

INSIGHTS AND OPPORTUNITIES:

COLLEGE STUDENT FINANCIAL HEALTH AND BEHAVIORAL SCIENCE

Executive Summary

The college completion crisis in America is largely driven by financial challenges. While finances are a common proximate cause of dropping out, the problem for many students appears to be more complex and nuanced than simply not having enough money. It has to do with poor financial health. The uniquely challenging context of managing finances as a student poses behavioral obstacles that hold students back on the path to graduation and financial stability.

With support from MetLife Foundation and through a rigorous multi-step process, ideas 42 used insights from behavioral science to identify high-potential opportunities to support student financial health. This process included mapping the student journey, reviewing existing interventions and evidence, and identifying gaps where new solutions are needed. Throughout this process ideas 42 consulted with stakeholders in the field, including university administrators, financial service providers, and technology entrepreneurs.

This process culminated in identifying the following key opportunities to jointly advance student financial health and college completion.

- **1. Facilitate college choice from a financial perspective:** Offer personalized guidance to help students choose a college that's a good academic and financial match, in an easy-to-use and scalable tool
- **2. Set students up to make good borrowing choices:** Communicate loan options in a clear, timely, and actionable way, and use customized default options to make the right choice easy
- **3. Prompt timely FAFSA filing and renewal:** Scale behavioral messaging campaigns to help students renew their FAFSA to maintain financial aid access through college
- **4. Support students in managing cash flows through college:** Smooth income volatility and ease financial management for students with planning, automation, and feedback
- **5. Promote selection of the right loan repayment plan:** When students leave college, guide them to choose a sustainable loan repayment plan

August 2018



About ideas 42

We're a leader in our field with unique expertise in behavioral science and the emerging practice of behavioral design. We create fresh solutions to tough problems using behavioral insights, and scale those solutions for maximum impact.

Our work spans more than 30 countries and encompasses economic mobility, health, education, consumer finance, safety and justice, energy efficiency, and international development. As a global non-profit, our partners include governments, foundations, companies, and many other institutions. Our specific expertise relating to student financial health is grounded in our previous work in both postsecondary education and consumer finance. This work includes over 30 interventions with more than two dozen partners, in addition to thought leadership in both fields.¹ These efforts have included providing structured support for financial aid application and acceptance, redesigning course registration messaging to ensure students remain on efficient paths towards graduation, and instituting a *Financial Health Check* to help consumers automate positive financial behaviors to help confront the dual challenges of income volatility and limited cognitive bandwidth.²³

At its core, behavioral science helps us understand human behavior and why people make the decisions they do. It teaches us that context matters, that asking the right questions is critical, and that simple solutions are often available but frequently overlooked. We work to identify the subtle but important contextual details that can have a disproportionate impact on outcomes.

Interconnected crises in college completion and financial health

Enormous strides have been made in recent decades to increase college access, but the full promise of that progress hasn't yet been realized because many students who start college don't graduate. As of September 2017, over 20 million students were enrolled in 2- and 4-year colleges and universities across the United States, a 25% increase since 2000.⁴ If current trends continue, over 8.6 million of those currently enrolled will not graduate by 2024.⁵ Financial struggles contribute to the completion crisis: they're the most common reason students cite for dropping out of college.⁶

While finances are a common proximate cause of dropping out, the problem for many students appears to be more complex and nuanced than simply not having enough money. It relates to the daily choices that together determine students' financial health: the spending, saving, borrowing, and planning that define their resiliency and

Of every 10 college students in America: a,b,c

- 4 don't graduate within 6 years across all institutions (at 2-year colleges, 7/10 don't finish in 3 years)
- 7 report feeling stressed about their personal finances
- 3 report neglecting academic work because of financial concerns

> Of every 10 college students who don't graduate: d

- 5+ report "needing to work and make money" as a major reason they left school
- 6+ report "it was too stressful trying to do both" (academics and making ends meet) during their first year of college



future opportunities.⁷ The context in which students live and make decisions presents unique challenges to building and maintaining financial health, as well as unique possibilities.

The student context makes managing finances particularly challenging. Students' **attention is stretched** in many different directions, as they face busy schedules and the competing demands of school, work, and other obligations, and are navigating new environments and processes for the first time. Financial decisions and actions are just one aspect of this complexity, and they're embedded throughout the college experience. In this context, it's perhaps unsurprising that students sometimes allow important details to fall through the cracks.⁸ Even seemingly small missteps, like failing to get advisor approval before the course registration deadline, can snowball into serious consequences that make it hard to bounce back and persist through college, and that have downstream consequences later in life.



While the context in which students live contributes to financial struggles, financial struggles are also an important part of the context: in particular, **the limited income and volatile cash flows** that define many students' financial realities. While poverty statistics are difficult to calculate for the entire universe of college-going Americans, more than half (52%) of students living off campus and not with relatives live under the poverty line. Even students with income above the poverty line frequently experience financial strain because they have "lumpy" income and expenses: large financial outlays for tuition, once-a-

semester financial aid refunds, and uneven income from jobs with variable hours.

One result is that financial concerns become a drain on valuable cognitive resources that are already heavily taxed in college. Even being prompted to think about a stressful financial scenario in the hypothetical has been shown to significantly reduce cognitive performance.¹⁰ For a college student who faces real financial stress in day-to-day life, the consequences for academic performance can be profound. Moreover, the need to cope with immediate financial struggles often leads students to resort to strategies that harm their chances of graduating and/or leave them more financially vulnerable, such as working so much that they aren't able to dedicate enough time to their studies or running up credit card debt.^{11,12} In the moment students make these decisions, they may seem reasonable or even necessary. And yet, outside of the "tunnel" of immediately pressing needs and obligations, it becomes apparent that a better path might have been possible.

Improvements in financial health can reduce this stress and free up valuable mental space for academics, which in turn increases the likelihood of persistence and smooths the path toward graduation. In the long term, college completion translates to improved financial health throughout adulthood. Compared to those without a degree, college graduates have roughly doubled lifetime earnings, higher credit scores, labeled lower unemployment, and are more likely to own a home.

What is at the root of these interconnected crises, and how can we pull students out of the cycle of financial and academic struggles? In this report, we outline five evidence-backed, practical, scalable opportunities to support students that draw on insights from behavioral science and current innovations in the field.



