourage more students to take the SAT/ACT by eliminating small hassles that stand in their way, and by signaling that taking entrance exams (and going to college) is the norm. One approach is to open up testing centers at local high schools and offer testing during school hours, removing the hassle of finding a test center and the burden of traveling to it. Another approach is to waive fees and change the “default” option to taking the exam, so that all students take entrance exams unless they actively choose to opt out.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Open an additional ACT/SAT test center at a high school	⌚ ⌚	\$	Case 2.1
Implement a policy for free testing and default test registration	⌚ ⌚	\$ \$	Case 2.2

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

Starting a testing center at your school

- 1** Select which exam to hold at your high school or college campus (ACT or SAT).
- 2** Apply for your school to become a testing center and take an online training.
- 3** Pick the date you want to hold the test. Each test has 6-7 date options.
- 4** Order testing materials at least 4 weeks prior to the testing date.
- 5** Advertise the date your school is hosting the test on your school's website, the websites of neighboring schools, local newsletters, and social media platforms.

Encouraging testing across an entire state or district through a policy change that

- 1** Makes public high schools or colleges in your area into ACT or SAT test-taking centers.
- 2** Funds school districts to automatically register students to take entrance exams and waive fees.
- 3** Offers testing to students in school on a weekday rather than a Saturday.
- 4** Provides an official makeup date for students who can't take the test on the default day.



KEEP IN MIND

- Some schools have offered small incentives to encourage students to take the test, such as free breakfast or lunch before or after the exam, or a "comp" day the following week.
- Beyond test-taking, setting aside in-school time for *any* college-prep activity could be an effective way to boost college applications. For example, you might offer support completing the FAFSA (see *Innovation 11*) or require students to meet with a high school counselor to register for college classes.

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 2.1: Entrance exam centers in high schools

CASE 2.2: Policies to make taking entrance exams the "default" option

If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

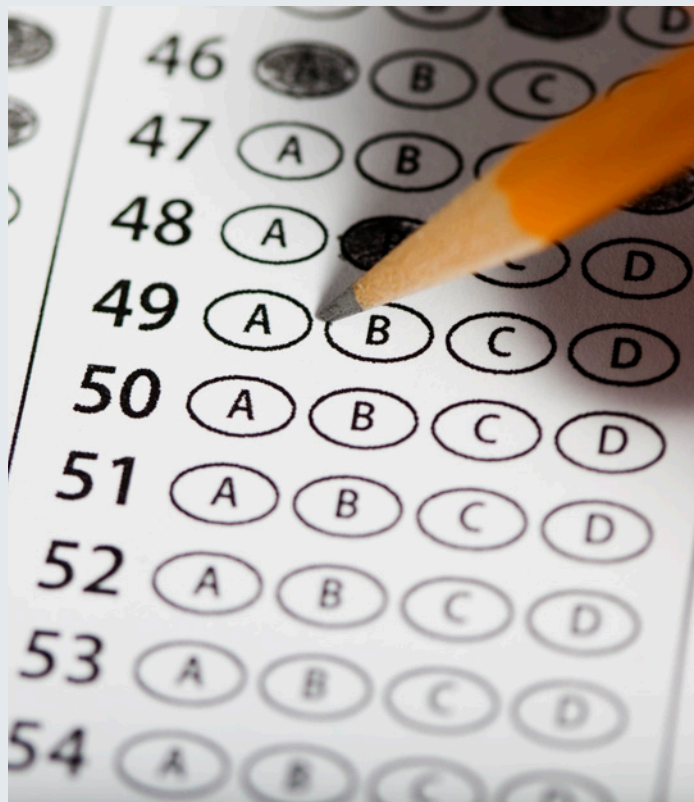
See page 11 for more information

CASE 2.1

ENTRANCE EXAM CENTERS IN HIGH SCHOOLS

WHAT: Certain high schools that hadn't previously hosted exams became college entrance exam testing centers.

WHO: High school juniors attending one of the schools that opened a testing center.



How it's helped students relative to projected outcomes if their school had not become a testing center:

for students at schools where testing centers were opened



Exam completion:

The likelihood of completing an exam increased by 4 percentage points



Enrollment:

The number of students enrolling in 4-year colleges was projected to increase by 1.6 percentage points

IMPORTANT DETAILS

- Opening a test center in a “test center desert” can be helpful to other high school students in the area, too; the researchers also found positive effects of opening a testing center for students attending neighboring schools.
- This study did not use an experimental design, but instead analyzed a large data set of test center locations and exam completion rates across the United States.

LEARN MORE

Bulman, G. (2015). The effect of access to college assessments on enrollment and attainment. *American Economics Journal*, 7(4), 1-36.

CASE 2.2

POLICIES TO MAKE TAKING ENTRANCE EXAMS THE “DEFAULT” OPTION

WHAT: States or districts put policies in place that made taking entrance exams the “default” option for all students, requiring them to actively opt out if they did not want to take the exam. In addition, they:

- waived registration fees
- offered exams in school on weekdays

WHO: High school juniors at 33 schools in California, Florida, and Texas.



How it's helped students relative to peers at schools that weren't registered at a testing center:



Exam completion:

The likelihood of completing an exam increased by 31 percentage points



Enrollment:

The number of students enrolling in 4-year colleges increased by 3 percentage points

IMPORTANT DETAILS

- *The impacts on enrollment were larger for students from small towns and rural areas.*
- *These policies eliminate the hassles of needing to register and plan for the exam, and avoid scheduling conflicts that arise with test-taking on the weekends. See Innovation 3 for more on eliminating seemingly small barriers that can have unexpectedly large impacts on students' behavior.*

LEARN MORE

Bulman, G. (2015). The effect of access to college assessments on enrollment and attainment. *American Economics Journal*, 7(4), 1-36.

ELIMINATE SMALL OBSTACLES

Increase college applications by removing seemingly small costs and hassles

THE CHALLENGE

Whether or where a student attends college shouldn't be influenced by small obstacles like the modest sum of money needed to send an SAT/ACT score report or the tedium of yet another administrative requirement. But seemingly trivial hassles can and do throw people off track, including when:

- **small costs** deter students from taking important steps
- administrative requirements **extend or muddy the process**
- confusion about minor details causes students to **question their readiness for college**

HOW IT'S HELPED STUDENTS



College applications



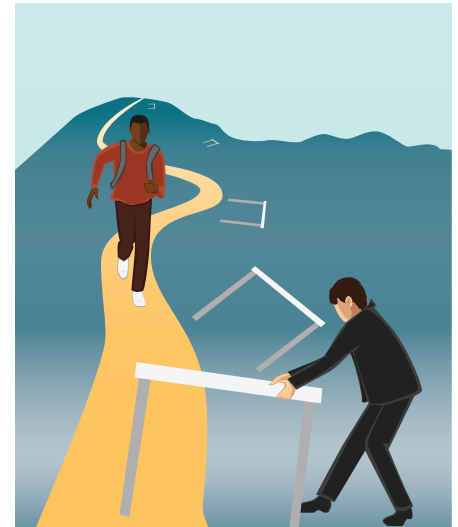
College match

The evidence is limited but promising. It's been tested only in a few specific contexts, though the concept is much more broadly relevant.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.

THE INNOVATION

Eliminate small fees and hassles to help keep students' focus on the large future benefits of college rather than the small present costs of the application process. These seemingly small costs, measured in money or time and effort, can affect an applicant's likelihood of making the decisions and taking the actions that lead to college. One approach is to remove fees for critical services like having test scores sent to colleges.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Remove small fees	⌚	\$ \$	Case 3.1
Paperwork-free fee waivers	⌚	\$	Case 3.2

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

1 Identify small costs—in terms of either money or time—that may have outsized impacts on students’ or prospective students’ ability to get through the college application and enrollment process. These may include:

- Fees to send entrance exam score reports to a college
- Fees to take placement tests for college courses
- “Lab fees” or other small costs associated with registering for courses that may be important for a student’s academic career
- Tedious, repetitive, or overly complex paperwork that can be simplified or eliminated

Fees

2 Waive minor fees or create small incentives at critical steps. If you’re not able to change fee structures directly, consider a different approach, such as:

- Advocating for a change with your state’s Department of Education or another body that governs these policies
- Offering small incentives for the students you work with to get past particularly sticky steps in the application process

Administrative hassles

2 Look for ways to simplify forms and to avoid collecting the same information more than once.

3 If a form or information request isn’t absolutely necessary, consider eliminating it.



KEEP IN MIND

- Eliminating very small fees can be effective, even when the costs involved are not actually unaffordable for applicants.
- Small fees and hassles are just one of the hurdles that college applicants need to surmount. See Innovations 4 and 5 for other strategies to help them along.

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 3.1: Giving students an additional free score report

CASE 3.2: Paperwork-free application fee waivers

If you’re interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 3.1

GIVING STUDENTS AN ADDITIONAL FREE SCORE REPORT

WHAT: A policy change allowed ACT test-takers to send score reports to an additional college for free (a service that previously cost \$6).

WHO: College applicants who took the ACT across the United States just after the change went into effect.

Where to Send Your Scores

Your Test Date: **June 2015**

Your Test Option: **ACT PLUS WRITING**

Your Test Location: **National**

[View previous orders for this test date](#)

Enter a Code Number

If you know the four-digit code number for the college or agency you want to receive your scores, enter the ACT code number here:

Confirm

Confirm

Search by Name

To find colleges or scholarship agencies in any country,
Enter all or part of the institution's name

List

Search by Location

To find colleges or scholarship agencies in the U.S. only,

Select state or territory

- Select -

OR

Enter all or part of a city name

List

Online interface students use to send their scores

How it's helped students relative to projected outcomes without the change:



Score reports:

Students sent an additional 0.8 score reports



Applications to selective colleges

increased by 7 percentage points
(those in the top three tiers of Barron's selectivity ratings)



Selectivity of colleges attended:

Colleges attended had ACT scores that were 0.236 points higher on average
(for low-income students)



Selectivity of colleges attended:

No increase in selectivity of colleges attended
(for middle and high-income students)

LEARN MORE

Pallais, A. (2015). Small differences that matter: Mistakes in applying to college. *Journal of Labor Economics*, 33(2), 493-520

CASE 3.2

PAPERWORK-FREE APPLICATION FEE WAIVERS

WHAT: Paperwork-free waivers that students could use to cover the cost of college application fees. Students were already eligible for application fee waivers. However, the new waivers eliminated tedious paperwork from the process, allowing students to simply submit the fee waiver with their application.

WHO: High-achieving high school seniors from low-income families across the United States.



How it's helped students relative to peers who were not sent the fee waivers, information, and application guidance:



Number of college applications
submitted increased by 19%

IMPORTANT DETAILS

➤ *This study combined simplified fee waivers with two other elements: information about net cost of college and application guidance (see Case 1.1). Each element has individual merits, but they were tested as a package. The combined effects are reported above.*

LEARN MORE

Hoxby, C., & Turner, S. (2013). Expanding college opportunities for high-achieving, low income students. Stanford Institute for Economic Policy Research Discussion Paper, (12-014).

COACH INTO COLLEGE

Coach students through the application process to boost enrollment and combat “undermatching”

THE CHALLENGE

Making it through the college application process is tough for any student. This is especially true for low-income students and first-generation students, who are less likely to have the resources available to help them overcome setbacks and uncertainties such as:

- being **intimidated** by the complex, multi-step process of applying
- having difficulty **keeping track** of all the steps and deadlines
- doubting whether they are “college material” or thinking no one expects them to attend

THE INNOVATION

Give students access to a personal coach who provides periodic guidance for navigating complicated decisions and timely reminders of upcoming deadlines. Coaches can also offer encouragement when students feel frustrated or overwhelmed. They help solidify applicants’ commitment to complete the process.

