

MAKING SUMMER PAY OFF

USING BEHAVIORAL SCIENCE TO ENCOURAGE POSTSECONDARY SUMMER ENROLLMENT

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MDRC's Center for Applied Behavioral Science (CABS) is an initiative that combines MDRC's expertise in social and education programs with insights from behavioral science. CABS develops innovative, low-cost interventions, tests their impact through experimentation, and provides technical assistance to programs.

For many low-income community college students, the road to graduation is challenging: Only 13 percent of entering students graduate within two years,¹ and only 24 percent graduate within three.² However, research has shown that students who enroll in summer courses are more likely to persist and graduate.³ Summer enrollees have the opportunity to earn credits and make progress toward a degree. The summer term also bridges the gap between the fall and spring semesters — a time of transition when many students drop out of college.⁴ Despite these benefits, most college students do not attend during the summer. How can postsecondary institutions encourage more students to enroll in summer courses? If more students do enroll, will they experience improved academic outcomes?

MDRC's Encouraging Additional Summer Enrollment (EASE) project explores these questions by using insights from behavioral science to encourage more students to enroll in summer courses. In partnership with the Ohio Association of Community Colleges and four community colleges in Ohio, MDRC developed and rigorously evaluated two interventions to encourage summer enrollment:

- 1 The first intervention was an **informational campaign** of personalized student communications delivered by email and mail that incorporated various behavioral science principles. This campaign aimed to simplify academic, financial aid, and procedural information related to summer enrollment, remind students of that information, and motivate them to register for courses.
- 2 The second intervention was a similar **informational campaign paired with a "last-dollar" tuition-assistance grant** that covered the difference between students' summer tu-

1 Juskiewicz (2017).

2 McFarland et al. (2018).

3 Adelman (2006); Attewell, Heil, and Reisel (2012).

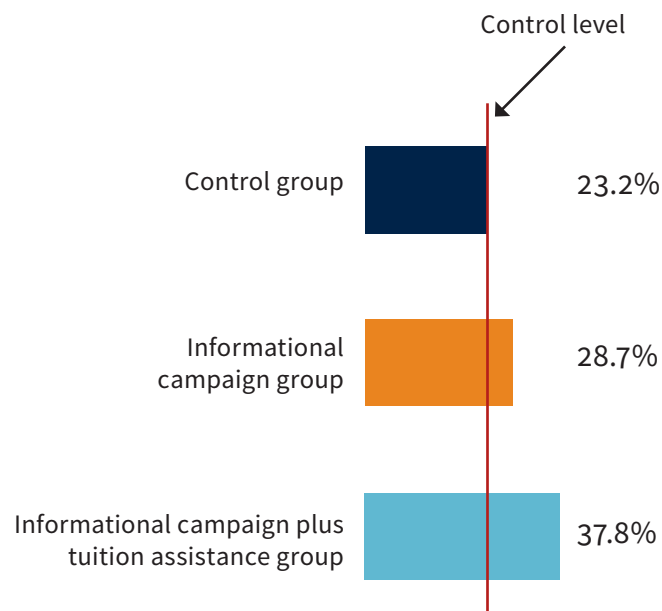
4 Liu (2016).

ition and fees and any grant financial aid (such as Pell Grant funding) they had available for summer courses.

To test the effectiveness of the two interventions, MDRC randomly assigned first-year, low-income students enrolled in spring 2017 courses to (1) a group that received an informational campaign, (2) a group that received tuition assistance plus an informational campaign, or (3) a control group that received the colleges' standard communications.⁵ The interventions launched in the spring 2017 semester to encourage enrollment for the summer 2017 term.

The study finds that both interventions — the informational campaign alone and the informational campaign plus tuition assistance — increased summer enrollment (Figure 1). The informational campaign increased summer enrollment by 5.5 percentage points, from 23.2 percent to 28.7 percent. The informational campaign plus

Figure 1. Summer Enrollment Rates



SOURCE: MDRC calculations using transcript data provided by Columbus State Community College, Marion Technical College, Stark State College, and Southern State Community College.

NOTE: Estimates are adjusted by college and spring 2017 enrollment level (full time/part time) interactions as well as race/ethnicity, gender, age, and dependency status.

⁵ Students were considered to be in their “first year” if they had not enrolled at their college of random assignment during the summer 2014 through summer 2016 terms. A student was considered “low-income” if he or she received a federal Pell Grant during the spring 2017 semester. Complete study eligibility criteria are described below.

plus tuition assistance was substantially more effective. It increased enrollment by 14.6 percentage points, from 23.2 percent to 37.8 percent. Both interventions also had positive, statistically significant effects on credit accumulation, an important indicator of progress toward a degree.⁶ Neither intervention had an effect on fall enrollment.

These findings demonstrate that improved policies and communication about summer term can improve summer enrollment and, as a result, credit accumulation. The informational campaign was probably effective because it provided simple, consistent reminders to students about the benefits of summer enrollment, the availability of courses, and the availability of financial aid. The finding that the informational campaign plus tuition assistance was substantially more effective is noteworthy. Many students in this group had enough grant aid to cover their summer tuition costs and did not need the additional tuition assistance, reducing the cost of this intervention.

With the reinstatement of the year-round Pell Grant for the 2017-2018 award year, eligible low-income students will have additional funding available for summer courses. Colleges looking to encourage students to take advantage of this funding and enroll in summer courses can consider sending personalized messages to students about summer enrollment. Providing gap tuition funding can further increase enrollment. The EASE project includes a second phase that will include six additional community colleges in Ohio. In Phase II, similar interventions are being implemented and evaluated in the new context of year-round Pell Grants. Future briefs will report findings from Phase II.

The sections that follow describe the benefits of summer enrollment and the development of the two EASE interventions. The brief then describes several barriers to summer enrollment identified during a diagnostic period and how the intervention components were designed in response to the barriers. After summarizing the study design, the brief presents the results in more detail and concludes with lessons and next steps for the project.

WHY ENCOURAGE SUMMER ENROLLMENT?

Many colleges offer courses during the summer, and students who enroll during the summers may experience improved academic outcomes.⁷ For example, students at two-year colleges who take summer courses after their first year are 7 percentage points to 16 percentage points more likely to graduate within five years.⁸ Summer

⁶ The estimated effect of the informational campaign on credits earned has a p-value of 0.093.

⁷ Adelman (2006); Attewell, Heil, and Reisel (2012).