> 5 Opportunities to Support Student Financial Health and College Completion

- 1. Facilitate college choice from a financial perspective
- 2. Set students up to make good borrowing choices
- 3. Prompt timely FAFSA filing and renewal
- 4. Support students in managing cash flows through college
- 5. Promote selection of the right loan repayment plan

Our Process

With support from MetLife Foundation, ideas 42 reviewed student experiences, programs, and tools that affect financial health to identify a broad set of possible approaches to improving student financial health. We assessed these approaches based on impact, scalability, and actionable behavioral bottlenecks, and identified those with the greatest potential to help students.

Our work consisted of three components:

- Map the student journey—We mapped crucial processes that students navigate before, during, and after college with an eye towards how they might impact student financial health. These maps captured the people, systems, and technologies that students interface with along the way, such as financial aid offices, course registration systems, enrollment management systems, and others. We produced 6 sets of process maps capturing students' journey to and through college, focusing on financial behaviors and decisions such as those needed to receive financial aid or to begin repaying loans. We also examined more than thirty-five of the most prominent technology systems and platforms that students interact with during these processes, and we conducted interviews with 11 college administrators and practitioners to identify key challenges and constraints in serving students. The result is a picture of how students proceed through the financial decisions and actions of college, where struggles most commonly arise, and how new solutions might best be integrated into the existing context.
- 2. Review interventions and evidence—We reviewed the existing behavioral interventions that have proven effective or shown initial promise to enhance student financial health. This led us to a consolidated summary of 20 fundamental behavioral interventions (drawn from over 80 studies and programs). The result is a clear picture of what has been tested and proven to move the needle on student financial health.
- 3. Identify gaps and opportunities—By overlaying the evidence review on the process maps, we identified gaps where new solutions are needed and where behavioral science can play an important role. Additionally, we explored how and by whom those solutions might be carried out. Through interviews with over 20 industry experts (including financial service providers, creators of tools and services, and government officials) we refined our understanding of how these opportunities might be addressed and identified next steps for stakeholders in the field.

The following pages of this report summarize the five opportunities we identified.

August 2018



OPPORTUNITY 1: Facilitate college choice from a financial perspective

Offer personalized guidance to help students choose a college that's a good academic and financial match, in an easy-to-use and scalable tool

> The challenge: A highly consequential choice that's easy to get wrong

The choice of whether and where to attend college is a financial decision in more ways than one. By opening doors to a stable, well-paying career, the right college is often a great financial investment in the long term. The wrong college, on the other hand, can jeopardize students' financial futures, leading them to borrow more in the short term, take longer to finish (or not finish at all), or face limited employment prospects after graduation. With so much at stake, it's tempting to assume students will usually make prudent choices. Despite the high stakes, many students fail to make a choice that sets them up for success. Those from disadvantaged backgrounds, who stand to gain the most from college, often have the least access to information and guidance throughout this process. The result is that low-income students, first generation students, and minority students are more likely than their peers to attend colleges that perform poorly in terms of students' graduation rate, loan default rate, and lifetime earnings.¹⁷

Why do students struggle to make prudent choices? One important reason is the complexity of the choice, which requires students to collect and evaluate information from disparate sources about a range of different features of colleges and select one college from the over 4,700 they might attend. Even if they can collect the right information, knowing how to evaluate it requires experience. There's no cue to tell students whether they've made the "right" choice, or even whether they've considered everything they should. When faced with such a highly complex choice and in the absence of the guidance needed to make it, people tend to fall back on simple rules of thumb that don't



- My cousin went to State U. so I will too (availability)
- I missed the application deadlines for everywhere but the local community college (no moment of choice)

capture all the relevant considerations.¹⁹ This leads students to focus on the options that come most easily to mind (are most **available** to recall), such as a nearby college or one a friend or family member attended. Even more troubling, for many students there isn't a clear **moment of choice:** they aren't prompted to build a list of good-match colleges before they begin applying. This means that they may never actively decide which colleges might be a good match, and it makes it more likely that they'll fall back on a default option, such as a less selective local institution that's not the best fit.²⁰

> The context: Plentiful information, insufficient guidance

• Online college scorecards and list builders can be a useful resource, but they don't capture the full picture of college financial value, nor do they account for the often-counterintuitive ways people actually make decisions and take actions. In recent years the federal government and others have begun to offer new technology platforms that allow students to see colleges' net cost, graduation rates, and other important measures of quality.²¹ These resources are an



important step in the right direction. Unfortunately, these tools are not always easy to use, don't allow students to easily compare schools on all relevant metrics at once, and often rely on users to generate lists of schools.

- **High school guidance counselors** are often charged with supporting students through the college application process, but many lack the right tools and are too thinly stretched to offer sufficient guidance. Nationwide, there is one counselor for 491 students on average, almost twice the ratio recommended by the US Department of Education^{22,23} (however, even one counselor for 245 students would likely be insufficient). And 21% of US high schools do not have any school counselor;²⁴ this statistic is one of many that highlight the current inequities in college access across public schools. As it stands, the current system fails to adequately support students in their college choice: a majority of young adults rank their guidance counselor as either poor or fair in supporting important aspects of the college choice process,²⁵ which may say less about individual guidance counselors than about the herculean task they are asked to perform.
- College coaches and other one-on-one resources can be immensely valuable in simplifying the college choice process, but they don't always fully capture the financial aspects of the choice, instead focusing on selectivity and other measures of academic quality. ^{26,27} uAspire is a program that takes an explicitly financial approach to college coaching. Their intensive coaching, which focuses on increasing both college access and affordability, has helped their program alumni persist in college at rates higher than the national average. ^{28,29} However, because of the resource intensity of coaching, such programs are expensive to scale and therefore can only reach a small proportion of the low- and moderate-income students who need support.

What's needed? A new college choice tool

A tool that simplifies college choice by making long-term financial value explicit and targeting the underlying behavioral drivers of the college choice complexity:

- Expanding applicants' choice set by generating a list of good value colleges to consider, combatting the availability bias that limits students' choices.
- Guiding students toward the best fit choices from both a financial and academic perspective, avoiding the huge challenge of triangulating information from multiple sources and then teasing out the most important elements to weigh the costs and benefits of different options.
- Integrating into existing support structures and/or reaching students early in the process, to create a moment of choice by prompting them to think early and actively about the list of colleges they will apply to.