HOW IT’S HELPED STUDENTS



College enrollment



College match

The evidence is highly compelling. Several models of college application coaching have been effective in helping different student populations. Most programs have focused on low-income students or on under-represented minority students, both while they are in high school.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Hire an external coaching provider	⌚ ⌚	\$ \$ \$	Case 4.1, 4.3
Use internal staff, peer mentors, or volunteers as coaches	⌚ ⌚ ⌚	\$ \$	Case 4.2

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

- 1** Identify a group of prospective students who intend to go to college but may struggle with the application process, such as low-income students or (potential) first-generation college students.
- 2** Get input from students and staff on the biggest barriers to college application and enrollment. This will help focus coaching on the biggest challenges and identify the points in the process when coaches can help the most.
- 3** Determine who will provide coaching services. It could be your existing staff, an outside coaching provider, or peer groups (e.g. local college students). Coaches should be a trusted source of advice for applicants.
- 4** Make sure coaches know the requirements of the college application process and the biggest barriers that applicants face. If your coaches aren't already trained, provide them with guidance on the coaching relationship and best practices.
- 5** Choose when and where to host coaching sessions. Look for a physical space that's accessible and convenient for applicants, and also consider opportunities to connect virtually.
- 6** Introduce students to coaches. Be sure to monitor the coaching relationship and provide support to coaches where needed.



KEEP IN MIND

- Providing resources like envelopes, stamps, and printing services at coaching sessions can help students finalize their applications. See Innovation 3 for more information on eliminating trivial obstacles.
- For most students, the application process takes several months. Make sure students have access to coaches for at least this full period of time.
- Even if they apply and are admitted to college, some students may not end up enrolling. See Innovation 5 for strategies to combat "summer melt."

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 4.1: Professional one-on-one coaching

CASE 4.2: Intensive after-school mentoring

CASE 4.3: Peer mentorship and cash incentives

CASE 4.4: Application advice through telementoring

If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 4.1

PROFESSIONAL ONE-ON-ONE COACHING

WHAT: The Bottom Line Access Program provided one-on-one coaching on topics including:

- *building a list of affordable colleges that are a good academic match*
- *writing college essays and completing strong applications*
- *completing financial aid applications and, later, interpreting aid awards*

WHO: High school students in Massachusetts, New York, and Illinois, most from low-income families, who would be the first in their family to attend college. Bottom Line offers coaching for high school students from late junior year through the start of their senior year, and continues to advise them through college if they attend one of Bottom Line's target institutions.



How it's helped students relative to peers who did not participate in the coaching program:



Enrollment in any college
increased by 6 percentage points



Enrollment in 4-year colleges
increased by 10 percentage points



College match: Students attended colleges with average 6-year graduation rates that were 4 percentage points higher and loan default rates that were 1 percentage point lower



Engagement in college:
Students were 7 percentage points more likely to participate in student groups in college, and they worked an average of 1.6 fewer hours per week (which frees up time for classes)

IMPORTANT DETAILS

- *This program was most effective for students with low GPAs, students who were not enrolled in other college access programs, and female students.*

LEARN MORE

Barr, A. C., & Castleman, B. L. (2016). Advising students to and through college: Experimental evidence from the Bottom Line advising program.

CASE 4.2

INTENSIVE AFTER-SCHOOL MENTORING

WHAT: The College Possible program provided students with intensive mentoring, including:

- SAT and ACT tutoring
- assistance with college choice, applications, and financial aid
- guidance during the transition to college

WHO: High school students in Minneapolis and St. Paul in their junior through senior year, most from low-income families, who would be the first in their family to attend college



How it's helped students relative to peers who did not participate in the program:



College application: Probability of applying to a 4-year college increased by 31 percentage points
No impact detected on college enrollment overall



Enrollment at selective colleges increased by 16 percentage points



Enrollment at 4-year colleges increased by 15 percentage points
4-year enrollment went up without overall enrollment increasing because students who otherwise would have attended community college went to 4-year schools instead.

IMPORTANT DETAILS

- *This program combined college application coaching with much broader academic and personal support.*

LEARN MORE

Avery, C. (2013). Evaluation of the College Possible program: Results from a randomized controlled trial (No. w19562). National Bureau of Economic Research.

CASE 4.3

PEER MENTORSHIP AND CASH INCENTIVES

WHAT: Dartmouth College students helped high school students complete the college application process by:

- providing weekly, in-person mentoring
- paying for application and SAT/ACT fees
- offering a \$100 stipend for completing the mentorship program

WHO: New Hampshire public high school seniors who had expressed some interest in college but had taken few or no steps to apply by late in their senior year.



How it's helped students relative to peers who didn't receive mentorship and incentives:

for all students



No overall effects on enrollment in any college

No overall effects on enrollment in a 4-year college

for women



Enrollment in any college increased by 12 percentage points

Enrollment in a 4-year college increased by 12 percentage points



Persistence: The additional students who enrolled were just as likely as other students to persist through college.

IMPORTANT DETAILS

- While cash incentives alone have not improved enrollment, combining cash incentives with peer mentoring succeeded in helping more students reach college.

LEARN MORE

Carrell, S. E., & Sacerdote, B. (2013). Late interventions matter too: *The case of college coaching New Hampshire* (No. w19031). Cambridge, MA: National Bureau of Economic Research.

CASE 4.4

APPLICATION ADVICE THROUGH TELEMENTORING

WHAT: Students from Amherst College mentored high school students through the college application process. Communicating by phone, the mentors:

- helped applicants research college options and identify colleges to apply to
- reviewed applications and admissions essays
- supported applicants in coping with negative admissions decisions

WHO: High-achieving, low-income high school seniors across the United States who had been nominated for a scholarship in the Questbridge program but did not ultimately receive the scholarship.



How it's helped students relative to peers who weren't offered the mentoring opportunity:



Application quality: Applicants scored 0.27 points higher on a 1-4 point "admissions rating" scale²



Applications to selective colleges:

Students submitted 0.9 more applications to selective colleges (classified by Barron's as "most competitive" but outside of the highest tier)



No change in the number of selective colleges students enrolled in

IMPORTANT DETAILS

- Students submitted more applications to less well known colleges within the "most competitive" category, suggesting that mentors expanded the range of colleges students considered.
- Only 51 students were offered mentorship in the study, a relatively small sample size. A larger study might find different results.

LEARN MORE

Avery, Christopher (2014). The Amherst Telementoring Program for high-achieving, low-income students: Results of a pilot study with a randomized controlled trial. Harvard Kennedy School Working Paper No. RWP14-055.

² Only marginally statistically significant ($p < 10\%$)

GUIDE TO DAY ONE

Use information and reminders to reduce “summer melt” and help students start college

THE CHALLENGE

In the summer months before college begins, students must complete a series of required, mostly minor financial and administrative tasks to prepare for the upcoming semester. Even students with strong intentions to enroll may fail to make it to the first day of college (a phenomenon often called “summer melt”) due to seemingly small barriers along the way, such as:

- **misunderstanding** their financial aid awards or requirements
- **forgetting** to register for placement tests or orientation
- **procrastinating** on small steps like completing housing application forms

THE INNOVATION

Send brief messages to students with simplified instructions for the tasks they need to complete, timely reminders about deadlines, and support and encouragement throughout the summer before they start college. You can also allow students to respond to messages interactively, facilitating customized guidance through critical tasks.

HOW IT'S HELPED STUDENTS



College enrollment

The evidence is **highly compelling** that these programs help students from low-income families and first-generation college students enroll in college, although the size of the effect may vary. Programs may be less effective if they duplicate or overlap with existing forms of support, such as one-on-one mentoring or comprehensive college access programs.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Automated interactive text messaging	⌚	\$	Case 5.2
One-on-one counseling of students	⌚ ⌚ ⌚	\$	Case 5.1
Specialized automated interactive text messaging	⌚	\$ \$	Case 5.3

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

- 1** Identify students who intend to go to college and may be vulnerable to “summer melt” (first-generation college students, for example) and gather their contact information.
- 2** Identify the key steps students must complete before the first semester begins, such as registering for new student orientation sessions, applying for housing, and any other administrative tasks. Remember that each step, no matter how small, is an opportunity for students to forget, procrastinate, or second-guess whether college is right for them.
- 3** Choose whether you will use person-to-person interaction or automated messaging (email or text) to reach students. Person-to-person can include communication over the phone, or through email, text, or another messaging service.

Person-to-person interaction

4 Communicate to counselors the steps where students may get stuck (Step 2, above) and connect them with students. Counselors could be school-based counselors, professional advisors, or current college students.

5 Suggest a time and space for students and counselors to meet. Alternatively, counselors can reach students by phone, email, text, or another channel.

Automated messaging

4 Create the content for your messages. Previous studies have found 8-10 messages sent throughout the course of the summer to be effective.

5 Send messages to students at pre-defined times and regular intervals. (It's important to give students the opportunity to opt out, though in previous studies very few have done so.)



KEEP IN MIND

- Students are most likely to open and read a message if it comes from a known and trusted source, such as a familiar administrator at their high school or college.
- For more information on how personalized messaging can support students earlier in the college application process, see Innovation 1.

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 5.1: One-on-one summer college counseling

CASE 5.2: Automated interactive text messaging

CASE 5.3: Specialized automated interactive text messaging

If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 5.1

ONE-ON-ONE SUMMER COLLEGE COUNSELING

WHAT: One-on-one counseling programs conducted in person and/or over the phone during the summer before college, either by uAspire or by counselors from Fulton County, Georgia schools. Counseling sessions included:

- *personalized financial aid guidance*
- *assistance completing paperwork*
- *review of key deadlines and help building a custom task list*
- *follow-up via phone, email, or text to check on progress during the rest of the summer*

WHO: High school graduates from large urban public school districts who:

- *in Boston had participated in a uAspire-hosted group workshop (counseling was provided by uAspire)*
- *in Fulton County, Georgia had been accepted by at least one college and planned to attend college (counseling was provided by the Fulton County school district)*



How it's helped students relative to peers who did not receive support:

for all students



Enrollment increased by 3 percentage points



Persistence to sophomore year of college increased by 5 percentage points

for certain subgroups of students



Enrollment increased by 8–12 percentage points for low-income students



Persistence to sophomore year increased by nearly 8 percentage points among the students from Boston

IMPORTANT DETAILS

- *The increase in persistence rates suggests that the program didn't encourage enrollment among students who were unprepared for college.*
- *Effects were stronger in Boston than in Fulton County, potentially because uAspire, which was responsible for counseling the Boston students but not the Fulton County students, already had significant experience helping students with financial needs navigate challenges on the path to college. For maximum impact, consider working with counselors who are trained and fluent in financial aid topics.*

LEARN MORE

Castleman, B. L., Page, L. C., & Schooley, K. (2014). The forgotten summer: Does the offer of college counseling after high school mitigate summer melt among college-intending, low-income high school graduates? *Journal of Policy Analysis and Management*, 33, 320–344.

WHAT: A texting campaign to support students in the summer transition to college by:

- sending 8-10 automated messages from a texting platform to students and their parents about important pre-enrollment tasks
- including web links in the messages, allowing students to complete tasks immediately on their phones
- inviting students to write back and connect with a college advisor for assistance

WHO: High school graduates intending to enroll in college in several U.S. cities (Dallas, TX, as well as Boston, Lawrence, and Springfield, MA). The majority of these students were students of color from low-income families.



How it's helped students relative to peers who did not receive text message outreach:

for all students



No impact on overall college enrollment



Enrollment at a 2-year college increased by 3 percentage points

for certain subgroups of students



Enrollment increased by 7 percentage points for students in Lawrence and Springfield

Enrollment at a 2-year college increased by nearly 8 percentage points for low-income students in Dallas who had a working cell phone number

IMPORTANT DETAILS

- The authors suggest that this texting strategy may be most effective in schools and communities (such as Lawrence, Springfield, and Dallas) where students have little access to college and financial aid planning supports during the summer before college.
- In a follow-up study, the authors found that sending text reminders to both students and their parents, rather than only to students, had no additional impact on enrollment.

LEARN MORE

Castleman, B. L., & Page, L. C. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates? *Journal of Economic Behavior & Organization*, 115, 144-160.

Castleman, B. L., & Page, L. C. "Parental Influences on Postsecondary Decision-Making: Evidence from a Text Messaging Experiment." *Educational Evaluation and Policy Analysis* 39.2 (2017): 361-377.

CASE 5.3

SPECIALIZED AUTOMATED INTERACTIVE TEXT MESSAGING

WHAT: A two-way texting system provided personalized, targeted messages to counsel students during the spring and summer prior to fall enrollment. The program featured:

- approximately 40 personalized text messages
- guidance on specific pre-enrollment tasks that students had not yet completed
- tailored, automated responses to students' questions based on algorithmic analysis of each question

WHO: Incoming freshmen at Georgia State University (GSU). Of these students:

- approximately one-quarter had already committed to attending GSU
- most were eligible for federal financial aid
- about a third were first-generation college students

"Hi Terrance! Congrats on being admitted to Georgia State! 🎉"

I'm Pounce — your official guide. I'm here to answer your questions and keep you on track for college. (Standard text messaging rates may apply.) Would you like my help?"