⁸ Attewell, Heil, and Reisel (2012).

courses provide students with an opportunity to earn additional credits, bringing them closer to graduation. This boost may be particularly beneficial for community college students, as many enroll part time or are required to complete developmental (remedial) courses before taking college-level courses, increasing the amount of time it takes them to earn degrees.

Relatedly, recent campaigns in higher education are encouraging full-time students to enroll in 15 credits each semester rather than 12, to promote timely graduation.⁹ But some students, such as those who are working full time or have to care for dependent children, may find a higher credit load unmanageable. Taking 6 credits in the summer could allow these students to spread out the load and still graduate on time.

In addition to the direct benefit of credit accumulation, summer courses may improve spring-to-fall persistence by keeping students engaged over the summer — a period when many students leave college.¹⁰

There is compelling evidence that summer enrollment rates can be improved and that students may benefit from summer enrollment. In MDRC's Performance-Based Scholarship Demonstration, students who received scholarships just for registering for summer did enroll in summer courses and earned credits at higher rates than control group students who did not receive the incentive.¹¹ In an evaluation of Kingsborough Community College's learning communities, MDRC found that the program, which included a main session and a summer or winter intersession, had a positive effect on enrollment during the intersession that overlapped with the program.¹² Furthermore, even after students completed the program, they continued to enroll in subsequent intersessions at a higher rate than they would have otherwise — suggesting a habit was formed. Finally, in MDRC's evaluation of the City University of New York's Accelerated Study in Associate Programs (ASAP), which provides students with a comprehensive package of services including summer tuition assistance and clear guidance to enroll during the summer, students offered ASAP were 21 percentage points to 25 percentage points more likely to enroll in summer/winter intersessions during their first year in the program, relative to students not offered ASAP. Over a quarter of ASAP's effect on credit accumulation over three years occurred during summer/winter intersessions.¹³

9 Complete College America (2013).

10 Liu (2016).

11 Mayer, Patel, Rudd, and Ratledge (2015).

12 Weiss et al. (2014).

13 Scrivener et al. (2015).

ENCOURAGING ADDITIONAL SUMMER ENROLLMENT: A BEHAVIORAL SCIENCE APPROACH

Given the evidence that summer enrollment rates can be influenced, the EASE project sought to develop and test the effects of interventions focused solely on increasing summer enrollment. Two interventions were developed: (1) an informational campaign and (2) an informational campaign combined with a tuition-assistance grant. The interventions were informed by research in behavioral science, an interdisciplinary field that incorporates psychology, economics, marketing, and other social sciences to shed light on how and why people make certain choices.

Informational Campaign

Research from behavioral science demonstrates that small changes in the way information is presented and delivered can influence decisions and make it easier for people to act. These small changes may be accomplished by simplifying processes, providing reminders, or setting default options to help people achieve positive outcomes.¹⁴ In recent years, researchers in postsecondary education have successfully experimented with informational campaigns informed by behavioral science. For example, personalized reminders sent to college freshmen increased the number of students who successfully refiled their financial aid applications and stayed in school, and text message reminders sent to high school seniors increased college enrollment.¹⁵ Given these results, a communications campaign that incorporated insights from behavioral science seemed like a promising strategy to inform students about the benefits of summer courses and provide essential information to facilitate their enrollment. Furthermore, such campaigns often cost little and are easily expanded to a larger scale. If proven effective, college administrators could easily adopt and sustain the informational campaign to encourage summer enrollment more broadly in their institutions.

Tuition Assistance

While MDRC was developing the EASE project, policy changes at the state and federal levels gave students more funding for continual enrollment. Just before the study began, the Ohio Department of Higher Education reinstated the Third-Term Ohio College Opportunity Grant for community college students, providing

¹⁴ Farrell, Anzelone, Cullinan, and Wille (2014); Dechausay, Anzelone, and Reardon (2015); Baird, Cullinan, Landers, and Reardon (2016).

¹⁵ Castleman and Page (2015, 2016).

funding for students to enroll in a third term in a year in addition to the usual two.¹⁶ For many Ohio students, this third term was summer. The policy change made Ohio a promising state in which to launch the EASE project. However, early reconnaissance revealed that Third-Term Ohio College Opportunity Grants did not fully cover the cost of summer tuition for many students. The EASE team was concerned that an informational campaign alone would not be an effective intervention for low-income students if they were unable to cover their remaining tuition costs. The team therefore developed the gap tuition-assistance grant as one component of the EASE project. The grant was paired with a campaign to inform eligible students about the new funding opportunity in addition to the potential benefits of summer enrollment. Furthermore, the informational campaign plus tuition assistance intervention provided the opportunity to test the efficacy of additional funding for summer. This test seemed timely, as Congress was just then considering legislation (since passed) to reinstate the year-round Pell Grant, which provides additional funding that low-income students nationwide can use to cover summer enrollment.

Participating Colleges

EASE launched at four community colleges in Ohio in the spring semester, to encourage enrollment for the summer 2017 term. The colleges varied in size and geographic classification (urban versus rural). The four participating colleges were:

- 1 **COLUMBUS STATE COMMUNITY COLLEGE**, a large, urban college in Columbus that serves over 27,000 students
- 2 **MARION TECHNICAL COLLEGE**, a small college in the small city of Marion that serves approximately 3,000 students
- 3 **SOUTHERN STATE COMMUNITY COLLEGE**, a small, rural community college in Hillsboro that serves approximately 3,000 students
- 4 **STARK STATE COLLEGE**, a mid-sized urban college in North Canton that serves over 12,000 students

DIAGNOSIS: BARRIERS TO SUMMER ENROLLMENT

To develop the content of the messages and determine the best way to present the tuition-assistance grant to students, MDRC conducted a systematic investigation to understand the institutional contexts at the four colleges and to identify barriers that prevented students from enrolling in summer courses. The inquiry focused on

¹⁶ Students were eligible for Third-Term Ohio College Opportunity Grants if they exhausted all their Pell Grant funding in a given award year and met residency requirements, income requirements, and other requirements. For full eligibility criteria see Braswell (2017).

low-income students at the participating community colleges who were eligible for Pell Grants. At each institution, the team conducted student focus groups, interviewed administrators and staff members, reviewed available documents, and conducted quantitative analyses of summer registration trends and financial aid use. As part of this “diagnosis,” the team mapped each step in the summer registration and financial aid process to identify points at which barriers or bottlenecks might prevent students from enrolling in summer courses. This section first provides relevant contextual information related to the structure and organization of the colleges’ summer terms, then presents the barriers identified.