SPOTLIGHT: EDQUITY'S COLLEGE MATCH TOOL

Edguity's college match tool (in beta) aims to help students find high quality colleges that are also affordable for them personally. The tool fills many of the gaps in the current support system, and addresses the identified bottlenecks. It asks about family income in simple way, incorporates data on key metrics to identify best value schools, and uses simple but comprehensive TurboTax-style prompts to calculate if students can afford a given school. In practice, the tool allows for easy comparison of schools across important measures of school quality and clearly articulates the tradeoffs among alternatives.

For more information: https://www.edquity.co/



A college list tool that meets these criteria could both support students directly and serve as a valuable resource for parents, guidance counselors, coaches, and others who support students in choosing and applying to college. Specifically, it could expand guidance counselors' ability to provide sound and useful guidance to large numbers of students in spite of high student to counselor ratios.

OPPORTUNITY 2: Set students up to make good borrowing choices

Communicate loan options in a clear, timely, and actionable way, and use customized default options to make the right choice easy

> The challenge: Loan amounts often don't match students' financial need

For over 40% of undergraduate students, federal loans are critical to making college affordable.³⁰ But the borrowing process can be complicated and intimidating, and students often make borrowing choices without a good understanding of their financial needs or of the obligations they're taking on. A full quarter of students with federal debt say they have none, and almost half underestimate the amount of their debt by at least 20%.³¹ Misunderstanding often leads students to make suboptimal borrowing choices. For example, 54% of all borrowers with private student loans did not take full advantage of federal Stafford loans, which generally carry lower interest rates and more flexible repayment options.³² Some students borrow more than they need, which burdens them with unnecessarily large debt loads, while others borrow too little, which jeopardizes their chances of completing college.³³

The way financial aid packages are communicated to students contributes to this confusion. Students receive their entire aid package in one award letter that often fails to clearly explain the sources of aid—including whether it's a grant or a loan that needs to be repaid—and downplays student autonomy in the decision. While students can borrow more or less to finance their degree regardless of what their school offers, this initial offer strongly influences ultimate borrowing behavior. This tendency to stick with the **default option**, a general bias in behavior,³⁴ is especially strong when the decision is unfamiliar or intimidating.³⁵

Students may also avoid reading and thinking about their loans because it triggers feelings of stress or anxiety about the process or the financial obligations they're taking on. This tendency to avoid stress-inducing information is called **ostriching** and it is made more likely by the confusing presentation of loan information and the absence of clear guidance. Discomfort with borrowing also manifests in students' **loan aversion**—a reluctance to borrow at all (or to borrow enough). Loan aversion is especially common among low-income and first-generation college students,³⁶ and it limits college access and jeopardizes completion among already vulnerable students. While the inclination to avoid debt is understandable, it can make college completion even more difficult.



- They offered me this amount, so it's probably what I need (default option)
- I don't even want to think about how much I'm borrowing (ostriching)
- Loans make me nervous— I'll just work more instead (loan aversion)



> The context: Opaque information and inconsistently available support

- **Financial aid award letters** are used to present students with a way to finance their education. Unfortunately, the letters vary greatly between colleges, which makes it difficult to compare aid awards. They can also be difficult to decipher and sometimes even misrepresent the true cost of college.³⁷ These letters make it hard for students to make an accurate financial plan for the semester and understand their repayment burden once they graduate.
- Entrance counseling covering a wide range of financial topics related to borrowing and repayment is required for all students who receive federally-subsidized loans. While these sessions are helpful for some, 38 it can be difficult for students to apply what they learn because so many topics are covered, many of which aren't salient or immediately actionable. 39 One survey found that nearly a third of students who went through entrance counseling did not even remember doing so. 40
- On-campus financial aid offices are tasked with walking students through the loan origination process and helping provide targeted guidance when necessary. 41 Unfortunately, many offices are understaffed and are unprepared or hesitant to provide personal advice on students' borrowing decisions. A recent study by the National Association of Student Financial Aid Administrators found that for every 1,000 financial aid applicants there are only 2.8 financial aid officers available to guide students. 42
- Prompting an active choice about borrowing decisions can help to ensure that students
 actually make a choice, rather than sticking to the default option in their offer letters. However,
 these interventions can have mixed results when not coupled with other more robust student
 supports. In one recent study, these prompts caused students to borrow less, leading to worse
 academic outcomes for some students.⁴³

What's needed? A better way of presenting financial aid information

Demystify financial aid and student loans by communicating aid offers consistently across colleges in a simple, clear, and actionable way by:

- Using clear language, avoiding jargon, and including only the essential information about the financial aid package to make award letters less intimidating and more easily understandable, and to combat students' tendency to avoid distressing information.
- Making it clear to students that they have a choice about the parameters of their financial aid package and don't have to accept it exactly as offered.

SPOTLIGHT: STANDARDIZED AWARD LETTERS

Standardized award letters that provide clear information on the full cost of attendance and the sources of aid can help students make more informed borrowing decisions. The standardization will also allow for easier comparison between schools to facilitate a good fit choice. A proposal that the Department of Education develop a standardized award letter, which all colleges would be required to use, was introduced in the US Senate as the *Understanding the True Cost of College Act of 2017.*

Source: United States Senate. (2017). True cost of college act of 2017. S.888, 115 Congress.



 When possible, harnessing the power of defaults to make the right choice easy: offering an aid package that's customized to the recipient's needs.

SPOTLIGHT: EXPENSE TRACKING TO SUPPORT LOAN CHOICE

Information about students' actual spending patterns and needs could be used to guide them to the right borrowing choice in the next year or semester.

See Opportunity 4 for more information.

OPPORTUNITY 3: Prompt timely FAFSA filing and renewal

Scale behavioral messaging campaigns to prompt students to renew their FAFSA to maintain financial aid access through college

> The challenge: Students miss out on financial aid by failing to submit the FAFSA

Students forgo more than \$2.7 billion in federal grant funds every year because they fail to submit the Free Application for Federal Student Aid (FAFSA).⁴⁴ Students who file the FAFSA before starting college often lose access to aid in later years because they fail to renew. Sixteen percent of first year Pell Grant recipients in good academic standing do not re-file their FAFSA for the following year. The failure to refile is negatively associated with persistence among this particularly low-income population.⁴⁵ We might expect students to claim at least the grant aid available to them, but many students don't.