Text sent to incoming freshman (adapted from study)

How it's helped students relative to peers who did not receive personalized text messages:

for all students



No effect on enrollment at GSU



No impact on financial aid behaviors

for students who had committed to attending



Enrollment at GSU increased by 3 percentage points



Financial aid steps: Students were 3 percentage points less likely to have a verification hold on their FAFSA forms and 6-7 percentage points more likely to accept a college loan or Stafford loan

IMPORTANT DETAILS

- The system in the study used a software application to parse messages sent by students' and generate appropriate and personalized responses. There are other, lower-tech ways to send students targeted messages, such as the tactic described in Case 5.2.
- Messages that the system could not answer automatically (about 13% of the total) were forwarded to staff who responded to them manually.

LEARN MORE

Page, L. C., & Gehlbach, H. (2017). How an artificially intelligent virtual assistant helps students navigate the road to college. Available at SSRN: <https://ssrn.com/abstract=2940297>







COLLEGE LIFE & ACADEMICS.

Help students navigate college life and succeed academically

New college students must navigate a complicated environment with academic, social, and personal challenges that can impede progress toward graduation. These challenges are significant and fewer than 50% of full-time students earn a degree within six years.⁹

Some students begin college with assumptions that limit their chance to succeed. For instance, when students have doubts about their ability to succeed in college, they may misinterpret normal struggles as indications that they're not "college material." Research shows that colleges and other organizations can help students learn new habits of thought and adopt beliefs that help them reinterpret adversity so they can persist in the face of challenges.¹⁰

Despite facing challenges, many students don't take advantage of available help like tutoring, academic advising, and work-study programs. At a northeast state university, only 11% of eligible students applied for on-campus jobs in 2014, leaving 80% of the positions unfilled and \$684,000 in funds on the table.¹¹ Although more than 30% of students at a venerable community college had GPAs under 2.0 in fall semester 2013, only 4% participated in a tutoring session.¹²

In this section, you'll find behavioral strategies to:

- *Strengthen students' resiliency and response to adversity* (Innovation 6)
- *Enable students to make the most of campus resources* (Innovation 7)
- *Prompt students to set and follow through on goals* (Innovation 8)
- *Guide students around common pitfalls to college success* (Innovation 9)
- *Help students navigate the academic and personal challenges of college* (Innovation 10)

CREATE RESILIENT MINDSETS

Strengthen engagement, resiliency, and responses to adversity

THE CHALLENGE

There are large and persistent achievement gaps between students at risk of not completing college—including low-income students, minority students, and first-generation college students—and their peers, even when they have seemingly similar records of success. What’s getting in the way for these at-risk students? There are many factors. One is that the everyday challenges of college can lead to frustration and disengagement for students who:

- perceive early struggles as signs that they **don’t belong in college**, rather than as universal and surmountable challenges
- view **intelligence as a fixed trait**, rather than a skill that can be developed and expanded through hard work
- fail to connect going to college with a **larger purpose**

THE INNOVATION

Engage students with messaging that 1) demonstrates that others have faced and overcome struggles similar to theirs, 2) provides examples of learning through challenges and hard work, and/or 3) inspires them to connect college with a broader purpose. Prompt students to reflect on how these ideas about belonging, hard work, and the purpose of learning apply to them, and follow up later to reinforce the messages.

HOW IT’S HELPED STUDENTS



Grades



Graduation



Persistence

The evidence for these innovations is highly compelling. Some studies, however, find positive effects for at-risk groups of students (such as racial minorities or first-generation college students) but no effect for students overall.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Reading and writing exercises	⌚	\$	Case 6.1, 6.2, 6.3
In-person small group sessions	⌚⌚⌚	\$	

See page 8 for an explanation of these cost and resource estimates.



HOW IT'S DONE

- 1** Identify the mindset challenges your students face. These often fall into the categories of stereotype threat or lack of belonging (“people like me don’t belong here”), fixed mindset (“I can’t get better at this”), and/or purpose (“this isn’t relevant to me”).
- 2** Select a delivery channel that works for your students, context, and cost constraints: in-person workshops, videos, and reading/writing exercises have all been effective.
- 3** Interview a range of students to glean insights into the psychological barriers that could potentially hold them back. Use information from these interviews to craft an intervention that combats the relevant mindset challenge(s).
- 4** Ensure that students internalize the messages by having them engage in written reflections on what they have heard or read and how it relates to them. Asking students to advise a future prospective student on how to respond to challenges has been shown to help them adopt the ideas as their own.
- 5** *Optional:* Follow up with text, email, or other messages later to reinforce the shift in mindset.



KEEP IN MIND

- Research on this innovation has typically focused on incoming first-year college students, but it might also be relevant for students further along in college.
- Interventions should be offered to all students, not just at-risk students. Targeting only at-risk students can reinforce the underlying biases.
- These innovations are especially tricky to get right. Learn more about them through Stanford’s College Transition Collaborative and the Project for Education Research that Scales (PERTS).

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 6.1: Online exercises to foster social belonging for incoming college students

CASE 6.2: Pen pals to reinforce growth mindset

CASE 6.3: Exercises to spur reflection on the larger purpose of education

If you’re interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 6.1

ONLINE EXERCISES TO FOSTER SOCIAL BELONGING FOR INCOMING COLLEGE STUDENTS

WHAT: Online exercise in which students:

- read survey results indicating that most new college students worry about belonging, and that these concerns dissipate over time
- read stories from older students with the message that early challenges can be overcome
- wrote a short essay drawing on their own past experiences about why it is common for students to initially feel out of place and how those initial worries tend to diminish over time

WHO: Incoming first year students in the summer before their first year at a large, selective public university.

“

At some point, I realized that almost everyone comes to college uncertain whether they fit in or not. Now it seems ironic – everybody comes to college and feels they are different from everybody else, when really in at least some ways we are all pretty similar.”

– Excerpt from essay written by student
(adapted from study)

How it's helped students relative to peers who did not complete the exercise:

for black, Latino and first-generation college students



Risk of drop-out: Likelihood of being classified as at risk of dropping out decreased by 6 percentage points



Persistence: Continuous, full-time enrollment through the entire first year increased by 4 percentage points

for other students



No effect on risk of dropping out



No effect on persistence

IMPORTANT DETAILS

- This study also tested an exercise aimed at conveying the message that intelligence can be developed (“growth mindset”).
- The researchers classified students as at risk of dropping out based on their reported social integration in the institution, academic plans, perceptions of academic struggle, academic stress and anxiety, and help-seeking behaviors.

LEARN MORE

Yeager, D. S., Walton, G. M., Brady, S. T., Akcinar, E. N., Paunesku, D., Keane, L., & Gomez, E. M. (2016). Teaching a lay theory before college narrows achievement gaps at scale. *Proceedings of the National Academy of Sciences*, 113(24), E3341-E3348. [experiment 2 is summarized above]

CASE 6.2

PEN PALS TO REINFORCE GROWTH MINDSET

WHAT: A “pen pal” program through which college students:

- watched a brief video clip showing evidence that the brain, and therefore intelligence, is capable of growing throughout life
- read letters, purportedly from middle school students, that described difficulties they faced in school
- were asked to write an encouraging response to an individual middle schooler, and in particular to stress the theme that intelligence can grow

WHO: Undergraduate students at Stanford University.



How it's helped students relative to peers who participated in a pen pal program that did not stress the theme that intelligence can grow:

for black students



Growth Mindset: Beliefs that intelligence is malleable increased



Reported engagement and enjoyment of the academic process increased



Semester GPA increased by 0.21³

for white students



Growth Mindset: Beliefs that intelligence is malleable increased



Reported engagement and enjoyment of the academic process did not change



Semester GPA increased by 0.27

IMPORTANT DETAILS

- This program helped students who experienced “stereotype threat” (were at risk of conforming to negative stereotypes about their group), but it did not change their perception of being stigmatized. Combining it with a social belonging message might make it even more effective.
- The greatest positive impacts were found for black students, although some modest benefits were also found for white students.
- Growth mindset belief was measured by students’ responses to two questions about the extent to which they think intelligence can grow with effort.

LEARN MORE

Aronson, J., Fried, C. B., & Good, C. (2002). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology*, 38(2), 113-125.

³ Only marginally statistically significant (p < 10%)

CASE 6.3

EXERCISES TO SPUR REFLECTION ON THE LARGER PURPOSE OF EDUCATION

WHAT: Students completed a computer-based exercise in which they:

- wrote about how they wished the world could be a better place
- read that many students work hard in school because they want to make a positive impact or be a good example for others
- were prompted to think about their own goals and to write about how learning and working hard in school could help them achieve those goals

WHO: High school students at 13 different public, private, and charter schools across the United States.



How it's helped students relative to peers who completed exercises unrelated to their sense of purpose:

for students at risk of dropping out of school



GPA increased by 0.18 points

for all other students



No effect on GPA

IMPORTANT DETAILS

- This study focused on high school students and did not measure effects on college enrollment or persistence, but similar interventions have also been effective in college settings.

LEARN MORE

Paunesku, D., Walton, G. M., Romero, C. L., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mindset interventions are a scalable treatment for academic underperformance. *Psychological Science*, 26, 784-793 [for the study cited above]

Yeager, D. S., Henderson, M. D., Paunesku, D., Walton, G. M., D'Mello, S., Spitzer, B. J., & Duckworth, A. L. (2014). Boring but important: A self-transcendent purpose for learning fosters academic self-regulation. *Journal of Personality and Social Psychology*, 107(4), 559. [for other interventions, including in a college setting]



MOBILIZE RESOURCE USE

Prompt students with timely reminders to make the most of campus resources

THE CHALLENGE

Colleges spend millions of dollars on services to support their students, such as tutoring, academic advising, and work-study programs, but **students often don't take advantage of these resources**. For many, the problem isn't a lack of motivation or awareness, but the logistics of things like scheduling appointments or submitting applications. Accessing resources is especially difficult when students:

- **forget** about the resource when they need it most
- perceive that the service isn't for people like them
- **procrastinate** taking steps because they're confused or overwhelmed with complicated processes

THE INNOVATION

Send students repeated, personalized reminders about relevant services at the moments when they're most likely to need them. Messages should highlight key details, address common misconceptions, and combat procrastination by including a clear opportunity to easily take the next step.

HOW IT'S HELPED STUDENTS



Awareness of resources



Use of resources

This evidence is limited but promising. Redesigned messaging has increased usage of multiple campus resources by students of varied backgrounds at both 2- and 4-year institutions (all studies were conducted at public colleges).

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Frequent, re-designed email messages	⌚	\$	Case 7.1, 7.2
Direct phone calls	⌚ ⌚	\$	Case 7.3

See page 8 for an explanation of these cost and resource estimates. These estimates only reflect the costs of getting students to access campus services, not the cost of accommodating increased traffic.



HOW IT'S DONE

- 1** Identify the students who could benefit from an existing campus service (such as tutoring, academic advising, or work-study) but aren't currently using it.
- 2** Select the right channel to catch your students' attention. Text messages often work well, but other channels such as email, phone, or a smartphone app may also be effective. Prepare to reevaluate the channel as students' communication habits change over time.
- 3** Gather students' contact information and bring on board any necessary outside vendors (such as a texting platform provider).
- 4** Determine when the service would be most useful to students and schedule messages around those times. For example, tutoring can be especially helpful right before midterm exams or when students receive midterm grades, when they may be reevaluating their study habits.
- 5** Craft messages to prompt students' participation. This may mean redesigning existing messages or creating new ones. Potential helpful message features include:
 - featuring other students who use the service
 - a clear explanation of how the resource could be helpful right now
 - easy-to-follow checklists of steps students can take to access the service
 - links to key resources or forms so that students can easily and immediately take the first step
- 6** Follow-up with reminders targeting students who have not yet made use of the service.

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 7.1: Email reminders for on-campus job applications

CASE 7.2: Reminders and encouragement to use the tutoring center

CASE 7.3: Frequent and increasing reminders for advising appointments



KEEP IN MIND

- Repeated communications are more effective than one-offs. It's helpful to send reminders to keep the service top-of-mind.
- Encourage faculty and advisors to reach out to students directly (see Case 7.2).
- Messages that correct common misconceptions, such as the mistaken belief that on-campus jobs are all low-wage and menial, can be particularly helpful (see Case 7.1).
- Another potential way to increase participation is to automatically schedule appointments for students with advisors or tutors. This makes using the resource the default and eliminates the need to schedule an appointment or wait in line.