Summer-Term Context

The participating colleges generally had one summer term with multiple sessions of different lengths. The sessions ranged from 5 to 12 weeks, making summer courses significantly shorter than most fall and spring courses, which are typically 16 weeks long. As a result, summer courses may be considered accelerated, as they often meet more frequently or for longer periods during the week. At some colleges, fewer courses are available during the summer than in the fall and spring. Students begin registering for summer courses early to mid-semester in the spring, and MDRC’s registration analysis found that at three of the four colleges, registration rates were highest just after the opening of summer registration and then remained relatively stable through the remainder of the registration period.¹⁷

When allocating financial aid for the summer semester, colleges can categorize themselves as “header” or “trailer” institutions. Header institutions consider summer the first term of an award year, while trailer colleges consider it the last term. One of the colleges in the study was a header institution, while the other three were trailer institutions. This difference is important when considering summer enrollment because federal guidelines at the time stipulated that colleges could only allocate Pell Grants across two semesters, and only funding that was left over could be used in the third term.¹⁸ Since the diagnosis and the interventions described in this brief occurred before year-round Pell Grants were reinstated, students who enrolled full time during the first two semesters of the year (fall and spring at trailers or summer and fall at headers) exhausted their Pell Grants and did not have any funds remaining for the third term (summer at trailers or spring at headers). However, students who enrolled less than full time often had Pell Grant funding remaining that could be used for third-term enrollment.

¹⁷ At one college, summer registration opened in the fall semester; for simplicity, this college was excluded from the registration analysis.

¹⁸ Federal guidelines may have changed due to the reinstatement of the year-round Pell Grant in 2017. The three trailer colleges participating in the project did not award year-round Pell Grants in summer 2017.

Barriers to Summer Enrollment

The following barriers to summer enrollment were identified through the diagnosis process:

- **Paying for summer courses is complex, and students may not know whether they have funding available.**

Students and staff members often cited a lack of financial aid as a primary reason students did not enroll during the summer, but the diagnosis process revealed that across the four colleges most students — approximately 80 percent — did not exhaust their aid and had Pell Grant funding remaining that could be used for summer attendance. For such students, the perception of a lack of aid may have been a barrier to summer enrollment. This misperception may have occurred because award letters and communications regarding summer financial aid were often long and complex (in an effort to explain various regulations). As a result, students may have misinterpreted or overlooked information about obtaining summer aid. In addition, the diagnosis process revealed that students often had to fill out additional forms or declare their intent to enroll in summer courses in order to receive updated award information for summer, which may have discouraged them from registering. Research has shown that such informational complexity and “hassle factors” can prevent people from acting.¹⁹

- **Students have competing obligations in the summer; many work or care for family.**

Many low-income community college students work while in school, and the diagnosis process revealed that for some students, employment served as a barrier to summer enrollment in two ways: (1) Because summer courses meet for longer periods or more often each week, students reported that they may conflict with their work schedules. (2) Some students reported increasing their work hours during the summer to earn extra money for the year. These findings suggest that some students may be giving stronger weight to payoffs or needs that are closer to the present, as opposed to the future benefits of summer courses.²⁰

Personal obligations also pose a barrier to summer enrollment for students with dependent children. Focus group participants with children frequently commented that they took classes when their children were in school. As a result, they did not consider summer courses. Students who are parents may want to take summer courses, but may struggle to plan for or find child care options.

¹⁹ Bertrand, Mullainathan, and Shafir (2004).

²⁰ This is a common tendency known as “present bias” that affects all people. See O’Donoghue and Rabin (1999).

- **Various college policies and procedures do not encourage summer attendance. Students do not think of summer term as the norm.**

The way information is presented can affect the choices that people make. The diagnosis process revealed that students received limited information about the summer term, including its potential benefits and deadlines, and when they did receive information, it was often presented in a way that deemphasized the term. For example, most majors did not require summer attendance, and the summer term was not consistently incorporated into degree-planning tools or promoted through student communications. The diagnosis process also revealed that social norms may also contribute to low summer enrollment: Data from the colleges indicated that traditionally aged college students (those younger than 24) were less likely to attend during the summer. Such students may remember having the summers off during secondary school and may not even be considering enrolling, or they may believe that summer courses are for students who are behind, not for those who aim to get ahead, as is often the case in high school.

- **Degree planning and course decision making for summer is complicated. Students may have difficulty selecting summer courses or avoid taking them.**

Course offerings and selection create several barriers to summer enrollment for community college students. The diagnosis process revealed students may be unaware of summer course offerings. The Ohio colleges offer mostly developmental and general education courses during the summer.²¹ Since most students enroll part time, first-year students such as those in the EASE study probably have outstanding general education requirements that can be completed. Nevertheless, students said that summer course offerings were limited. Students may believe course offerings are more limited than they actually are because many degree plans do not include the summer term. This fact may also make summer course selection difficult.

The diagnosis process also revealed that students had negative associations with summer courses because they are accelerated. During focus groups, students — even those who had not taken summer courses in the past — tended to agree that summer courses are more difficult than courses in other terms. Such preconceived notions may dissuade interested students from enrolling.

²¹ Colleges often require students to take non-major-specific courses such as math or English. These courses are referred to as “general education” courses.

- **Students intend to enroll in summer but don't actually follow through.**

Summer enrollment requires students to select the appropriate courses, determine whether they are offered during the summer, and complete the registration process by the deadline. If a student decides that enrolling in summer is a good choice, he or she may not ultimately follow through. Even students who manage to identify courses or know what courses to take can still fail to complete the action.

INTERVENTION DESIGN

To mitigate the barriers to summer enrollment identified during diagnosis, the team incorporated strategies from behavioral science to design the informational campaign and the tuition-assistance grant. It is important to note that not all barriers could be alleviated with the campaign and grant; rather, the messages of the campaign and the implementation of the grant were designed to address the barriers to varying degrees.