Why do students so often fail to renew their FAFSA when it would make college much more affordable and increase their chances of graduating? For some, failure to file the FAFSA is rooted in an inaccurate **mental model** of who applies for and is eligible for aid, and/or about what's required to maintain aid eligibility. This is especially true for students already in college. The challenge is also partially rooted in complexity of the process. Although it's "only" a form, the FAFSA is a daunting challenge for many students. Completing it involves gathering documentation from various sources (including potentially sensitive



- Financial aid is only for lowincome students, not for me (mental model)
- It's going to take me so long to track down all this information—I'll do it later (hassle factors)

documents like parents' tax returns), parsing technical jargon to answer questions properly, and keeping track of deadlines—all amid the pressures of college. Even seemingly small **hassle factors** have been shown in various contexts to keep us from following through on actions we know are valuable and intend to do.⁴⁷ These hassles often have a disproportionately large impact on behavior, especially when processes—like filing the FAFSA—have many sub-steps. The result is that students procrastinate in completing the necessary steps, which can lead to missed deadlines. In some cases, they may forget altogether until it's too late.



> The context: Effective solutions exist, but aren't yet reaching many students

- **Personalized support and assistance** have shown impressive positive results in boosting FAFSA submissions and long-term persistence indicators.⁴⁸ hese interventions are best delivered in person and require a meaningful investment of staff or volunteer time, which makes them difficult to scale.
- **Prompts and reminders** to complete and submit FAFSA paperwork through text message, mail, and/or email have also been effective in the pre-college context. These prompts go beyond simply telling students they should complete the FAFSA to helping them follow through by breaking down the process into simple steps, and offering timely, actionable, and motivating reminders. Although they have smaller effects on FAFSA submission than high-touch personalized assistance, they produce meaningful impacts that are far more cost effective. ⁴⁹ Because of their cost effectiveness, these interventions are scalable for both incoming and ongoing college students. But they don't yet reach most students.
- **Financial aid offices** are sometimes seen as resources to help students navigate complicated financial aid paperwork. Onfortunately, many offices are understaffed and thus unable to provide additional support to the students who need it. Even financial aid offices with the capacity to support students often wait for students to come to them for assistance rather than proactively reaching out and reminding students.

> What's needed? Scale proven interventions to reach all students

Replicate targeted SMS/email messaging campaigns to prompt students to complete the FAFSA and guide them through the process. Draw on the lessons learned from successful past interventions, using low-cost delivery channels to reach students at scale with messages that:

- Correct misperceptions about who is eligible and applies for financial aid to target inaccurate mental models of financial aid.
- Break down the FAFSA process into clear sub-tasks, targeting students' tendency to procrastinate or get discouraged, and connecting students to further guidance and resources where necessary, using timely reminders.
- Support students through each step of the process with direction and reminders to reduce the barriers imposed by small hassles along the way.

This intervention has the potential to benefit millions of students at a relatively low cost.

SPOTLIGHT: FAFSA COMPLETION PROMPTS FOR COMMON APP USERS

Evidence supports the use of behaviorally informed messages to increase FAFSA applications among incoming students. In one study, students who registered with the *Common App* were sent planning prompt messages that helped them articulate how and when to complete the FAFSA. The intervention increased applications by 1.1 percentage points among all students, and 1.7 percentage points among first generation students. These effects may seem modest, but the intervention was both more cost effective than other rigorously evaluated FAFSA interventions and may understate the messages' true impact because the control group also received several general messages about FAFSA.

For more information: Bird, K. A., Castleman, B. L., Goodman, J., & Lamberton, C. (2017). Nudging at a National Scale: Experimental Evidence from a FAFSA Completion Campaign (Vol. 54). EdPolicy Works Working Paper Series No. 54



SPOTLIGHT: FAFSA RENEWAL PROMPTS FOR CONTINUING STUDENTS

Partnering with the City University of New York (CUNY), ideas 42 designed a behaviorally-informed text message and email intervention designed to nudge continuing community college students to renew their FAFSA. Continuing students received up to 9 text messages and up to 9 emails in addition to normal communications. In a randomized controlled trial across three CUNY community colleges and more than 26,000 continuing students, the intervention boosted FAFSA renewal rates by over 9 percentage points, or 31%.

OPPORTUNITY 4: Support students in managing cash flows through college

Smooth income volatility and ease financial management for students with planning, automation, and feedback

> The challenge: Students have volatile cash flows and little financial cushion

Making ends meet is a struggle for many Americans, and the financial lives of college students present unique challenges. Infrequent spikes in income, such as once-a-semester financial aid checks, and lumpy expenses throughout the semester make planning both difficult and necessary. Volatile cash flows make it difficult to balance a budget and can lead students to resort to expensive forms of credit that further derail their financial stability.⁵² Students also typically have little financial slack, which means that even the smallest of missteps can have severe downstream consequences. Forgetting an overdue cell phone bill or diverging from a budget in even a small way can lead to late fees, rising interest rates, and financial stress that make it hard to get back on track.

Students struggle with money management for some of the same reasons we all do—but for many students, the challenge is more difficult and the stakes are higher. Part of the problem is that future financial needs are vague and uncertain, which tends to make us underestimate them,⁵³ and to be **overconfident** about our ability to weather financial shocks.⁵⁴ Students, like all of us, also face **present bias**—a tendency to over-value the immediate consequences of our actions compared to the longer-term effects.⁵⁵ This makes it difficult for students to rigidly stick to a budget, especially when they're busy and tired. In a context rife with competing and urgent demands, students may struggle to devote a sufficient portion of their **limited attention**



- Money is tight now, but I'm sure I'll have enough to get by (overconfidence)
- I've had such an exhausting day, I'll order take-out instead of cooking tonight (present bias)
- I have to work, study, and take care of the kids, I don't have time to think about my budget right now (limited attention)

to maintaining their financial health,⁵⁶ which means small issues can snowball into large ones before they're noticed. The lack of cushion in students' budgets and schedules adds to the cognitive burden of keeping it all under control, as small missteps can quickly become crises that demand attention and

August 2018



energy, which in turn diverts attention away from classwork and can make persisting through college more difficult