If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 7.1

EMAIL REMINDERS FOR ON-CAMPUS JOB APPLICATIONS

WHAT: A series of 12 behaviorally designed emails that encouraged students to apply for on-campus jobs by:

- *addressing the misperception that student jobs are menial and low-wage*
- *highlighting both the short- and longer-term benefits of on-campus jobs*
- *reducing hassles by providing a sample resume and simple guide for how to list references*
- *clearly communicating the application deadline*

WHO: First year students at Arizona State University, a large, public 4-year university, who were eligible for on-campus jobs through the Student Engagement and Employment Development (SEED) program.

Subject: Grow your career, starting now

Hi Andrew,

Congratulations! You are among the select 4% of students invited to participate in ASU's new SEED program. The SEED program will help you grow your skills now so that you can be better prepared for your career when you graduate. **Earn an additional \$1,200 - \$1,900 this year** through an on-campus SEED job.

SEED gives you:

- one-on-one mentorship with a dedicated mentor
- enhanced access to professional development training
- cutting-edge support services, such as Gallup's StrengthQuest skills assessment

Don't lose out on the opportunity you've already been awarded! Apply soon—**many jobs are closing February 5!** It only takes 10-20 minutes to apply.

Is a SEED job right for you? Select one.

Yes I want a SEED job now.

Maybe, let me think about it and decide later.

No, I already have a job or don't think I qualify.

Email sent to students

How it's helped students relative to peers who received the standard emails:



Number of students applying
for SEED jobs increased by 3 percentage points



Number of unique applications
submitted for SEED jobs increased by 56 percent (171 more applications)

IMPORTANT DETAILS

- *If you implement something similar, be sure that your system is ready for an increase in applications. If students try to access a service but face delays or hassles, they might be discouraged from trying again.*

LEARN MORE

ideas42. (2016). Project brief: Staying connected to campus life with work study.

CASE 7.2

REMINDERS & ENCOURAGEMENT TO USE THE TUTORING CENTER

WHAT: One series of behaviorally designed emails sent to students recommending that they use on-campus tutoring services, and a second series sent to faculty to encourage them to refer students to the tutoring center. The emails to students were designed to:

- combat the stigma associated with tutoring by demonstrating that many students use tutoring, including those who have achieved academic success
- help them easily schedule a tutoring appointment by including clear instructions on how to do it
- clarify the connection between maintaining good academic standing and staying eligible for financial aid



WHO: Two groups at West Kentucky Community and Technical College received redesigned emails:

- students receiving financial aid (all of whom are required to meet certain academic standards in order to maintain aid eligibility)
- instructors, who were reminded to refer struggling students to the tutoring center

How it's helped students relative to peers who received the college's standard emails about tutoring:

for all students



Number of tutoring sessions attended increased by 43-53 percent



No impact detected on semester GPA

for all instructors



Number of referrals to tutoring increased by 12 percentage points

IMPORTANT DETAILS

- Students responded positively to peer testimonials and personal stories. If you decide to use this approach, make sure 1) the stories are authentic and don't come across as insincere or trite, and 2) aren't so long that students are deterred from reading the message.
- In this case, as in others, repeated communications were more effective than one-off emails.

LEARN MORE

ideas42. (2016). Project brief: Taking advantage of on-campus tutoring.

CASE 7.3

FREQUENT & INCREASING REMINDERS FOR ADVISING APPOINTMENTS

WHAT: Increasingly intrusive reminders to students encouraging them to make an advising appointment. There were three cycles of reminders:

- *emails in the third week of the term*
- *phone calls from administrative support staff in the fourth week*
- *phone calls from the advisors in the fifth week*

WHO: Incoming first-year students at the University of Alabama at Birmingham who had not yet made advising appointments and had declared a major as either pre-nursing or psychology, or were undeclared.



How it's helped students relative to peers who did not receive the outreach treatment:



Engagement:

The number of students making and keeping advising appointments increased by 12 percentage points



Timeliness:

Students met with an advisor 9 days sooner, on average

IMPORTANT DETAILS

- *Repeated reminders may backfire if they become too intrusive. Be careful not to cross the line from persistent to “nagging.”*
- *Sending reminders over a period of 5 weeks meant that the resulting appointments were spread throughout the semester, which left advisors with more time to spend on each appointment.*

LEARN MORE

Schwebel, D. C., Walburn, N. C., Jacobsen, S. H., Jerrolds, K. L., & Klyce, K. (2008). Efficacy of intrusively advising first-year students via frequent reminders for advising appointments. *NACADA Journal*, 28(2), 28-32.



Semester Goals

FACILITATE GOAL-SETTING

Prompt students to set goals and then follow through

THE CHALLENGE

Students juggle numerous academic, financial, and personal priorities throughout college. They likely have a general idea of their aspirations, but the path forward is often murky. Even small steps towards their goals would be beneficial, but students often struggle to identify and take them. This struggle is compounded when students:

- haven't **clearly articulated** what they hope to achieve, in both the short- and longer-term
- fail to **create a plan** for the steps needed to follow through on goals
- can't see their **progress** and don't know if they're on track

THE INNOVATION

Create opportunities for students to set concrete, task-based goals related to their academic progress or finances. You can build goal-setting prompts into existing interactions, such as academic advising appointments or online systems, or introduce them separately. You can also send regular reminders to highlight progress and encourage students to follow through.

HOW IT'S HELPED STUDENTS



Grades



Financial stability



Academic progress

This evidence is highly compelling. Goal-setting programs have improved performance and follow-through with a variety of goals among a variety of student demographic groups at both public and private colleges, although all studies were conducted at 4-year institutions.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Custom online goal-setting activity	⌚	\$ \$	Case 8.1
Follow-up reminders	⌚ ⌚	\$	Case 8.2
Integrated goal-setting procedures	⌚	\$	Case 8.3

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

- 1** Identify the type of behavior you want to encourage. This could be financial (“save money for emergencies”) or academic (“complete more practice tests”).
- 2** Determine when students could start taking action. You’ll want to reach out to students and create a clear moment of action at the beginning of the process rather than later on.
- 3** Identify the appropriate channel to reach students. This could be an in-person interaction (using an existing touchpoint such as an advising appointment), an online process such as a course management system, or individual messages sent to students.
- 4** Prompt students to set their own goals. You can make suggestions and guide them towards productive tasks, but self-identified goals are the most effective.
- 5** Prompt each student to think through what’s needed to achieve their goal. Spending time making a plan, spelling out the details, and/or envisioning what success would look like can increase commitment.
- 6** Send prompts and reminders that highlight progress to help keep students on track.



KEEP IN MIND

- Task-based goals are more effective than performance-based goals (see *Case 8.3*).
- Reminders are helpful (see *Case 8.2*), but the experience of setting the goal is the most important part (see *Case 8.1*).
- It’s okay if students set goals that are too ambitious. Goals can be motivating and enhance achievement even if they aren’t achieved (see *Case 8.3*).

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 8.1: Online personal goal-setting for struggling students

CASE 8.2: Goal-setting and planning for financial goals

CASE 8.3: Task-based goals for practice exam completion



If you’re interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 8.1

ONLINE PERSONAL GOAL-SETTING FOR STRUGGLING STUDENTS

WHAT: A 2.5-hour writing program that guided students through goal-setting, elaboration, and reflection. The program prompted students to:

- reflect on academic or non-academic goals they hoped to achieve
- prioritize goals and evaluate their attainability
- identify sub-goals, concrete strategies, and potential obstacles
- articulate their commitment to achieving each goal

WHO: Students at McGill University, a private college in Canada, who:

- planned to take a full course-load for each semester in the study's duration
- had been on academic probation or had a cumulative GPA under 3.00
- described themselves as “experiencing academic difficulty”



How it's helped students relative to peers who participated in web-based tasks that did not focus specifically on goals:



GPA increased by 0.5 points



Courseload: No students dropped below 9 credits compared to 20% of their peers

IMPORTANT DETAILS

- Effects were stronger for native English speakers, which isn't surprising since the innovation was a writing exercise in English. Students are likely to get the most out of this kind of exercise if they do it in their native language.
- Most students set at least one goal that was academic in nature, but it's possible that non-academic goals can still have academic benefits.

LEARN MORE

Morisano, D., Hirsh, J. B., Peterson, J. B., Pihl, R. O., & Shore, B. M. (2010). Setting, elaborating, and reflecting on personal goals improves academic performance. *Journal of Applied Psychology*, 95(2), 255.

CASE 8.2

GOAL-SETTING AND PLANNING FOR FINANCIAL GOALS

WHAT: Online goal-setting and plan-making exercise aiming to improve financial well-being and academic performance by:

- *prompting students to set financial goals related to saving, spending, or both*
- *prompting students to identify the action steps needed to achieve their goals*
- *following up with a series of 10-15 encouraging text messages reminding students of their goals and how they planned to achieve them during the semester*

WHO: Students at Valencia College, a public college in Orlando, Florida

Remember, you said
you'd spend less on food
by 'make some lunch at
home

Here's the message
you wrote for yourself
at the beginning of the
semester: 'You can
do it!'

Follow-up text message reminders and encouragement
(reproduced from study)

How it's helped students relative to peers who completed a financial education exercise but did not set goals or receive SMS reminders:



Financial stability:

Self-reported satisfaction with financial condition increased by 10 percent



Emergency finances:

Self-reported ability to come up with \$400 in case of an emergency increased by 8 percent

IMPORTANT DETAILS

- *While this study focused on financial goals, a similar approach could be used in setting academic goals.*

LEARN MORE

ideas42. (2016). Project brief: Improving student financial well-being.

CASE 8.3

TASK-BASED GOALS FOR PRACTICE EXAM COMPLETION

WHAT: Students set goals at the start of a course that were either performance-based, such as getting an A in a particular course, or task-based, such as completing at least five online practice exams before the midterm. Students were randomly assigned to set one type of goal or the other. Goals were:

- set by the students themselves and kept private from peers and instructors
- referenced in later messages, such as a reminder email about practice exams that served as a commitment device to encourage follow-through

WHO: Students at a public university who were enrolled in a large, on-campus, semester-long introductory course.

GOAL SETTING

Please set a goal for the number of practice exams that you will complete out of the 5 practice exams for the Midterm 1 Exam.

Think carefully before setting your goal.

The professor and the TA will not see your goal. However, when you take the practice exams you will be reminded of your goal.

MY GOAL IS TO COMPLETE

☐ out of the 5 practice exams for the Midterm 1 Exam

☐ Prefer not to say

Excerpt from a prompt to set a goal for completing practice exams (reproduced from study)

How it's helped students who set task-based goals, relative to peers who did not set goals:

for all students



Course performance: chance of getting at least an A-minus increased by 4 percentage points⁴



Completion of at least 8 of the 15 possible practice exams increased by 6 percentage points

for male students



Course performance: chance of getting at least an A-minus increased by 10 percentage points

IMPORTANT DETAILS

- In this study, task-based goals were much more effective than performance-based goals.
- Task-based goals were especially helpful for students who were not otherwise taking many practice exams. It helped pull up students from the bottom and middle of the distribution.
- Effects were stronger for male students. The researchers suggest this may be because they had lower self-control than their female peers, making the commitment devices more useful.

LEARN MORE

Clark, D., Gill, D., Prowse, V. L., & Rush, M. (2016). Using goals to motivate college students: Theory and evidence from field experiments. IZA Discussion Paper No. 10283.



POINT OUT PITFALLS

Use warnings to help students recognize and avoid pitfalls to college success

THE CHALLENGE

Failing a course, making a mistake in course registration, or even missing a deadline could have serious effects on financial aid eligibility, persistence, and graduation. Fortunately, these pitfalls can be avoided if students know they're there, but all too often the pitfalls aren't apparent to students until it's too late. Despite the high stakes, staying on track can be more difficult when students:

- **are unaware** that they've missed a deadline or failed to complete a necessary step
- feel **confused or frustrated** by complicated systems or requirements
- **don't utilize** the free support services, like tutoring, offered on campus

THE INNOVATION

Offer early, actionable information and guidance to help students avoid common pitfalls and stay on track in college. One approach is to offer workshops or other resources to help students develop strong academic practices that will help prevent problems before they arise. When a potential problem *is* detected, promptly and repeatedly send guidance that provides clear, simple steps to solve the problem, and encourage students to act swiftly.