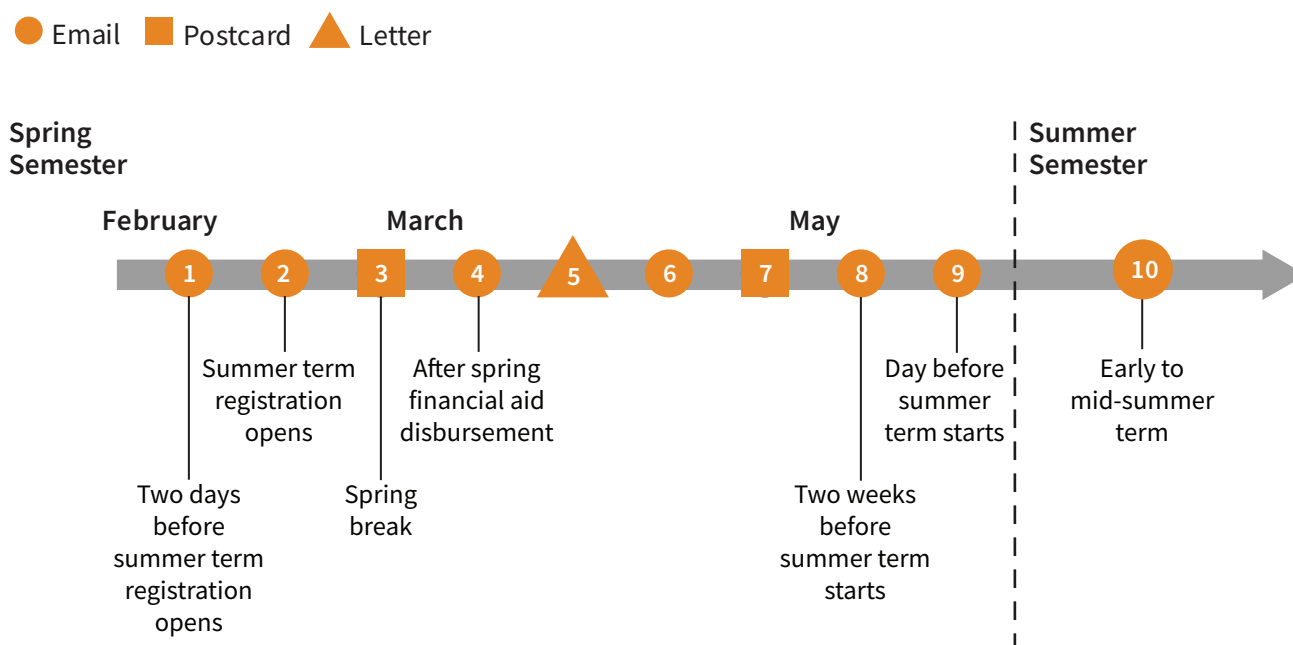
The sections below highlight elements of the two interventions, including the central messages of the informational campaign. As described, there are two intervention groups in the EASE study: the informational campaign group and the informational campaign plus tuition assistance group. While both groups received outreach informed by behavioral science, the informational campaign plus tuition assistance group also received a grant to cover any gap between students' grant aid and their tuition and fees for the summer term. Both intervention groups received the same number of messages at the same frequency.

Informational Campaign

The informational strategy included seven emails, two postcards, and one letter.²² This multimodal approach was selected because during the diagnosis process students expressed varied communication preferences. Emails and mailings were sent by various departments in the college, such as financial aid, the registrar's office, and advising, so that if a student missed one message he or she might see the next, and so students would not get used to receiving the campaign messages and stop opening them. Since the diagnosis process revealed an initial peak in registration, followed by stable registration throughout the registration period, the informational campaign was designed to cover the entire registration period. The timing of the communications varied based on each college's academic calendar, but the messages generally began a few days before the opening of summer registration in early spring and ended in early to mid-summer, as shown in Figure 2.

²² Two colleges also employed another form of communication to encourage summer enrollment. At one college, students in both groups received robocalls. At another college, students in both groups received messages through an educational software platform used to communicate with students about their courses and academic performance.

Figure 2. EASE Phase I Message Timeline



NOTE: Message timelines at each college varied slightly and are summarized in this representation.

The outreach incorporated many techniques from behavioral science to address various challenges a student might face. Each message was personalized with the student's name and signed by the sender from the college. Students were also sent personalized messages throughout the campaign about their financial aid packages and course selections, based on their majors and degree progress. The campaign generally used simple and straightforward language, with boxes and colors to highlight important information. To reduce hassle factors associated with registration, many campaign messages included essential information such as deadlines, direct hyperlinks to registration web pages, and student portal usernames and guidance to reset passwords. Each message also included a phone number or email address for college offices or staff members who could answer questions.

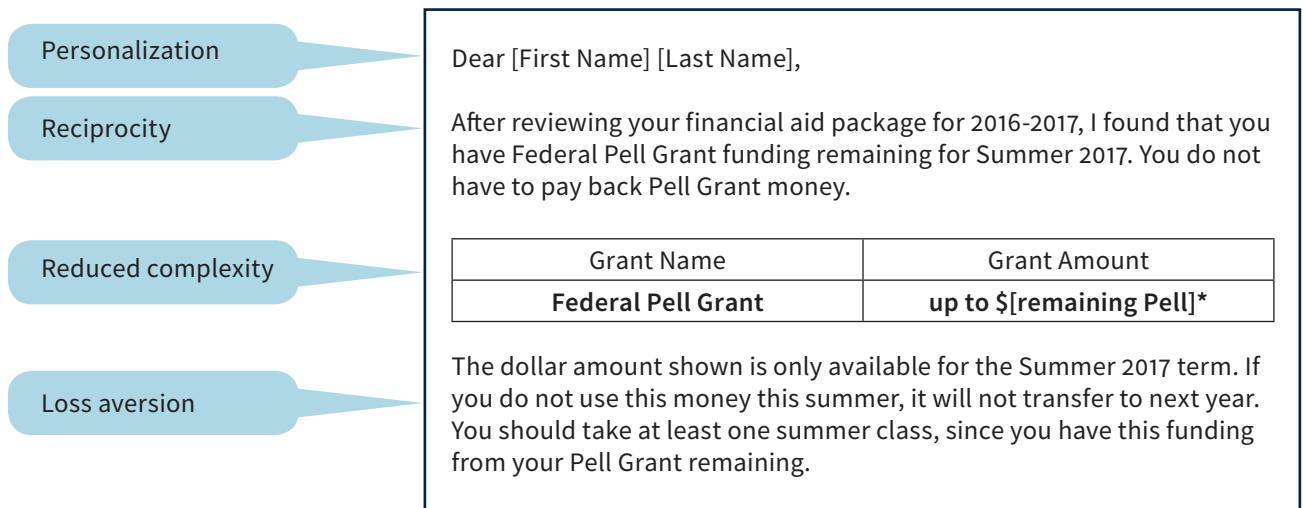
The following elements of the informational campaign were intended to address particular barriers to summer enrollment identified during the diagnosis process.