> The context: Resources and financial products don't match students' needs

- **Financial aid disbursement** often comes in one large lump sum payment at the start of the semester. Anticipating expenses that may be months away and making money last is challenging for college students. Though unproven, approaches that spread disbursement of financial aid funds over the course of the semester could make it simpler for students to manage their finances. One such model, Aid Like A Paycheck, is in the early stages of testing and thus far has shown mixed results.⁵⁷
- **Financial literacy programs** are commonly offered by colleges with the aim of teaching personal finance concepts. However, research has shown that these programs have only weak and short-term impacts on actual behavior. Among their flaws, programs often overload students with lots of information but don't provide opportunities for students to actually implement new strategies. To boost their impact, financial literacy programs should identify a small range of critical financial behaviors and serve as a moment of action to automate as many as possible, while setting goals for others.
- **Budgeting tools** like Mint that link to users' bank and credit card accounts provide real-time feedback on spending and financial needs and can, in theory, help students identify problems before they become severe. However, these tools also aren't designed for the college student context and they aren't widely used by students, especially low-income students who could benefit most. ^{59,60}

What's needed? Customized support for students' financial lives

Support students to take control of their challenging financial lives through one or more of the following:

- Easing the challenges inherent in the student context with financial products that smooth income flows or expenses over the semester and help students meet acute short-term needs with savings or emergency loans.
- Making it easy to build good financial habits by recommending specific actions, prompting students to build realistic plans, and automating recurring transactions where possible. This provides an opportunity for students to confront (and overcome) overconfidence and present bias. It also gives students a greater sense of control over their financial lives that eases some of the cognitive burden of managing money.

SPOTLIGHT: FINANCIAL HEALTH CHECK

Financial counseling that centers on concrete actions individuals can take leads to more sustained behavior change than most current programs. Personalized sessions with coaches that focus on "set and forget" financial behaviors, like automatic bill pay and savings transfers, help make money management easier and remove barriers and temptations that can trip up individuals. These innovations are ripe for adaptation to the student context.

For more information: http://www.ideas42.org/wp-content/ uploads/2015/05/The_Financial_ Health_Check-1.pdf



• Providing timely, actionable feedback at crucial moments throughout the semester to reduce the effects of limited attention and break through the noise of other daily needs when necessary. This feedback can help students anticipate and avoid struggles and connect them to resources, like emergency aid, when needed. This information could also be used to guide students' decisions, drawing from a student's own financial history to provide customized advice for key decisions such as how much to borrow (see also Opportunity 2).

All three types of support could be combined in a single **financial product** designed for students. This would ideally be a transactional account with features that smooth large cash inflows to help students make money last through the semester, automate repeated transactions, flag problems early,

SPOTLIGHT: A STUDENT-FOCUSED BUDGETING TOOL

A budgeting app customized for the college context would help students set and stick to realistic financial plans. The tool would provide real-time feedback on students' spending behaviors, highlighting when they are about to go off course and what they should do about it. Building on existing APIs, a white label application would allow individual colleges to provide students with a useful tool and could generate increased buy-in from college leaders and administrators.

and connect students to other available resources when issues arise. Its value to students would be most compelling with a link between the student's financial service provider and college, allowing for customization to a student's unique context, needs, and resources.

OPPORTUNITY 5: Promote selection of the right loan repayment plan

When students leave college, guide them to choose a realistic loan repayment plan

> The challenge: Borrowers fall behind on loans even when flexibility is available

At the close of 2016, college debt totaled \$1.3 trillion, and of the student loan borrowers who entered repayment between 2013-2014, 11.5% are already in default. 61,62 This crisis has hit vulnerable communities particularly hard: nearly half of all African American borrowers who entered school in 2003-2004 defaulted on their loans within 12 years, compared to 21% of white students. 63 The personal consequences of loan default can be devastating, ranging from damaged credit scores to garnished wages to the revocation, in some states, of professional licenses. 64 And in some cases default is avoidable. Income

driven repayment (IDR) plans can delay or significantly lower monthly payments and provide more flexibility. Many borrowers who struggle with monthly payments and are in jeopardy of delinquency and default are eligible for these plans,⁶⁵ but up to 80% of eligible borrowers don't sign up.⁶⁶

If IDR can help keep borrowers on track, why do so many fail to take advantage of it? Part of the problem is that many students leaving college are defaulted into repayment plans that they're unlikely to be able to afford.⁶⁷ The **default option** is called the "Standard Plan," and can easily be perceived as a recommendation, even



- The "standard" plan probably means it is recommended (default option)
- I have to track down last year's tax returns—I'll find time later to deal with it (hassles)
- My loans are such a mess, I don't even want to think about it (ostriching)



though it's unmanageable for many students. Many don't know about IDR and among those who do the complexity of the sign-up process impedes uptake. Borrowers who decide to enroll often have to proactively request materials, which are full of intimidating technical jargon and require applicants to gather information from a variety of sources (pay stubs, tax returns, bank statements). Unsurprisingly, these **hassles** can lead borrowers to put off signing up as they fall farther and farther behind on payments. The fact that the process is intimidating and that it's frightening to admit to themselves that they can't afford their loan payments only makes the problem worse, as borrowers **ostrich** and procrastinate further.

> The context: Information is available, but actionable guidance is harder to find

- Exit counseling is a potentially important channel for connecting with outgoing students because all students with federal student loans are required to go through it when graduating or otherwise leaving school. While the content and medium (online vs in-person) of counseling varies between schools, its reach creates the potential for impact. Unfortunately, counseling fails to deliver information in a clear and memorable way for many borrowers. According to a study conducted by Young Invincibles and NERA Economic Consulting, only 55% of students with federal loans remember receiving any loan counseling. The authors suggest that counseling was so poorly delivered that the remaining students did not recognize the experience as counseling or remember it at all. ⁶⁹ Even for those students who do emerge from counseling better informed, there is a six-month delay before they actually begin repaying their loans. ⁷⁰ This grace period can make it difficult for students to accurately predict their financial situation at the start of repayment, thus making it difficult to apply what they learn in exit counseling.
- Loan servicers can help borrowers either stay on track with repayment or find a repayment plan that better fits their circumstances. Unfortunately, the onus is on borrowers to proactively access these resources. When servicers do reach out to borrowers it is often an indication that repayment has already gone off track, at which point avoidance and other factors lead to low levels of engagement from borrowers. Fewer than 5% of initial calls to delinquent borrowers are answered, according to Great Lakes Higher Education Guaranty Corporation, a non-profit loan guarantor.⁷¹

What's needed? A better way to ensure students get into a repayment plan they can afford

Enhance exit counseling to set students up on a successful path to repayment. Behaviorally optimized exit counseling would target many of the key roadblocks student face on the path to timely repayment, by:

- **Demystifying complex repayment options** by providing clear, simple descriptions of available plans. To combat the tendency to "ostrich" in the face of looming student debt, emphasize to students that an affordable plan is available.
- **Prompting students to actively choose** a repayment option suited to their needs, so they don't end up with a plan that's not right for them, and providing clear and concrete guidance



about which repayment plans are appropriate, in particular making alternative repayment plans more salient for a wider range of borrowers.