HOW IT'S HELPED STUDENTS



Course completion



Aid eligibility



Tutoring use



Aid awards

This evidence is **limited but promising**. Redesigned messaging decreased various forms of academic and financial aid violations, but the effect size varied depending on student populations. In initial experiments, effects were stronger for minority students.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Frequent, redesigned warnings	⌚	\$	Case 9.1, 9.2
Workshops	⌚⌚⌚	\$ \$	Case 9.2

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

- 1** Identify avoidable pitfalls that can result in students losing financial aid or falling behind academically, such as registering for courses outside of degree requirements or getting consistently poor grades.
- 2** Select the right communication channel to capture your students' attention. Text messages currently work well, but the "best" channel will change as communication habits evolve.
- 3** Gather students' contact information and bring on board any external service providers, such as a texting provider.
- 4** Craft messages to students (or redesign existing messages) that clarify which actions result in violations or other problems, using simple language and a clear layout. Be clear about the consequences. Use a friendly and direct tone, not a dire or threatening one.
- 5** Contact students multiple times, including a final message that provides a "last chance" to avoid the problem. Be sure to cast a wide net and include all relevant students.
- 6** When students do violate a requirement, provide immediate feedback that clearly explains the problem and offers actionable steps for correcting it.



KEEP IN MIND

- Emails and workshops can also be used to help students build good study habits, develop a growth mindset, and learn about helpful campus resources such as tutoring centers.
- Engage students with preventative measures, such as skill-building workshops, early in their college careers so they have the most time to benefit from enhanced academic skills and habits.

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 9.1: Emails and warnings to improve course registration

CASE 9.2: Prevention strategies and warnings to improve academic standing



If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 9.1

EMAILS AND WARNINGS TO IMPROVE COURSE REGISTRATION

WHAT: One behaviorally redesigned email sent to students before course registration and another sent as a warning to students who selected noncompliant courses. The emails:

- *used simple phrasing, a clear layout, and a conversational tone*
- *made explicit the link between course registration choices and financial aid eligibility*
- *provided clear action steps with embedded links to help students take immediate action*

WHO: Students at Valencia College, a public state college in Orlando, during the course registration process.

Subject: You need to fix your registration

Hi Danny,

This is Christen from the Financial Aid office. While reviewing your course schedule, we found that you're registered for at least one class that won't be paid for by your federal financial aid.

POS 1643 | US GOVERNMENT | CRN: 269903

POS 1644 | US POLITICS | CRN: 209392

POS 1645 | US LEGISLATION | CRN: 309301

Students last year lost hundreds of dollars for this reason. But don't worry, it's easy to keep your full financial aid.

Please take 10 minutes now to follow these steps so that you don't lose any of your aid:

1. Your current program of study is: AA GENERAL STUDIES. If you need the above courses to transfer to a different program of study, make an appointment with an advisor or contact advising directly by clicking [here](#).
2. Otherwise, log into [Atlas](#) to drop US GOVERNMENT, US POLITICS, US LEGISLATION using the CRNs 269909, 209392, 309301
3. Register for a new course or courses that meet your degree requirements.

**Redesigned email sent after course registration
(reproduced from study)**

How it's helped students relative to peers who received the standard emails:

for all students



Student aid awards increased by \$150 on average per student



Persistence: Students earned an additional 0.22 credit hours that semester⁵



No impact detected on GPA

for minority students



Student aid awards increased by \$187 per student



Students passed an additional 0.29 credit hours that semester



No impact detected on GPA

IMPORTANT DETAILS

- *Students at Valencia averaged five separate attempts to register for every full-credit course because the process was tedious and confusing. Guidance and encouragement may be especially helpful in these frustrating moments.*

⁵ Only marginally statistically significant ($p < 10\%$)

LEARN MORE

ideas42. (2016). Project brief: Keeping students eligible for financial aid when registering.

CASE 9.2

STRATEGIES AND WARNINGS TO IMPROVE ACADEMIC STANDING

WHAT: Enhanced prevention strategies and expanded warnings that aimed to decrease the incidence of Satisfactory Academic Progress (SAP) violations, which cause students to lose eligibility for federal financial aid. Specific components included:

- increasing the number of students receiving warnings, in particular targeting incoming transfer students and continuing students near the GPA threshold
- non-mandatory workshops to help students build positive academic behaviors and adopt a growth mindset
- encouraging the use of tutoring services and regular class attendance

Make a plan! When and where will you study for exams in the next week? Text us your plan to up your chances of earning Eagle Success \$\$\$”

Text message prompting students to set intention to study (reproduced from study)

WHO: At-risk students at The College at Brockport, a 4-year public college that's part of the State University of New York.

How it's helped students relative to peers who received the standard communications:

for all students



Course withdrawals decreased by 10%



Tutoring attendance increased by 4 percentage points



No impact detected on SAP violations



No impact detected on GPA

for minority students



Course withdrawals decreased by 15%



Tutoring attendance increased by 6 percentage points



SAP violations declined by 8 percentage points⁶



No impact detected on GPA

IMPORTANT DETAILS

- Students particularly appreciated the social support from university officials and peer groups.
- Workshop attendance was low, and the positive impacts were strongest among students who attended at least one workshop. Selection bias is in play and students who attended were likely more engaged, but encouraging or requiring workshop attendance could increase impact.

LEARN MORE

ideas42. (2016). Project brief: Maintaining good academic standing.

⁶ Only marginally statistically significant (p < 10%)

COACH THROUGH COLLEGE

Coach students through the academic and personal challenges of college

THE CHALLENGE

Students fall behind or fail to complete college for a range of reasons, such as financial strains that become unmanageable, missed administrative deadlines, or difficulty navigating opaque systems. Strains on money, energy, and time can be hard to resolve. But other problems are fixable, including students not being aware of deadlines or not taking advantage of available resources. These struggles to stay on track in college are compounded when students:

- feel **frustrated, confused, or overwhelmed**
- **fail to remember** available resources at the moment they're needed
- **procrastinate** or neglect tackling small tasks
- perceive **stigma** associated with needing help

THE INNOVATION

Connect students with coaches within or outside the college. Coaches can provide information and answers, help troubleshoot challenging situations, and guide students toward useful resources. Personalized coaching can enable students to persist in the face of challenges and navigate both academic and “real life” barriers to college completion.

HOW IT'S HELPED STUDENTS



Grades



Graduation



Persistence

This evidence is **limited but promising**. The studies focus on adult students and colleges with low retention rates, though other student populations might also benefit.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
External professional coaching service	⌚ ⌚	\$ \$ \$	Case 10.1
Coaching by internal staff or students	⌚ ⌚ ⌚	\$	Case 10.2

See page 8 for an explanation of these cost and resource estimates.



HOW IT'S DONE

- 1** Talk to students, instructors, and staff to identify the most important personal and academic barriers to college success for your students. This will help determine how and for whom coaching may be most valuable, and what sorts of people would be the most effective coaches.
- 2** Determine who will provide coaching services. Options include staff, more advanced students, and outside coaching providers.
- 3** Connect with coaches and provide any necessary training. For internal staff or student coaches, clearly communicate the goals of the coaching relationship. For professional coaches, share institution-specific information so they understand your context.
- 4** Identify students who are most in need of coaching and most likely to benefit from it. You may also opt to provide coaching to all students.
- 5** Match students with coaches.
- 6** Monitor the coaching relationships and provide coaches with ongoing training and support.



KEEP IN MIND

- Coaches and students can interact via multiple channels. In-person meetings are helpful but may not always be practical or necessary. Flexibility to adapt to students' needs and circumstances is particularly important.
- Coaching may be especially helpful when it strengthens students' sense of social belonging and connectedness to college (see *Innovation 6*).

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 10.1: Professional coaching services

CASE 10.2: Coaching from upper-year students

If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

WHAT: Coaching by InsideTrack, a private company that provides coaching programs and consulting services to colleges. While exact services varied by college, coaches generally worked with students for two semesters, using various combinations of phone, email, text messages, and social networks to:

- *spot academic, personal, and financial barriers to success*
- *identify resources to help overcome barriers*

WHO: Students at 17 colleges that hired InsideTrack to provide coaching services. Different colleges targeted different groups of students with coaching.



How it's helped students relative to peers who were not offered coaching:



Persistence over 6 months increased by 5 percentage points



Graduation within 4 years increased by 4 percentage points

IMPORTANT DETAILS

- *It's important to target coaching interactions to critical student needs and intervene at times when action is possible. InsideTrack uses predictive algorithms to identify specific issues and times for coaches to reach out to students, but coaches with a strong relationship with their students can also identify these trouble spots.*

LEARN MORE

Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis*, 36(1), 3-19.

WHAT: Coaching provided by upper-year students. Coaches connected with students in person, via Skype, or over the phone to:

- monitor students' progress
- offer encouragement and motivation
- advise on challenges ranging from navigating campus logistics to managing anxiety about coursework

WHO: First-year students at a University of Toronto satellite campus.

"How's everything at home?"

"Good, I'm gonna start looking into scholarships this weekend, and I may need your help with that."

"Yeah for sure, I've looked through scholarships myself so I can definitely help you with that on the weekend."

Texting interaction between a coach and a student
(adapted from study)

How it's helped students relative to peers who did not receive coaching:



Average course grades increased by 5 percentage points



Cumulative GPA increased by 0.35 points

IMPORTANT DETAILS

- This program was very small and had a low coach-to-student ratio of about 5:1, which allowed coaches to build a personal relationship with students. The same results might not be achieved with a larger program or a higher ratio.
- This study also tested a text message program that provided advice and encouragement. Unlike the coaching service, it showed no effect on student outcomes.

LEARN MORE

Oreopoulos, P., & Petronijevic, U. (2017). Student coaching: How far can technology go? *Journal of Human Resources*, 1216-8439R.



Student Loan
Application



STUDENT FINANCES

Improve access to financial assistance and guide students to make smart financial decisions

One in five college students does not complete the FAFSA,¹³ even though most of these students would be eligible for aid. As a result, many take on an unnecessary financial burden that makes completing college more difficult. Many potential college students who do not complete the FAFSA fail to reach college at all. Low-income students are least likely to complete the FAFSA¹⁴ or submit it early.¹⁵ The problem is complex. Some students don't understand what financial aid is, others assume they aren't eligible, and still others intend to apply but don't follow through.¹⁶

Decisions about borrowing and repaying loans can be daunting. For some students, college is their first experience managing their own finances. For others, the challenge of how to pay for college is added to an already strained financial life. Despite the high financial stakes, most students know little about how much they are paying for college and how much debt they're taking on.¹⁷ Some students under-borrow and miss out on valuable financial support. Others over-borrow and later struggle to pay back their loans. Guidance on making these decisions is often available, but it may not reach the students who need it.

In 2016, nearly five million student loan borrowers were at least 90 days behind on repaying their loans.¹⁸ These repayment struggles can have lasting consequences, damaging credit scores and creating long-term financial vulnerability. Income-driven repayment plans and other help is available, but switching plans is complex and many borrowers who could benefit don't apply.

In this section, you'll find behavioral strategies to:

- *Help students meet FAFSA deadlines with targeted messages and assistance* (Innovation 11)
- *Guide students to make good decisions about whether and how much to borrow* (Innovation 12)
- *Encourage students to consider (and reconsider) the best repayment option for them* (Innovation 13)

PROMPT FAFSA COMPLETION

Help students meet FAFSA deadlines with targeted messages and assistance

THE CHALLENGE

Each year, many students miss out on available financial aid because they file the FAFSA late or fail to submit it at all. These enormous missed opportunities stem from lack of knowledge, simple misperceptions, and the obstacles of the process itself. More specifically, some students:

- don't know the FAFSA exists
- don't realize that financial aid is widely available, or that they would be eligible for it
- don't realize FAFSA has to be filled out every year, not just once
- **lose track** of deadlines and **procrastinate** on submitting because the process is confusing

THE INNOVATION

Prompt students to complete the FAFSA and submit it on time. One approach is to send students a series of messages that breaks down the process into simpler steps and reminds them of key deadlines. You can also create a moment of action for students to complete the paperwork and offer personalized assistance through the process.