Marketing Affordability by Providing Personalized Funding Estimates

To address the barrier of funding complexity, the MDRC team strategized with the college teams on how to calculate and provide personalized "Pell remaining"

estimates to each student in the informational campaign group. This message provided each student with a tangible estimate of how much Pell Grant funding he or she had available for summer. The personalized estimate was sent by email and mail. Several messages also used *social influence* to emphasize that most students had Pell Grant funding available for the summer and made use of *loss aversion* by explaining when the remaining funds could only be applied to the upcoming summer term.²³ To prompt a student to consider the information seriously, messages also included the concept of *reciprocity* (a social norm where a person responds to a positive action with another positive action) by highlighting that a staff person at the college had taken the time to review the student's financial aid package and provide him or her with the estimate.²⁴ (See Figure 3.)

Figure 3. Example Letter Text from the Informational Campaign Group



Reframing the Summer as a Time for Getting Ahead

To address the barrier of competing obligations in the summer, some of the messages highlighted graduation as a long-term goal and emphasized summer as a step toward that goal.²⁵ If students feel far from graduation, they might feel a psychological distance from it. Mitigating that psychological distance might encourage

²³ “Social influence” refers to deep-seated norms and unconscious alignment with the status quo that people use to make everyday choices. These behaviors can be influenced, especially by comparing one with one’s peers, as in Alcott (2011). “Loss aversion” refers to a preference for avoiding losses over acquiring gains of equal size, relative to a reference point. Studies suggest that the prospect of a loss is twice as powerful, psychologically, as the possibility of a gain. See Tversky and Kahneman (1991).

²⁴ Behavioural Insights Team (2015).

²⁵ Research has shown that the decisions people make for their future selves and other people are similar to each other, but different from decisions they make for their present selves. Pronin, Olivola, and Kennedy (2008).

them take the steps needed now to keep moving toward their goal. For example, the first postcard (Figure 4) aimed to depict the student's journey to graduation and how summer courses would help to keep the student "on track" to meet that goal.

Using Social Influence

To counteract norms that did not promote summer as a time for learning, the team interviewed students who had taken summer courses and developed testimonials about the benefits of summer courses. These testimonials, which were sent to students in a postcard and in email, used social influence to affect students' decisions about summer (Figure 5). They included the interviewed student's name, major, and degree aspiration.

Promoting Follow-Through

Procrastination is common in human nature, and seemingly small hassles can prevent people from acting.²⁶ To encourage students to act on their intentions, messages encouraged them to think about how summer could help them achieve their goals and outlined the steps they needed to take to register (Figure 6). The plan-making prompts encouraged students to map out the steps they would take to enroll and included deadlines to activate a sense of urgency. The postcard also included a *commitment device* to encourage students to follow through on their intention to enroll.²⁷

Figure 4. Front of the First Postcard Mailed to Students



Figure 5. Example Student Testimonials Included in a Postcard and Email

“ I think of it as a win-win situation. I was able to finish my modern language requirement as a result of taking a summer course. I had a couple of friends in the class and we would typically study after classes together...it was a good experience overall. ”

“ I know for me being a working adult...even if you just took a part-time course load during the summer, it doesn't take an enormous amount of time. The more you put in, the more you're going to get out of it. It will get you to where you want to be sooner, or at least get you on the path there sooner. ”

²⁶ Ariely and Wertenbroch (2002); Bettinger, Long, Oreopoulos, and Sanbonmatsu (2012).

²⁷ “Commitment devices” allow people to voluntarily impose restrictions in the present to help themselves accomplish future goals. See Rogers, Milkman, and Volpp (2014).

Figure 6. Front of the Second Postcard Mailed to Students

Your goals could be closer than you think! Register for summer now to make it happen.

Think about how summer can help you: yes no

I want to graduate faster ○ ○

I would like to earn more credits this year ○ ○

I still have pre-requisites to take for my major ○ ○

If you checked yes to any of these, summer courses are right for you!

I will commit to taking summer courses so I can achieve my goals faster.

Signature _____

Commitment device

Planning prompt

Check off a day next week when you will register for classes

S	M	T	W	T	F	S

Tip
Set a reminder on your phone for the day you choose!

Stark State
COLLEGE

Students were also sent personalized course recommendations based on their majors and degree plans, which informed them of specific course options they had available in summer. While this information was already available to students if they searched the college’s course catalogue, highlighting and personalizing a few relevant options for them and providing clear guidance may have made them more likely to act on their intention to register.

Informational Campaign Plus Tuition Assistance

The informational campaign plus tuition assistance group’s communications used nearly the same strategies, with a few differences. First, it removed the burden for students to understand their available financial aid by guaranteeing that summer tuition would be completely covered and framing the courses as “free.” Second, it “primed” a scholarly identity by naming the tuition-assistance grant the “Summer Scholar Grant” and using the term “Summer Scholar” throughout the campaign.

Making Summer Tuition Free by Providing the Summer Scholar Grant

The team hypothesized that for some students, not having funding to pay for summer courses would be the main barrier to enrolling. The tuition assistance would provide a traditional economic incentive for these students to enroll. Policy making has emphasized changing behavior by providing financial incentives for many years. However, research findings on the effectiveness of financial incentives have been mixed, so behavioral science informed how the offer of summer tuition assistance was designed and communicated.²⁸ The communications emphasized loss

²⁸ A growing body of research is focusing on maximizing the success of incentives. For example, when and how incentives are delivered may be as important as the amount of the incentives. See Kamenica (2012); Halpern et al. (2015)

aversion by highlighting that the grant was only available for the upcoming summer term, and provided the maximum dollar amount of the scholarship to make the offer stand out. (See Figure 7.)

Figure 7. Excerpt 1 from an Informational Campaign Plus Tuition Assistance Group Email

Don't miss out on this grant opportunity at MTC; it is only available for Summer 2017. You won't be able to use it next fall. You should take at least one summer course since you have this grant funding available.

To enroll in summer:

- Decide how to pay for summer courses. ***Use Your Summer Scholar Grant to pay for summer courses.***

In the diagnosis process, the research team ascertained that many students would not actually tap into the last-dollar tuition assistance grant because they had funding from their Pell Grants remaining for summer. As a result, the informational campaign plus tuition assistance could shed light on whether the simple message to students that “you are covered” would be more effective than the personalized funding estimates in the informational campaign alone.²⁹ (See Figure 8, and see Box 1 for more information on the Summer Scholar Grant.)