• Recommending that students choose income driven repayment (IDR) unless they're confident they'll be financially secure enough to afford larger student loan monthly payments.

These changes would work within the existing exit counseling structure and would thus require few additional resources. In the longer term, there is a clear need to reform the repayment processes themselves, reducing complexity and hassles wherever possible at the moment students leave college and throughout their repayment terms. These changes could take multiple forms, such as simplifying the sign-up process for IDR or eliminating or streamlining annual income verification requirements.

A call to action

Big challenges lie ahead in working to improve student financial health and college completion. These challenges are intertwined, and so are the solutions. Financial decisions before and during college have great bearing on a student's likelihood of succeeding in college, which in turn significantly influences their financial health later in life.

The good news is that there are promising opportunities to move the needle on both of these big challenges. Behavioral science offers valuable insights into how seemingly small barriers can trip students up in surprisingly consequential ways. The five opportunities above are grounded in rigorous evidence of how context influences actions and how to make the "best" path forward easier. A dedicated group of stakeholders is already working to further the joint goals of college completion and financial health and have made tremendous strides. This report highlights opportunities emerging from the work already done and sketches a path forward for continuing to improve student outcomes. Some of these opportunities can be considered low-hanging fruit: for example, expanding usage of prompts to file the FAFSA that have been directly and repeatedly proven to help students (Opportunity 3). Others are more complex approaches that leverage evidence-backed insights for the development of new tools, such as budgeting software tailored to students' unique needs (Opportunity 4).

The opportunities identified in this report are not a comprehensive set of possibilities, but they represent some of the most promising potential approaches. They should be seen as a foundation upon which actors in the postsecondary education, consumer finance, and technology spaces can build. This report is a call to action for colleges, financial service providers, technology companies, and other stakeholders to seize these opportunities and identify new ways to address the joint challenges of financial health and college completion.

Critically, moving forward requires collaboration. There are a range of opportunities for colleges and the private sector to work together to leverage data, communication channels, and new products and tools to better support students financially on the journey through college.

Progress also hinges on continuing to build the evidence base for effective approaches. While a rich body of evidence undergirds the opportunities discussed in this report, there remain important unanswered questions, including:



- How can we determine the "correct" amount students should borrow, and what are the consequences of under-borrowing?
- To what extent can students' limited resources be further stretched by more careful budgeting, and when is more money the only viable solution?
- What are the biggest financial missteps that hold students back, and how can they be predicted?

Clarity on these and other questions will lead to better solutions and create new opportunities to support students.

The promise of increased college access has opened the door for millions of low-income and first-generation students, most of whom would not previously have considered postsecondary education an option for people "like them." With a college degree comes increased opportunity for better paying work, a more fulfilling career, improved health outcomes, and a leg up for the next generation. However, these gains are concentrated among those who persist through the myriad challenges of college and ultimately graduate, which far too many vulnerable students fail to do. A concerted effort to improve student financial health—as both a foundation of college completion and result of it—can help make this promise a reality for a growing number of students.



References

- ¹ Cohen, N., Davis, K., Tantia, P., Wright, J., Chandrasekhar, C., & Spence, T. (2015). Reimagining Financial Inclusion. *ideas42 & Oliver Wyman*. Retrieved from http://www.ideas42.org/wp-content/uploads/2015/11/Reimagining-Financial-Inclusion-Final-Web-1.pdf
- ² ideas42. (2016). Nudging for Success: Using behavioral science to improve the postsecondary student journey. Retrieved from http://www.ideas42.org/wp-content/uploads/2016/09/Nudging-For-Success-FINAL.pdf
- ³ Schoar, A., & Tantia, P. (2014). The financial health check: A behavioral approach to financial coaching. ideas42. Retrieved from http://www.ideas42.org/wp-content/uploads/2015/05/The_Financial_Health_Check-1.pdf
- ⁴ U.S. Department of Education, National Center for Education Statistics. (2017). Fast Facts: Back to School Statistics.
- ⁵ Authors' calculations, from Shapiro, D., Dundar, A., Huie, F., Wakhungu, P.K., Yuan, X., Nathan, A. & Bhimdiwali, A. (2017). Completing College: A National View of Student Completion Rates—Fall 2011 Cohort (Signature Report No. 14). Herndon, VA: National Student Clearinghouse Research Center.
- ⁶ Public Agenda. (2011). With Their Whole Lives Ahead of Them Myths and Realities About Why So Many Students Fail to Finish College. Retrieved from https://www.publicagenda.org/files/theirwholelivesaheadofthem.pdf
- ⁷ Parker, S., Castillo, N., Garon, T., & Levy, R. (2016). Eight Ways to Measure Financial Health. Chicago: *Center for Financial Services Innovation*.
- ⁸ Lavie, N. (2005). Distracted and confused?: Selective attention under load. Trends in cognitive sciences, 9(2), 75-82.
- ⁹ Bishaw, A. (2013). Examining the effect of off-campus college students on poverty rates. *United States Census Bureau, Social, Economic, and Housing Statistic Division, Poverty Statistics Branch.*
- ¹⁰ Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). Poverty impedes cognitive function. Science, 341(6149), 976-980.
- ¹¹ Trombitas, K. (2012). Financial stress: An everyday reality for college students. *Lincoln, NE: Inceptia*
- ¹² Joo, S. H., Durband, D. B., & Grable, J. (2008). The academic impact of financial stress on college students. Journal of College Student Retention: Research, Theory & Practice, 10(3), 287-305.
- ¹³ Taylor, P., Parker, K., Fry, R., Cohn, D., Wang, W., Velasco, G., & Dockterman, D. (2011). Is college worth it? College presidents, public assess value, quality and mission of higher education. *Pew Social and Demographic Trends*.
- ¹⁴ Bernerth, J. B. (2012). Demographic variables and credit scores: An empirical study of a controversial selection tool. *International Journal of Selection and Assessment*, 20(2), 242-246.
- ¹⁵ Ryan, C, & Siebens, J.. (2012). Educational Attainment in the United States: 2009 Population Characteristics. Retrieved from https://files.eric.ed.gov/fulltext/ED529755.pdf
- ¹⁶ Mezza, A. A., Sommer, K., & Sherlund, S. M. (2014). *Student loans and homeownership trends* (No. 2014-10-15). Board of Governors of the Federal Reserve System (US).
- ¹⁷ Rothwell, J. (2015). Report: The stubborn race and class gaps in college quality. *Brookings Institution*. Retrieved from https://www.brookings.edu/research/the-stubborn-race-and-class-gaps-in-college-quality/
- ¹⁸ U.S. Department of Education, National Center for Education Statistics. (2017). Fast Facts: Back to School Statistics.
- ¹⁹ Tversky, A., & Kahneman, D. (1975). Judgment under uncertainty: Heuristics and biases. In *Utility, probability, and human decision making* (pp. 141–162). Springer. Retrieved from http://link.springer.com/chapter/10.1007/978-94-010-1834-0_8
- ²⁰ Dynarski, S. M., & Scott-Clayton, J. E. (2006). *The cost of complexity in federal student aid: Lessons from optimal tax theory and behavioral economics* (No. w12227). National Bureau of Economic Research.
- ²¹ Lieber, R. (2017). The long story of the movement toward college cost clarity. *The New York Times*. Retrieved from https://www.nytimes.com/2017/10/20/your-money/paying-for-college/college-costs-grassley-franken.html?_r=0
- ²² United States Congress. (2002). No Child Left Behind Act of 2001, Pub. L. No. 107-110, 115 Stat. 1425. *United States Federal Government*.
- ²³ American School Counselor Association. (2014). Student to School-Counselor Ratio 2013-2014. Retrieved from https://www.schoolcounselor.org/asca/media/asca/home/Ratios13-14.pdf
- ²⁴ Office for Civil Rights. (2016). 2013-2014 Civil Rights Data Collection: A First Look. *U.S. Department of Education*. Retrieved from https://www2.ed.gov/about/offices/list/ocr/docs/CRDC2013-14-first-look.pdf
- ²⁵ Public Agenda. (2011). Can I Get a Little Advice Here? How an Overstretched High School Guidance System Is Undermining Students' College Aspirations. New York, NY: Public Agenda.
- ²⁶ Barr, A. C., & Castleman, B. L. (2016). Advising students to and through college: Experimental evidence from the Bottom Line advising program.
- ²⁷ Avery, C. (2013). Evaluation of the College Possible program: Results from a randomized controlled trial (No. w19562). National Bureau of Economic Research.
- ²⁸ 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.
- $^{\rm 29}$ uAspire. (2017). Impact. Retrieved from https://www.uaspire.org/impact
- ³⁰ Urban Institute. (2017). Borrowing. In *Understanding College Affordability*. Retrieved from http://collegeaffordability.urban.org/covering-expenses/borrowing/#/