HOW IT'S HELPED STUDENTS



FAFSA submissions



Aid awards



On-time renewals



College enrollment

The evidence is highly compelling, but positive impacts were not found in all settings for all students.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Messages sent by text, email, or an existing platform	⌚	\$	Case 11.1, 11.2
Develop a new smartphone application	⌚	\$ \$	Case 11.3
Add in-person FAFSA assistance to an existing service	⌚ ⌚	\$	Case 11.4

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

1 Identify students who may struggle to complete the FAFSA (e.g., first-generation college students). Because FAFSA must be submitted every year, this applies to both students who intend to apply to college and those who are already enrolled.

2 Choose the type of support you will provide:

Prompts and reminders

3 Select the right communication channel to capture your students' attention. Text messages currently work well, but the "best" channel will change as communication habits evolve.

4 Gather students' contact information and engage any relevant service providers, such as a texting platform.

5 Identify key financial aid steps and deadlines.

6 Craft messages and build a timeline for sending them to students. Focus on the 2-3 months leading up to the deadline.

Personalized assistance

3 Find an opportunity to integrate FAFSA assistance with another in-person service, such as tax prep or academic advising.

4 Streamline the process if possible by enabling students (and/or their parents) to carry over relevant information from tax returns.

5 Guide applicants through the remaining FAFSA questions.

6 When possible, encourage applicants to submit the form during this meeting. Otherwise, follow up later to ensure they submit the form.



KEEP IN MIND

- Consider whether it makes sense to communicate with parents as well as students. Sometimes, though not always (see *Case 5.3*), reminders are more effective when sent to both students and their parents.¹⁹
- Difficulties with FAFSA filing contribute to "summer melt"—see *Innovation 5* for a broader approach to this problem.

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 11.1: Financial aid nudges in the first year of college

CASE 11.2: FAFSA completion campaign

CASE 11.3: Smartphone app reminders for high school students

CASE 11.4: FAFSA assistance from tax professionals



If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 11.1

FINANCIAL AID NUDGES IN THE FIRST YEAR OF COLLEGE

WHAT: A series of 12 personalized texts and reminders that:

- highlighted important deadlines and requirements for refiling the FAFSA
- provided information about where to obtain help with financial aid
- offered assistance on financial aid-related processes via text message

WHO: First-year students at 2- and 4-year colleges who had worked with uAspire, a non-profit focused on college affordability, during high school.

Hi Rosa it's Award Letter time!
Make sure u get urs from ur fin
aid office & ask them for help if
u have questions. Or call us at
555-555-5555.

Personalized text to a student
(adapted from study)

How it's helped students relative to peers who did not receive the texts:

for 4-year college students



Persistence: There was no overall effect on persistence



Continuous enrollment: There was no overall effect on continuous enrollment

for 2-year college students



Persistence to fall semester of the second year increased by 12 percentage points



Continuous enrollment through spring semester of the second year increased by 14 percentage points

IMPORTANT DETAILS

- This program was most effective where persistence was initially lowest. Students who saw the largest gains in persistence were those attending community colleges and those with lower high school GPAs.
- Persistence rates among first-year students at four-year institutions were already over 80 percent, which may explain why no effects were found on persistence at those institutions. A similar program might be more effective for first-year students at four-year institutions with lower persistence rates.
- This program focused on a select group of students who had previously received assistance via text message from uAspire and therefore may have been more responsive to this form of outreach and support.

LEARN MORE

Castleman, B.L. & Page, L. (2016). Freshman year financial aid nudges: An experiment to increase FAFSA renewal and college persistence. *Journal of Human Resources*, 51(2), 389-415.

CASE 11.2

FAFSA COMPLETION CAMPAIGN

WHAT: A messaging campaign to increase FAFSA completion rates that included texts, emails, and postal mail. The messages:

- described the financial benefits of completing the FAFSA
- prompted recipients to think of themselves as motivated students and to connect this identity to FAFSA completion
- encouraged students to think about the logistics and time needed to complete the FAFSA and make a concrete plan to get it done

WHO: 450,000 high school seniors who had registered with the Common Application, a national non-profit organization through which students can apply to multiple colleges and universities with one application.

Excerpt from mailer sent to students
(reproduced from study)

How it's helped students relative to peers who received only general information and encouragement to complete the FAFSA:

for all students



College enrollment
increased by 1.1 percentage points

for first-generation college students



College enrollment
increased by 1.7 percentage points

IMPORTANT DETAILS

- The planning prompts that encouraged students to make a plan for completing the FAFSA seemed to be the most effective component.
- Because the enrollment rate was already over 80%, there was relatively little room for influencing students' behavior. A similar program targeting students with lower enrollment rates might have larger effects.

LEARN MORE

Bird, K., Castleman, B., L., Goodman, J., & Lambertson, C. (2017). Nudging at a national scale: Experimental evidence from a FAFSA completion campaign. Charlottesville, VA: EdPolicyWorks working paper.

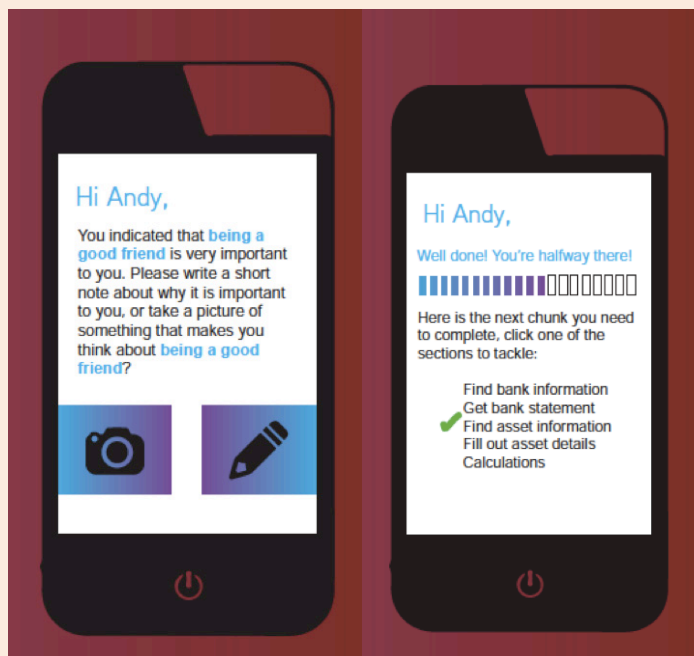
CASE 11.3

SMARTPHONE APP REMINDERS FOR HIGH SCHOOL STUDENTS

WHAT: A smartphone app that guided students through the FAFSA process over a period of several weeks by:

- *breaking down the application process into discrete, manageable tasks*
- *simplifying instructions*
- *delivering timely reminders about upcoming tasks*

WHO: High school seniors at San Jose High School, many of whom were from low-income, underrepresented, minority families and would be the first in their family to attend college.



Values affirmation and reminders on app
(reproduced from study)

How it's helped students relative to peers who received reminders about topics unrelated to financial aid:



FAFSA completion increased by 15 percentage points



Likelihood of receiving an aid award increased by 29 percentage points

IMPORTANT DETAILS

- *If you consider developing an app or other technology tool, make sure to think through how you will get students to actually use it. This challenge around “uptake” is generally harder than people anticipate. In this program, students downloaded and received instructions on how to use the app during dedicated class time.*

LEARN MORE

ideas42. (2016). Project brief: Increasing FAFSA Awards.

CASE 11.4

FAFSA ASSISTANCE FROM TAX PROFESSIONALS

WHAT: In a meeting otherwise dedicated to tax return preparation, H&R Block tax professionals guided those interested in filing the FAFSA through the process by:

- simplifying the transfer of pertinent information from tax returns into the FAFSA
- helping filers gather additional required information
- encouraging filers to submit the paperwork right away

WHO: Guidance was provided to people for whom the FAFSA was relevant, including:

- parents of high school seniors
- young adults who were high school graduates but had no college experience
- young adults with prior college experience but no degree

How it's helped students relative to peers who didn't receive assistance:

	for high school students whose parents received assistance	for adults with no college experience	for adults with prior college experience
	FAFSA submissions increased by 16 percentage points	FAFSA submissions increased by 26 percentage points	FAFSA submissions increased by 20 percentage points
	College enrollment increased by 8 percentage points	College enrollment did not increase	College enrollment did not increase
	Pell Grant awards increased by 10 percentage points	Pell Grant awards increased by 2 percentage points	Pell Grant awards increased by 3 percentage points
	Persistence through the second year of college increased by 8 percentage points	Effects on persistence were not reported	Effects on persistence were not reported

IMPORTANT DETAILS

- This intervention had two components: integrating FAFSA assistance with an in-person touchpoint that individuals were already participating in, and simplifying the FAFSA submission process by providing personal assistance on forms. While this combined approach has the most potential, the individual components may still be helpful on their own.

LEARN MORE

Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of simplification and information in college decisions: Results from the H&R Block FAFSA experiment. *Quarterly Journal of Economics* 127(3), 1205-1242.

Bettinger, E. P., Long, B. T., & Oreopoulos, P. (2013). The FAFSA project: Results from the H&R Block FAFSA experiment and next steps. Cambridge, MA: Harvard University.

REFRAME BORROWING CHOICES

Encourage students to make active decisions about whether and how much they borrow

THE CHALLENGE

Many students hesitate to borrow any money for post-secondary education even when doing so might be a good long-term financial decision. Other students borrow too much and end up taking on more debt than they need. While plenty of information about loan options is available, clear and specific guidance is harder to find. When it is difficult to evaluate alternatives, seemingly minor differences in the way options are presented can have an outsized impact. For example, borrowers may:

- perceive the default amount as an **implied recommendation** of how much they should borrow
- skip over or misunderstand **information that's unclear, complex, or easy to ignore**
- avoid choosing entirely** and thus end up with the default loan amount from their award letter

THE INNOVATION

Restructure the presentation of loan offers and send additional messages that provide simple guidance and clear information. This supports better-informed decisions and prompts students to make active choices about how much to borrow. Since many people just accept the default option, offering a loan amount that is appropriate for the borrower can help make the right choice easy.

HOW IT IMPACTED STUDENTS



Active choices



Likelihood of borrowing and amount borrowed

The evidence that these innovations shape borrowing choices is highly compelling. However, while students can be nudged to borrow more or less, the impacts on resulting student outcomes are uncertain. If they are nudged to borrow too little, academic performance and persistence can suffer.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Add loan information to existing communications	⌚	\$	Case 12.1, 12.3
Prompt students with additional text or email communications	⌚ ⌚	\$	Case 12.2

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

1 Determine whether students may be under- or over-borrowing in a way that impacts their academic performance, financial health, or ability to stay in college. It's important for this determination to be accurate, because getting it wrong could backfire for students. **For that reason, this innovation should be pursued with extra caution.**

2 Choose whether to redesign existing communications or interfaces, send additional prompts, or do both. Both strategies have been shown to influence borrowing behavior.

3 If you will be sending additional prompts, choose a channel that will capture students' attention and collect any necessary contact information.

4 Decide how to guide borrowing choices:

Prompt an active choice

- 5** Craft messages to students that:
- present information about options in a clear way
 - encourage students to consider which option is best for them
 - enable students to easily access additional support

6 Send messages to students before they make borrowing decisions.

Personalize the default option

5 Gather information on students' estimated expenses to calculate their borrowing needs. Try to customize this for individual students or specific groups rather than providing a single figure to all students.

6 Adjust award letters to point students toward loan amounts that are likely to more accurately reflect their needs.



KEEP IN MIND

- Prompt students to consider both the benefits and costs of borrowing. Borrowing too much means there's more to repay later, but borrowing too little means students may need to work more hours, which can cause academic performance to suffer.
- Reframing borrowing decisions can be combined with personalized assistance via text or prompts to meet in person with an advisor (see *Case 12.1*).
- Once students receive financial aid, they need to ensure that it lasts through the semester (see *Case 8.2* for a financial goal-setting approach to help students budget).

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 12.1: Text messages prompting active borrowing choice

CASE 12.2: Tailored notices with simplified loan information

CASE 12.3: Altering the presentation of a loan award



If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 12.1

TEXT MESSAGES PROMPTING ACTIVE BORROWING CHOICE

WHAT: A series of 8 interactive text messages sent to students over a one-month period after they applied for a loan. The messages included:

- prompts to consider how much they need to borrow and how borrowing choices impact future monthly payments
- links to important steps plus information about loans and repayment
- offers to answer questions or provide personalized assistance

WHO: New and continuing students at Community College of Baltimore County (CCBC).