Figure 8. Excerpt 2 from an Informational Campaign Plus Tuition Assistance Group Email

I have good news to share. MTC has started a new Summer Scholar Grant. You are eligible to receive this grant if you enroll in summer classes. This **grant (which you do not have to pay back) will fully cover your tuition and fees for summer***. This means you can take summer classes for free.

Priming a Scholar Identity

The choices people make are influenced by their perception of who they are and the roles they take on. While individuals attending college are students, they are also mothers, employees, sons, the first in their families to go to college, and so on. When people are prompted to consider a specific identity, they often behave in

²⁹ Estimates concerning the difference in effectiveness between these messages will be provided in a subsequent report.

Box 1. Summer Scholar Grants Received and Amounts Awarded

Students in the informational campaign plus tuition assistance group were offered a last-dollar tuition grant called the Summer Scholar Grant. The grant covered the difference between students' summer tuition and fees and their grant financial aid (that is, their Pell Grant and Third-Term Ohio College Opportunity Grant funds).

Students were informed of the Summer Scholar Grant through the intervention's informational campaign. At the three trailer institutions that consider summer the last term in the financial aid year, the grant was applied to the summer semester. At the one header college, which considers summer the first semester of the financial aid year, the grant was applied to students' third term — the following spring semester (spring 2018). As a result, preliminary data on the cost of the grant are only available for the three trailer colleges. (These data are currently based on invoices provided by the participating colleges. More precise financial aid information will be analyzed and reported in a future brief.)

Based on preliminary analyses at the three trailer colleges, approximately one in four students in the informational campaign plus tuition assistance group received Summer Scholar Grant disbursements. The average cost of the grant among all group members (among those who did enroll in summer courses and those who did not) was about \$150. It is important to note that not all of the students in this group who enrolled in summer 2017 courses needed tuition assistance. Just over half of summer enrollees received Summer Scholar Grants, and the average cost of the grant among enrollees was about \$360.

ways that fit the associated identity.³⁰ Depending on the identity being activated, that tendency can lead to negative behaviors (for example, acting to conform with negative stereotypes, also known as “stereotype threat”) or can lead to positive ones.³¹ By describing the tuition gap coverage as a “scholar grant,” the team aimed to activate a positive identity, encouraging students to act in a way consistent with the behaviors of being a “scholar.”

STUDY DESIGN AND RESULTS

To test the effectiveness of the informational campaign and the informational campaign plus tuition assistance, the interventions were evaluated using a randomized

30 Spencer, Steele, and Quinn (1999); Steele (1997).

31 Ross, White, Wright, and Knapp (2013).

controlled trial. All students at the four colleges who met the following criteria were included in the study:³²

- Low-income (defined as students who received Pell Grants in spring 2017)
- Seeking a degree or certificate
- In their first year (defined as students whose first semester of enrollment was fall 2016 or spring 2017)
- Enrolled in the spring 2017 semester (as of the first day of classes)

In January and February of 2017, MDRC randomly assigned 3,723 students eligible for Pell Grants to (1) the *informational campaign* group, (2) the *informational campaign plus tuition assistance* group, or (3) the *control* group, in roughly equal proportions. Differences in subsequent outcomes, such as summer enrollment rates, represent an estimate of the effect of the interventions.³³ Findings on the effectiveness of the two interventions are provided below.³⁴ Unless otherwise noted, all findings are statistically significant. All analyses include 3,689 students.³⁵

Effects on Summer Enrollment

The primary aim of the interventions was to increase summer enrollment rates.

- **Both interventions have positive effects on summer enrollment, with the largest effects produced by the informational campaign plus tuition assistance.**

As is common at many community colleges throughout the country, summer enrollment rates are low; only 23.2 percent of the control group enrolled in at least

³² The following students were excluded from the study: students simultaneously enrolled in high school during the period covered by the data, students under the age of 18, and students enrolled through penitentiaries.

³³ Differences in outcomes between the informational campaign group and the control group, for example, represent the estimated effects of the informational campaign and not the true effects because it is not possible to know what would have happened to the informational campaign group students had they not been sent the messages. The control group serves as an excellent proxy for what would have happened, but uncertainty remains. For ease of exposition, throughout the remainder of the document the word “estimated” is not included when describing estimated effects.

³⁴ See Table 1, included at the end of this brief, for more detailed results that may be of interest to researchers.

³⁵ Thirty-four students from one college were excluded from all analyses because they were determined to be ineligible for Pell Grants (11 informational campaign plus tuition assistance group students, 11 informational campaign group students, and 12 control group students).

one summer course. The summer enrollment rate for the informational campaign group was 28.7 percent; the informational campaign caused a 5.5 percentage point increase in summer enrollment. The summer enrollment rate for the informational campaign plus tuition assistance group was 37.8 percent; the informational campaign plus tuition assistance caused a 14.6 percentage point increase in summer enrollment. Compared with the informational campaign alone, the informational campaign plus tuition assistance caused a 9.1 percentage point increase in summer enrollment. (See Figure 1.)

Effects on Credits Attempted and Earned

- **Both interventions have positive effects on credits *attempted* in the summer, with larger effects for the informational campaign plus tuition assistance.**

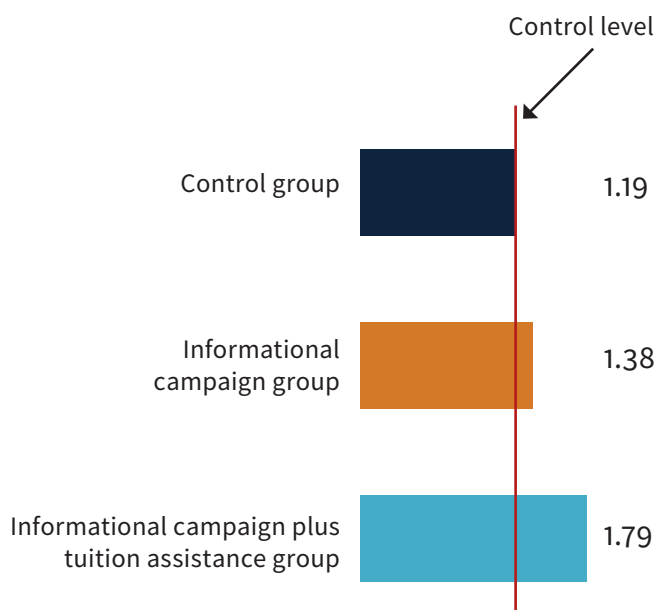
Control group students attempted, on average, 1.44 credits in the summer. While this average may seem low, it includes zero credits attempted for the 76.8 percent of control group students who did not enroll. Students in the informational campaign group attempted, on average, 1.72 credits, an effect of 0.29 credits (a 20 percent increase). Students in the informational campaign plus tuition assistance group attempted, on average, 2.34 credits, an effect of 0.90 credits (a 62 percent increase).