- ³¹ Akers, B., & Chingos, M. M. (2014). Are college students borrowing blindly. Brown Center on Education Policy at Brookings.
- ³² Consumer Financial Protection Bureau. (2012). Private student loans. Retrieved from http://files.consumerfinance.gov/f/201207_cfpb_Reports_Private-Student-Loans.pdf
- ³³ Cunningham, A. F., & Santiago, D. A. (2008). Student aversion to borrowing: Who borrows and who doesn't. *Institute for Higher Education Policy*.
- ³⁴ Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. Journal of Risk and Uncertainty, 1(1), 7-59.
- ³⁵ Choi, J., Laibson, D., Madrian, B. C., & Metrick, A. (2004). For Better or for Worse: Default Effects and 401(k) Savings Behavior (Vol. Perspectives on the Economics of Aging). Chicago: University of Chicago Press.
- ³⁶ Burdman, P. (2005). The Student Debt Dilemma: Debt Aversion as a Barrier to College Access. UC Berkeley Research and Occasional Paper Series. https://escholarship.org/uc/item/6sp9787j
- ³⁷ FinAid. (2017). Guide to financial aid award letters. In *The Smart Student Guide to Financial Aid*. Retrieved from http://www.finaid.org/fafsa/awardletters.phtml
- ³⁸ Fernandez, C., Fletcher, C., Klepfer, K., & Webster, J. (2015). A Time to Every Purpose: Understanding and Improving the Borrower Experience with Online Student Loan Entrance Counseling. *TG Research and Analytical Services*.
- ³⁹ Whitsett, H, O'Sullivan, R. (2012). Lost Without a Map: A Survey about Students' Experiences Navigating the Financial Aid Process. *Young Invincibles*. New York, NY: NERA Economic Consulting.
- ⁴⁰ Office of Student Life. (2017). National Student Financial Wellness Study: 2017 Key Findings Report. Columbus, OH: The Ohio State University.
- ⁴¹ National Association of Student Financial Aid Administrators. (n.d.). What financial aid administrators do. *NASFAA*. Retrieved from https://www.nasfaa.org/uploads/documents/What_Fin_Admins_Do_1.pdf
- ⁴² National Association of Student Financial Aid Administrators. (2016). 2016 NASFAA Benchmarking Report: Key Factors That Impact Financial Aid Office Salaries, Staff Size, Administrative Capacity, and Campus Relations. *NASFAA*.
- ⁴³ Barr, A., Bird, K., & Castleman, B. (2016). Prompting active choice among high-risk borrowers: Evidence from a student loan counseling experiment.
- ⁴⁴ PBS Newshour. (2016, Sept 30). FAFSA makes changes, hoping more students will utilize funds [Television Broadcast]. *PBS Newshour*. Retrieved from https://www.pbs.org/newshour/show/fafsa-makes-changes-hoping-students-will-utilize-funds
- ⁴⁵ Bird, K., & Castleman, B. L. (2016). Here today, gone tomorrow? Investigating rates and patterns of financial aid renewal among college freshmen. *Research in higher education*, *57*(4), 395-422.
- ⁴⁶ ideas42. (2015). Project brief: Increasing FAFSA Applications, making college more affordable. Retrieved from http://www.ideas42.org/wp-content/uploads/2015/12/FAFSA-Brief.pdf
- ⁴⁷ Cabinet Office Behavioural Insights Team (2011). Behaviour change and energy use. *London: Cabinet Office*. Retrieved from http://neweconomists.org/files/Behaviour_and_Energy.pdf
- ⁴⁸ Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of application assistance and information in college decisions: Results from the H&R Block FAFSA experiment. *The Quarterly Journal of Economics*, *127*(3), 1205-1242.
- ⁴⁹ Bird, K., Castleman, B., L., Goodman, J., & Lamberton, C. (2017). Nudging at a national scale: Experimental evidence from a FAFSA completion campaign. Charlottesville, VA: EdPolicyWorks working paper.
- ⁵⁰ National Association of Student Financial Aid Administrators. (n.d.). What financial aid administrators do. *NASFAA*. Retrieved from https://www.nasfaa.org/uploads/documents/What_Fin_Admins_Do_1.pdf
- ⁵¹ Rosenbaum, J. E., Deil-Amen, R., & Person, A. E. (2006). After admission: From college access to college success. New York, NY: Russell Sage Foundation.
- ⁵² Cohen, N., Davis, K., Tantia, P., Wright, J., Chandrasekhar, C., & Spence, T. (2015). Reimagining Financial Inclusion. *Ideas42 & Oliver Wyman*. Retrieved from http://www.ideas42.org/wp-content/uploads/2015/11/Reimagining-Financial-Inclusion-Final-Web-1.pdf
- 53 Weinstein, N. D. (1980). Unrealistic optimism about future life events. Journal of Personality and Social Psychology, 39(5), 806.
- ⁵⁴ de Bassa Scheresberg, C., & Lusardi, A. (2014). Financial Capability among Young Adults. *National Endowment for Financial Education*. Retrieved from https://nefe.org/What-We-Provide/Primary-Research/Financial-Capability-Among-Young-Adults
- ⁵⁵ Meier, S., & Sprenger, C. (2010). Present-Biased Preferences and Credit Card Borrowing. *American Economic Journal: Applied Economics*, 2(1), 193–210. https://doi.org/10.1257/app.2.1.193.
- ⁵⁶ Gennetian, L. A., & Shafir, E. (2015). The Persistence of Poverty in the Context of Financial Instability: A Behavioral Perspective. *Journal of Policy Analysis and Management, 34*(4), 904–936. https://doi.org/10.1002/pam.21854
- ⁵⁷ MDRC. (2017). Aid Like A Paycheck. Retrieved from https://www.mdrc.org/project/aid-paycheck#overview
- ⁵⁸ Fernandes, D., Lynch Jr, J. G., & Netemeyer, R. G. (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science*, 60(8), 1861-1883.
- ⁵⁹ Baker, T. H. (2017). FinTech Alternatives to Short-Term Small-Dollar Credit: Helping Low-Income Working Families Escape the High-Cost Lending Trap. *M-RCBG Associate Working Paper Series*, (75).
- ⁶⁰ NCLR, National CAPACD, National Urban League. (2014). Banking in Color: New Findings on Financial Access for Low-and-Moderate Income Communities. *National Council of La Raza*.
- ⁶¹ U.S. Department of Education. (2017). U.S. Department of Education Releases National Student Loan FY 2014 Cohort Default Rate [Press Release]. Retrieved from https://www.ed.gov/news/press-releases/us-department-education-releases-national-student-loan-fy-2014-cohort-default-rate