Text prompting students to make active borrowing decision (reproduced from study)

Hi Imelda, this is Emily from CCBC. We know loans can be confusing so we're here to help you decide the loan amount that is right for you!"

How it impacted students relative to peers who did not receive the text messages:

for all students



Likelihood of taking an unsubsidized loan decreased by 3 percentage points



Average amount of unsubsidized Stafford loans decreased by \$90



No effect on taking a subsidized loan

for students with high debt



Likelihood of taking an unsubsidized loan decreased by 9 percentage points



Average amount of unsubsidized Stafford loans decreased by \$359



No effect on taking a subsidized loan

IMPORTANT DETAILS

- *Borrowing less isn't always the right decision. Students who were nudged by the text messages to borrow less earned fewer credits and performed slightly worse academically, though this decline was not statistically significant and was concentrated among students with low GPAs who were least likely to complete their degree. The negative effects on credits earned and academic performance did not persist into the next semester.*
- *If you provide interactive texting, be prepared to respond to students' texts. At CCBC, 70% of students sent a text back to the counselor, and roughly half of those students sent at least five messages.*
- *Effects were more pronounced among black students, female students, and students with low GPAs.*

LEARN MORE

Barr, A., Bird, K., & Castleman, B. (2016). Prompting active choice among high-risk borrowers: Evidence from a student loan counseling experiment.

CASE 12.2

TAILORED NOTICES WITH SIMPLIFIED LOAN INFORMATION

WHAT: Individually tailored “loan notices” were emailed to students before and after they received financial aid offers. Notices included simplified information about:

- *cumulative borrowing to date*
- *projected future monthly payments*
- *typical amount borrowed by peers*

WHO: Continuing students at the University of Missouri who had previously borrowed.



How it impacted students relative to peers who did not receive the simplified information:

for all students



Likelihood of meeting with a financial aid officer increased by 2 percentage points



No effect on likelihood of borrowing



No effect on persistence

for certain subgroups of students



Likelihood of borrowing declined by 3-4 percentage points for students with either a low GPA or a high debt load

IMPORTANT DETAILS

- *Be careful about sharing other students' borrowing behavior if poor borrowing decisions are common.*

LEARN MORE

Darolia, R. (2016). An experiment on information use in college student loan decisions. Federal Reserve Bank of Philadelphia Working Paper No. 16-18.

CASE 12.3

ALTERING THE PRESENTATION OF A LOAN AWARD

WHAT: A college changed the default loan amount listed on the award letter it sends to students from \$0 to a positive dollar amount. This tweak only changed the visual presentation of the offer, it did not in any way alter:

- *how much students were eligible to borrow if they chose (all students in the experiment were eligible for similarly-sized loans)*
- *information about eligibility (the award letters communicated the amount students were eligible to borrow)*
- *the requirement to take an affirmative step in order to take out a loan if the student wished to borrow*

WHO: Students at a large community college. Compared to the average community college student, students at this school:

- *received similar amounts of financial aid*
- *were less likely to complete college*



How it impacted students relative to peers whose loan offer was listed as zero:

for all students



Likelihood of borrowing increased by 9 percentage points



Average amount borrowed increased by \$350

for students who were induced to borrow



Course load increased by an average of 3.7 credits



GPA increased by an average of 0.6 points

LEARN MORE

Marx, B. M., & Turner, L. J. (2017). Student loan nudges: Experimental evidence on borrowing and educational attainment. Working paper.



IMPROVE REPAYMENT

Guide students to consider (and reconsider) the best repayment option for them

THE CHALLENGE

Many student borrowers struggle to repay their loans after leaving school, often with devastating effects on their long-term financial health. While a range of repayment plans and loan relief programs are available, many borrowers never utilize options that could help them stay on track. This is often because:

- they **aren't aware** they have a choice, or the differences between options are **unclear**
- struggling borrowers **assume that no solution is available** and avoid addressing the problem
- the process of applying for relief is **tedious and confusing**

THE INNOVATION

Prompt students leaving college to actively consider their repayment choices, and guide them to the plan best suited to their circumstances. When borrowers show signs of struggling to repay, send messages that demystify the income-based repayment plan application process, encourage them to participate, and assure them that debt relief is both available and accessible.

HOW IT'S HELPED STUDENTS



Active choices



Applications for income-driven repayment



Engagement with servicers

This evidence is limited but promising. The short-term effects on students' repayment plan choices are promising, but this approach hasn't been widely tested and there is little evidence of long-term effects on student loan default rates.

See page 7 for an explanation of how we evaluate the evidence, and the case studies that follow for concrete examples of these effects.



WHAT IT COSTS

	STAFF TIME	COSTS	EXAMPLES
Redesign existing communications or web interfaces	⌚	\$	Case 13.1, 13.3
Messages and tools sent by email or text	⌚	\$	Case 13.2
Print materials sent by mail	⌚	\$ \$	Case 13.2

See page 8 for an explanation of these cost and resource estimates.

HOW IT'S DONE

Prompt an active repayment choice

- 1** Identify students who are graduating or otherwise leaving college.
- 2** Choose a channel to communicate with students about loan repayment options. The best channel is one that is both trusted by students and captures their attention.
- 3** Display students' repayment options in a simple, easily comparable format, and encourage them to consider which option is best for them.

Identify and reach out to borrowers in distress

- 1** Identify borrowers who have fallen behind on payments or show other signs that they may struggle to repay.
- 2** Select the best channel to reach borrowers and gather their contact information.
- 3** Send messages to borrowers that reassure them that relief is available and encourage them to engage with their loan provider.
- 4** If debt relief is the best option, prompt borrowers to follow through with paperwork as needed.
- 5** Remind borrowers to complete recertification paperwork to maintain eligibility.



KEEP IN MIND

- Some of the same techniques for prompting good borrowing decisions can be used at repayment time (see *Innovation 12*).
- Urgent or alarming language can backfire. Craft messages to highlight the importance of the problem while showing that it is fixable and offering a clear path to fixing it (see *Case 13.2*).

KEEP READING FOR EXAMPLES FROM THE RESEARCH

CASE 13.1: Simplified presentation of loan repayment options

CASE 13.2: Outreach on debt relief for struggling borrowers

CASE 13.3: Personalized recertification reminders for income-driven repayment

If you're interested in adopting a version of this innovation at your organization, contact the Nudge Hotline for free assistance at

hotline@nudge4.org
434.233.0165 (phone)
434.233.0165 (SMS)

See page 11 for more information

CASE 13.1

SIMPLIFIED LOAN REPAYMENT OPTIONS

WHAT: A simplified version of the Department of Education's information on student loan repayment options was presented to students. The revised table:

- condensed lengthy text
- displayed key attributes of each plan in a table to facilitate easy comparison
- eliminated potentially misleading plan names, such as "Standard," that could be interpreted as implied recommendations but aren't the best option for many students

Repayment Plan	How Long You'll Pay for	How Much You'll Pay Every Month (The First & Final Month's Amounts)	How Much You'll Pay in Interest (In addition to the \$30,000 Loan)
Blue	10 years	\$311	\$11,429
Red	14 years	\$263 to \$305 (increases or decreases depending on your income)	\$16,678
Green	25 years	\$208	\$32,468
Purple	10 years	\$179 to \$538	\$14,580

WHO: Students at Valencia College in Orlando.

Redesigned repayment plan table (reproduced from study)

How it's helped students relative to students who weren't prompted with a table of borrowing options:



Likelihood of choosing the standard repayment plan decreased by 28 percentage points

IMPORTANT DETAILS

- Prompting students to consider the choice is the most important component of this approach. The simplified version of the comparison table didn't impact students' choices relative to the Department of Education's standard table, although it did help students understand and remember important plan attributes.
- Results suggest that the simplified table of options may have led students to choose a plan that was more appropriate for them, but effects on repayment behavior were not measured.

LEARN MORE

ideas42. (2016). Making informed choices about loan repayment: Valencia College. In *Nudging for Success: Using behavioral science to improve the postsecondary student journey*.

CASE 13.2

OUTREACH ON DEBT RELIEF FOR STRUGGLING BORROWERS

WHAT: A series of messages and materials that encouraged borrowers who were behind on student loan payments to apply for income-based repayment. The messages guided them through the application process and included:

- an introductory email with a personal and friendly tone that informed borrowers to expect a call from their servicer
- a simple, color-coded checklist summarizing steps and additional documents required
- email reminders to encourage follow-through
- a folder overlay for the application form with window cut-outs exposing the essential sections that simplified filling in the required information

WHO: Borrowers with student loans served by Great Lakes Higher Education Guaranty Corporation whose loans were at least 60 days delinquent.

Start here Here is the form we promised to send you when we spoke on the phone. It's for **Income Based Repayment**, a government program that means you can make more affordable payments on your student loan(s) for a while. This folder will help walk you through the application. If you have any questions don't hesitate to call us at (800) 236-2700.

1 Talk to us on the phone.

2 Open this folder briefly to make sure the pre-filled contact information is correct. If not, check the box at the top and enter the correct information.

Please enter or correct the following information.
☐ Check this box if any of your information has changed.
 SSN: []-[]-[]-[]-[]-[]-[]-[]-[]-[]
 Name: [] [] [] [] [] [] [] [] [] []
 Address: [] [] [] [] [] [] [] [] [] []
 City, State, Zip Code: []
 Telephone - Primary: ([] []) [] [] [] [] [] []
 Telephone - Alternate: ([] []) [] [] [] [] [] []
 E-mail Address (Optional): []

3 Check the box below to apply for lower student loan payments based on your income.

If no box in the chart is already checked, check the box at the bottom of the chart ("only IBR is available...") to ensure you receive the plan that will reduce your monthly payments the most. Feel free to read up on the different plans by turning this page.

	Direct Loan Program Loans*	FFEL Program Loans*
IBR	☐	☐
Pay As You Earn (PAYE)	☐	☐
Not Available	☐	☐

4 If you checked the first box in step 3, leave these boxes blank! If not, check one of the options below: (A) Updating your current repayment plan based on the annual documentation you are submitting (B) Requesting a change in monthly payment because your circumstances have changed

☐ Do you have student loans with more than one company (Nelnet, Navient, etc.)? If so, check the box. If this isn't familiar, leave it blank.

Now, flip the jacket over.
The front, back and signature pages need to be complete before you send in.

Folder overlay to guide students completing
Income Based Repayment applications
(reproduced from study)

How it's helped students relative to borrowers who received only the standard communications:

for all borrowers



Outreach to the guarantor
increased by 5%⁷



Applications for income-based repayment increased by 3 percentage points

for borrowers who requested a mailed application (and received the folder overlay)



Applications for income-based repayment increased by 7 percentage points

LEARN MORE

ideas42. (2016). Project brief: Boosting timely loan repayment: Education on debt relief options.

⁷ Only marginally statistically significant (p<10%)

CASE 13.3

REMINDERS FOR INCOME-DRIVEN REPAYMENT RECERTIFICATION

WHAT: An email from Federal Student Aid (FSA) to borrowers in advance of the annual repayment deadline for income-driven payment. The email noted the actual monthly payment increase that would happen if the borrower did not recertify their income. (Income level determines monthly payment amount in income driven repayment plans and it must be “recertified” every year.)

WHO: Borrowers who were enrolled in income-driven repayment plans and:

- were nearing their recertification deadline
- would see an increased monthly payment if they did not recertify their income



How it's helped students relative to borrowers told only the average payment increase for failing to recertify:



Recertification

increased by 3 percentage points

LEARN MORE

White House Social and Behavioral Sciences Team (SBST). (2016). Income-driven repayment: Recertification. In *2016 SBST Project Abstracts*.