- **Both interventions have positive effects on credits *earned* in the summer, although this finding is somewhat tenuous for the informational campaign alone.**

Control group students earned, on average, 1.19 credits in the summer. Students in the informational campaign group earned, on average, 1.38 credits in the summer, an effect of 0.19 credits (a 16 percent increase).³⁶ In addition to being on the borderline of what is conventionally considered statistically significant, the magnitude of this effect estimate is small, representing a 3.5 percentage point increase in the proportion of students earning some additional credits. (See Figures 9 and 10.)

Students in the informational campaign plus tuition assistance group earned, on average, 1.79 credits, an effect of 0.60 credits (a 51 percent increase over the control group). This effect occurred primarily by shifting the distribution of credits earned toward having fewer students who earned zero credits and more who earned 0.5 to 8 credits. Compared with the control group, the informational campaign plus

³⁶ The p-value of this estimated effect is 0.093, just statistically significant using the 0.10 convention and not statistically significant using the 0.05 convention. As a robustness check, the effect of the informational campaign on credits earned was estimated *excluding* covariates. (As specified in an analysis plan, all main analyses include covariates.) The estimated effect under this model is 0.15 credits, with a p-value of 0.182.

Figure 9. Total Average Credits Earned

SOURCE: MDRC calculations using transcript data provided by Columbus State Community College, Marion Technical College, Stark State College, and Southern State Community College.

NOTE: Estimates are adjusted by college and spring 2017 enrollment level (full time/part time) interactions as well as race/ethnicity, gender, age, and dependency status.

tuition assistance group had 11.1 percentage points more students earn between 0.5 and 8 credits and 11.8 percentage points fewer students earn zero credits. (See Figure 10.)

Effects on Fall Enrollment

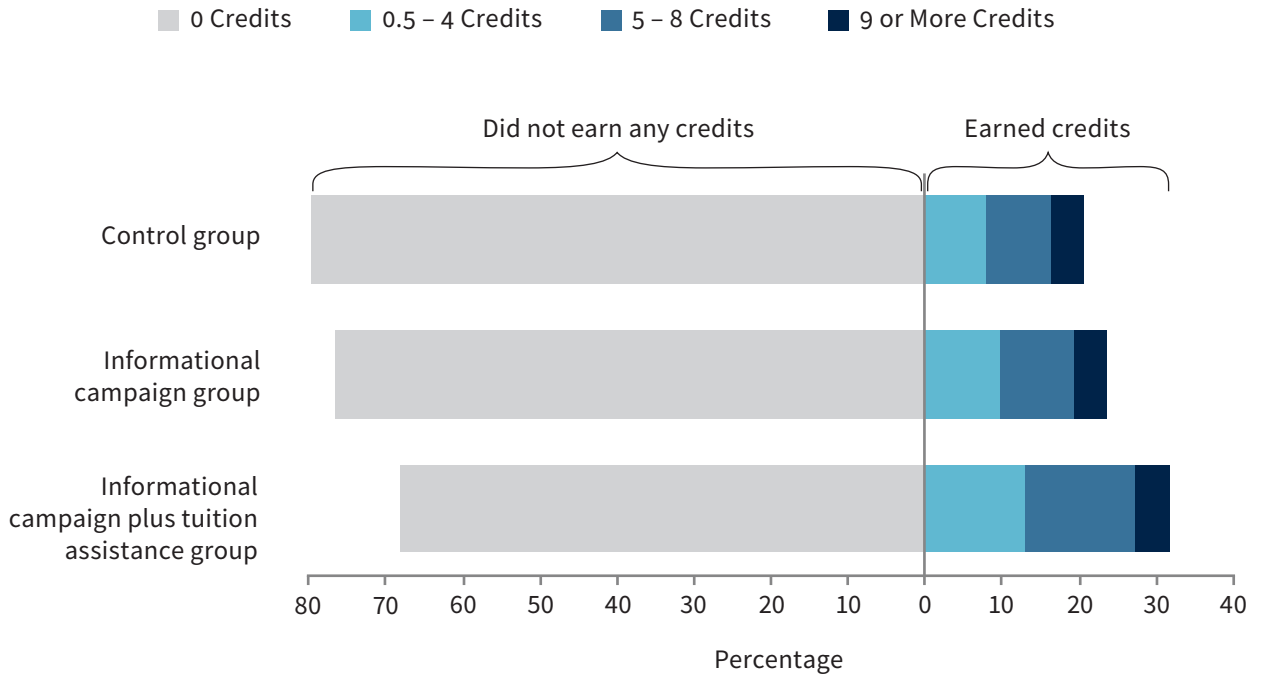
- **Neither intervention had a discernable effect on fall enrollment.**

The estimated effects on fall enrollment are 0.2 percentage points for the informational campaign group and 0.9 percentage points for the informational campaign plus tuition assistance group. These effect estimates are not practically meaningful or statistically significant. (See Figure 11.)

The lack of a meaningful effect on fall enrollment may be surprising at first glance since the interventions did have positive effects on summer enrollment and since existing evidence suggests that summer enrollment may increase enrollment in the next fall term.³⁷ However, upon closer investigation, the results seem less surpris-

³⁷ Attewell and Douglas (2014).