- ⁶² Federal Reserve Bank of New York. (2017). Household Borrowing, Student Debt Trends and Homeownership [Press Release]. Retrieved from https://www.newyorkfed.org/press/pressbriefings/household-borrowing-student-loans-homeownership
- ⁶³ Miller, B. (2017). New federal data show a student loan crisis for African American borrowers. *Center for American Progress*. Retrieved from https://www.americanprogress.org/issues/education-postsecondary/news/2017/10/16/440711/new-federal-data-show-student-loan-crisis-african-american-borrowers/
- ⁶⁴ Silver-Greenberg, J., Cowley, S., & Kitroeff, N. (2017, November 18). When unpaid student loan bills mean you can no longer work. *The New York Times*. Retrieved from https://www.nytimes.com/2017/11/18/business/student-loans-licenses.html?_r=0
- ⁶⁵ Federal Student Aid. (2017). Work with your loan servicer to choose a federal student loan repayment plan that's best for you. U.S. Department of Education. Retrieved from https://studentaid.ed.gov/sa/repay-loans/understand/plans
- ⁶⁶ United States Government Accountability Office. (2015). Federal student loans: Education could do more to help ensure borrowers are aware of repayment and forgiveness options (GAO-15-663). Washington, D.C.: U.S. Government Accountability Office.
- ⁶⁷ United States Government Accountability Office. (2015). Federal student loans: Education could do more to help ensure borrowers are aware of repayment and forgiveness options (GAO-15-663). Washington, D.C.: U.S. Government Accountability Office.
- ⁶⁸ ideas42. (2016). Project brief: Making Informed Choices About Loan Repayment, helping students navigate repayment plans. Retrieved from https://www.ideas42.org/wp-content/uploads/2016/12/I42-718_Brief_Valencia_Repayment_4.pdf
- ⁶⁹ Whitsett, H, O'Sullivan, R. (2012). Lost Without a Map: A Survey about Students' Experiences Navigating the Financial Aid Process. New York, NY: NERA Economic Consulting.
- ⁷⁰ Federal Student Aid. (2018). Understanding repayment: learn about how, when, and to whom you make your federal loan payments. *U.S. Department of Education*. Retrieved from https://studentaid.ed.gov/sa/repay-loans/understand
- ⁷¹ ideas42. (2016). Project brief: Boosting timely loan repayment: Education on debt relief options. Retrieved from http://www.ideas42.org/wp-content/uploads/2016/12/142-718_Brief_GreatLakes_3.pdf
- ^a U.S. Department of Education, National Center for Education Statistics. (2017). *The Condition of Education 2017* (NCES 2017-144), Undergraduate Retention and Graduation Rates.
- ^b Office of Student Life. (2017). National Student Financial Wellness Study: 2017 Key Findings Report. Columbus, OH: The Ohio State University.
- ^c Shapiro, D., Dundar, A., Huie, F., Wakhungu, P.K., Yuan, X., Nathan, A. & Bhimdiwali, A. (2017). Completing College: A National View of Student Completion Rates—Fall 2011 Cohort (Signature Report No. 14). Herndon, VA: National Student Clearinghouse Research Center.
- ^d Public Agenda. (2011). With Their Whole Lives Ahead of Them Myths and Realities About Why So Many Students Fail to Finish College. Retrieved from https://www.publicagenda.org/files/theirwholelivesaheadofthem.pdf