**Standard plan?
Income-driven repayment?
Graduated repayment?**



APPENDIX A

Summary of Evidence for Each Innovation

	HOW IT'S HELPED STUDENTS	EVIDENCE IS
INNOVATION 1. COST/BENEFIT CLARITY Clarify the costs and benefits of college to shape college-going intentions	✓ College-going intentions ✓ Applications submitted ✓ College admission ✓ College match	Highly compelling
INNOVATION 2. ENCOURAGE ENTRANCE EXAMS Improve college entrance exam completion to boost enrollment	✓ Entrance exam completion ✓ College enrollment ✓ College match	Highly compelling
INNOVATION 3. ELIMINATE SMALL OBSTACLES Increase college applications by removing seemingly small costs and hassles	✓ College applications ✓ College match	Limited but promising
INNOVATION 4. COACH TO COLLEGE Coach students through the application process to boost enrollment and combat “undermatching”	✓ College enrollment ✓ College match	Highly compelling
INNOVATION 5. GUIDE TO DAY ONE Use information and reminders to reduce “summer melt” and help students start college	✓ College enrollment	Highly compelling
INNOVATION 6. CREATE RESILIENT MINDSETS Strengthen engagement, resiliency, and response to adversity	✓ Grades ✓ Persistence ✓ Graduation	Highly compelling
INNOVATION 7. MOBILIZE RESOURCE USE Prompt students with timely reminders to make the most of campus resources	✓ Awareness of resources ✓ Use of resources	Limited but promising
INNOVATION 8. FACILITATE GOAL-SETTING Prompt students to set goals and then follow through	✓ Grades ✓ Academic progress ✓ Financial stability	Highly compelling
INNOVATION 9. POINT OUT PITFALLS Use warnings to help students recognize and avoid pitfalls to college success	✓ Course completion ✓ Tutoring use ✓ Aid eligibility ✓ Aid awards	Limited but promising
INNOVATION 10. COACH THROUGH COLLEGE Coach students through the academic and personal challenges of college	✓ Grades ✓ Persistence ✓ Graduation	Limited but promising

	HOW IT'S HELPED STUDENTS	EVIDENCE IS
INNOVATION 11. PROMPT FAFSA COMPLETION Help students meet FAFSA deadlines with targeted messages and assistance	✓ FAFSA submissions ✓ On-time renewals ✓ Aid awards ✓ College enrollment	Highly compelling
INNOVATION 12. REFRAME BORROWING CHOICES Encourage students to make active decisions about whether and how much they borrow	✓ Active choices ✓ Likelihood of borrowing ✓ Amount borrowed	Uncertain
INNOVATION 13. IMPROVE REPAYMENT Guide students to consider (and reconsider) the best repayment option for them	✓ Active choices ✓ Engagement with servicers ✓ Applications for income-driven repayment	Limited but promising

APPENDIX B

Summary of Costs and Resources for Each Innovation

	STAFF TIME	COSTS	CASES
INNOVATION 1. COST/BENEFIT CLARITY			
Clarify the costs and benefits of college to shape college-going intentions			
✓ Send students personalized information about college costs/benefits	⌚ ⌚	\$	Case 1.1
✓ Send students general information about college costs/benefits	⌚	\$	Case 1.2
INNOVATION 2. ENCOURAGE ENTRANCE EXAMS			
Improve college entrance exam completion to boost enrollment			
✓ Open an additional ACT/SAT test center at a high school	⌚ ⌚	\$	Case 2.1
✓ Implement a policy for free testing and default test registration	⌚ ⌚	\$ \$	Case 2.2
INNOVATION 3. ELIMINATE SMALL OBSTACLES			
Increase college applications by removing seemingly small costs and hassles			
✓ Remove small fees	⌚	\$ \$	Case 3.1
✓ Paperwork-free fee waivers	⌚	\$	Case 3.2
INNOVATION 4. COACH TO COLLEGE			
Coach students through the application process to boost enrollment and combat “undermatching”			
✓ Hire an external coaching provider	⌚ ⌚	\$ \$ \$	Case 4.1, 4.3
✓ Use internal staff, peer mentors, or volunteers as coaches	⌚ ⌚ ⌚	\$ \$	Case 4.2
INNOVATION 5. GUIDE TO DAY ONE			
Use information and reminders to reduce “summer melt” and help students start college			
✓ Automated interactive text messaging	⌚	\$	Case 5.2
✓ One-on-one counseling of students	⌚ ⌚ ⌚	\$	Case 5.1
✓ Specialized automated interactive text messaging	⌚	\$ \$	Case 5.3
INNOVATION 6. CREATE RESILIENT MINDSETS			
Strengthen engagement, resiliency, and response to adversity			
✓ Reading and writing exercises	⌚	\$	Case 6.1, 6.2, 6.3
✓ In-person small group sessions	⌚ ⌚ ⌚	\$	
INNOVATION 7. MOBILIZE RESOURCE USE			
Prompt students with timely reminders to make the most of campus resources			
✓ Frequent, re-designed email messages	⌚	\$	Case 7.1, 7.2
✓ Direct phone calls	⌚ ⌚	\$	Case 7.3
INNOVATION 8. FACILITATE GOAL-SETTING			
Prompt students to set goals and then follow through			
✓ Custom online goal-setting activity	⌚	\$ \$	Case 8.1
✓ Follow-up reminders	⌚ ⌚	\$	Case 8.2
✓ Integrated goal-setting procedures	⌚	\$	Case 8.3

	STAFF TIME	COSTS	CASES
INNOVATION 9. POINT OUT PITFALLS			
Use warnings to help students recognize and avoid pitfalls to college success			
✓ Frequent, redesigned warnings	⌚	\$	Case 9.1, 9.2
✓ Workshops	⌚ ⌚ ⌚	\$ \$	Case 9.2
INNOVATION 10. COACH THROUGH COLLEGE			
Coach students through the academic and personal challenges of college			
✓ External professional coaching service	⌚ ⌚	\$ \$ \$	Case 10.1
✓ Coaching by internal staff or students	⌚ ⌚ ⌚	\$	Case 10.2
INNOVATION 11. PROMPT FAFSA COMPLETION			
Help students meet FAFSA deadlines with targeted messages and assistance			
✓ Messages sent by text, email, or an existing platform	⌚	\$	Case 11.1, 11.2
✓ Develop a new smartphone application	⌚	\$ \$	Case 11.3
✓ Add in-person FAFSA assistance to an existing service	⌚ ⌚	\$	Case 11.4
INNOVATION 12. REFRAME BORROWING CHOICES			
Encourage students to make active decisions about whether and how much to borrow			
✓ Add loan information to existing communications	⌚	\$	Case 12.1, 12.3
✓ Prompt students with additional text or email communications	⌚ ⌚	\$	Case 12.2
INNOVATION 13. IMPROVE REPAYMENT			
Guide students to consider (and reconsider) the best repayment option for them			
✓ Redesign existing communications or web interfaces	⌚	\$	Case 13.1, 13.3
✓ Messages and tools sent by email or text	⌚	\$	Case 13.2
✓ Print materials sent by mail	⌚	\$ \$	Case 13.2

APPENDIX C

Reference List

COLLEGE ACCESS.

REMOVE BARRIERS TO COLLEGE ENTRY.

INNOVATION 1. COST/BENEFIT CLARITY

Clarify the costs and benefits of college to shape college-going intentions

- | | |
|--|----------|
| Hoxby, C., & Turner, S. (2013). Expanding college opportunities for high-achieving, low income students. Stanford Institute for Economic Policy Research Discussion Paper, (12-014). | Case 1.1 |
| Oreopoulos, P., & Dunn, R. (2013). Information and college access: Evidence from a randomized field experiment. <i>The Scandinavian Journal of Economics</i> , 115(1), 3-26 | Case 1.2 |
| Micheltmore, K. (2016, November). The impact of information: Evaluating a financial aid promise. | -- |

INNOVATION 2. ENCOURAGE ENTRANCE EXAMS

Improve college entrance exam completion to boost enrollment

- | | |
|--|----------------|
| Bulman, G. (2015). The effect of access to college assessments on enrollment and attainment. <i>American Economics Journal</i> , 7(4), 1-36. | Case 2.1 & 2.2 |
| Goodman, S. (2016). Learning from the test: Raising selective college enrollment by providing information. <i>Review of Economics and Statistics</i> , 98(4), 671-684. | -- |
| Hurwitz, M., Smith, J., Niu, S., & Howell, J. (2015). The Maine Question: How Is 4-Year College Enrollment Affected by Mandatory College Entrance Exams? <i>Educational Evaluation and Policy Analysis</i> , 37(1), 138-159. | -- |
| Hyman, J. (2016). ACT for all: The effect of mandatory college entrance exams on postsecondary attainment and choice. <i>Education Finance and Policy</i> . | -- |

INNOVATION 3. ELIMINATE SMALL OBSTACLES

Increase college applications by removing seemingly small costs and hassles

- | | |
|---|----------|
| Pallais, A. (2015). Small differences that matter: Mistakes in applying to college. <i>Journal of Labor Economics</i> , 33(2), 493-520 | Case 3.1 |
| Hoxby, C., & Turner, S. (2013). Expanding college opportunities for high-achieving, low income students. Stanford Institute for Economic Policy Research Discussion Paper, 12-14. | Case 3.2 |

INNOVATION 4. COACH TO COLLEGE

Coach students through the application process to boost enrollment and combat “undermatching”

- | | |
|--|----------|
| Barr, A. C., & Castleman, B. L. (2016). Advising students to and through college: Experimental evidence from the Bottom Line advising program. | Case 4.1 |
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| Carrell, S. E., & Sacerdote, B. (2013). Late interventions matter too: The case of college coaching New Hampshire (No. w19031). Cambridge, MA: National Bureau of Economic Research. | Case 4.3 |
| Avery, Christopher (2014). The Amherst Telementoring Program for high-achieving, low-income students: Results of a pilot study with a randomized controlled trial. Harvard Kennedy School Working Paper No. RWP14-055. | Case 4.4 |
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INNOVATION 5. GUIDE TO DAY ONE

Use information and reminders to reduce “summer melt” and help students start college

- | | |
|--|----------|
| Castleman, B. L., L.C. Page, & K. Schooley (2014). The forgotten summer: Mitigating summer attrition among college-intending, low-income high school graduates. <i>Journal of Policy Analysis and Management</i> , 33, 320–344. | Case 5.1 |
| Page, L. C., & Gehlbach, H. (2017). How an artificially intelligent virtual assistant helps students navigate the road to college. Available at SSRN: https://ssrn.com/abstract=2940297 | Case 5.2 |
| Castleman, B. L., & Page, L. C. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates? <i>Journal of Economic Behavior & Organization</i> , 115, 144-160. | Case 5.3 |
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COLLEGE LIFE & ACADEMICS.

HELP STUDENTS NAVIGATE COLLEGE LIFE AND SUCCEED ACADEMICALLY.

INNOVATION 6. CREATE RESILIENT MINDSETS

Strengthen engagement, resiliency, and response to adversity

- | | |
|---|----------|
| Yeager, D. S., Walton, G. M., Brady, S. T., Akcinar, E. N., Paunesku, D., Keane, L., ... & Gomez, E. M. (2016). Teaching a lay theory before college narrows achievement gaps at scale. <i>Proceedings of the National Academy of Sciences</i> , 113(24), E3341-E3348. | Case 6.1 |
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| ideas42. (2016). <u>Project brief: Fostering a sense of belonging: Forming a new narrative about freshman year.</u> | -- |
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INNOVATION 7. MOBILIZE RESOURCE USE

Prompt students with timely reminders to make the most of campus resources

- | | |
|---|----------|
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| ideas42. (2016). Project brief: Taking advantage of on-campus tutoring. | Case 7.2 |
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| ideas42. (2016). Project brief: Registering early to plan for success. | |
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INNOVATION 8. FACILITATE GOAL-SETTING

Prompt students to set goals and then follow through

- | | |
|---|----------|
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INNOVATION 9. POINT OUT PITFALLS

Use warnings to help students recognize and avoid pitfalls to college success

- | | |
|---|----------|
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INNOVATION 10. COACH THROUGH COLLEGE

Coach students through the academic and personal challenges of college

- | | |
|--|-----------|
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STUDENT FINANCES.

IMPROVE ACCESS TO FINANCIAL ASSISTANCE AND GUIDE STUDENTS TO MAKE SMART FINANCIAL DECISIONS.

INNOVATION 11. PROMPT FAFSA COMPLETION

Help students meet FAFSA deadlines with targeted messages and assistance

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INNOVATION 12. REFRAME BORROWING CHOICES

Encourage students to make active decisions about whether and how much to borrow

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INNOVATION 13. IMPROVE REPAYMENT

Guide students to consider (and reconsider) the best repayment option for them

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ideas42. (2016). <u>Project brief: Boosting timely loan repayment: Education on debt relief options.</u>	Case 13.2
White House Social and Behavioral Sciences Team (SBST). (2016). <u>Income-driven repayment: Recertification.</u> In <i>2016 SBST Project Abstracts</i> .	Case 13.3

ENDNOTES

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