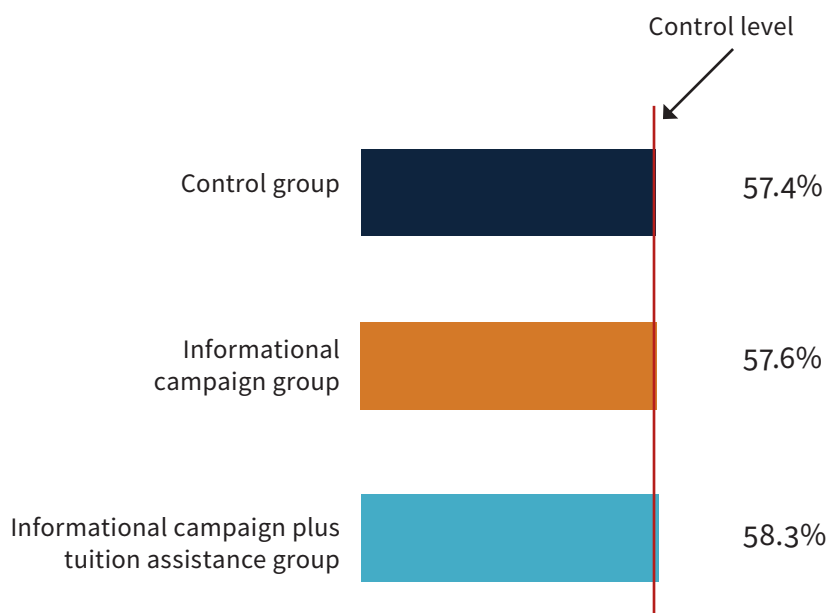
Figure 10. Distribution of Total Credits Earned



SOURCE: MDRC calculations using transcript data provided by Columbus State Community College, Marion Technical College, Stark State College, and Southern State Community College.

NOTE: Estimates are adjusted by college and spring 2017 enrollment level (full time/part time) interactions as well as race/ethnicity, gender, age, and dependency status.

ing. Consider that the informational campaign plus tuition assistance intervention induced 14.6 percentage points more students to enroll in summer — a large effect. Nonetheless, if the mechanism by which this intervention could increase fall enrollment is through summer enrollment, then the 14.6 percent of intervention group members who were induced to enroll in the summer are the only ones who can see an effect on fall enrollment. One quasi-experimental estimate suggests summer enrollment may increase fall enrollment by 16 percentage points. If the 14.6 percent of intervention group members who were induced to enroll in the summer were 16 percentage points more likely to enroll in the fall, then the expected overall effect on fall enrollment would be just 2 percentage points ($0.146 * 0.16 = 0.02$).

Figure 11. Fall Enrollment Rates

SOURCE: MDRC calculations using transcript data provided by Columbus State Community College, Marion Technical College, Stark State College, and Southern State Community College.

NOTES: Estimates are adjusted by college and spring 2017 enrollment level (full time/part time) interactions as well as race/ethnicity, gender, age, and dependency status. Fall enrollment is based on attempting any credits at the end of the add/drop period.

LESSONS FOR COLLEGES

The EASE project sought to use insights from behavioral science to diagnose barriers to summer enrollment, and to design interventions to mitigate those barriers and increase enrollment. The two EASE interventions — an informational campaign and an informational campaign plus tuition assistance — both increased summer enrollment. These findings have several implications for post-secondary institutions:

- **Simplified, multimodal communications and frequent reminders can increase summer enrollment.**

The finding that the informational campaign increased summer enrollment demonstrates that a relatively low-intensity intervention informed by behavioral science can influence students to take summer courses. The positive results can possibly be attributed to (1) the extensive nature of the campaign, which consist-

ently highlighted the benefits of summer courses and provided students with multiple reminders to enroll throughout the entire open registration period; (2) the multimodal delivery, which reached students who had varying communications preferences; and (3) the provision of personalized Pell Grant estimates and course recommendations for the summer term, which simplified the logistics of summer enrollment. Colleges looking to encourage summer enrollment can consider using similar strategies. Such strategies may be especially timely given the recent reinstatement of year-round Pell Grants, which provide eligible low-income students with additional funding that can cover summer enrollment costs.

Summer enrollment communications were simplified even further by the gap tuition-assistance grant. Only a little more than half of students in the informational campaign plus tuition assistance group who enrolled in summer courses actually received the grants, so it is possible that some students were motivated to enroll because the tuition guarantee made the campaign messages simpler and more powerful. Personalized financial aid estimates like those provided to the informational campaign group make it so students no longer need to seek out the information on their own, but students must still decide whether their available aid provides enough financial support for them to enroll. The gap tuition-assistance grant may have removed this burden and promoted enrollment even among students with enough grant aid to cover tuition. Future analyses may explore this possibility by assessing whether the informational campaign plus tuition assistance was more effective than the informational campaign alone among students who did not have a tuition gap (and therefore did not actually need the Summer Scholar Grant).

- **The primary benefit of summer enrollment is credit accumulation.**

The EASE interventions did not significantly affect fall enrollment. This result suggests that the primary benefit of inducing more students to enroll during the summer is the credits they accrue. To obtain effects on fall enrollment, interventions may need to be combined with other strategies as part of a comprehensive program.

- **Institutional changes and more intensive interventions may be needed.**

Using principles from behavioral science, the informational campaigns were designed to simplify information and motivate students to enroll in summer courses. While it is promising to see that a relatively simple intervention could increase enrollment, insights from behavioral science can be applied to develop more intensive interventions that may increase summer enrollment even further. For example, it may help to normalize summer enrollment if colleges make institutional changes to promote it. They could intervene early — possibly during student orientation — to set the expectation that students enroll during the summer, or include recommended summer courses more consistently in degree plans. Such

changes would be in line with “guided pathways,” a popular type of college reform that aims to give students highly structured course sequences or degree plans that clearly guide them to graduation.³⁸ The EASE diagnosis period also led to some other ideas that may warrant development and testing, including providing more information on child care options or on-campus child care during the summer for students with children, or linking summer courses to employment or paid internship opportunities.

WHAT'S NEXT?

The second phase of the EASE project is currently under way at 10 community colleges across Ohio. Phase II continues to test the effects of an informational campaign and an informational campaign plus tuition assistance on summer enrollment and other academic outcomes; however, the interventions were adapted to reflect the availability of year-round Pell Grant funding. As with any new policy, few students may use year-round Pell Grants initially if they are unaware of the change. Phase II of the EASE project may shed light on ways to communicate with students about year-round Pell Grants. Future briefs will report on findings from Phase II and on the effects of the two interventions among certain types of students, such as those who had Pell Grant funds available for the summer.

³⁸ Bailey, Jaggars, and Jenkins (2015).

Table 1. Enrollment Data by Group, Summer and Fall 2017

Outcome	AVERAGE OUTCOME LEVELS			INFO CAMPAIGN + TUITION vs. CONTROL			INFO CAMPAIGN vs. CONTROL			INFO CAMPAIGN + TUITION vs. INFO CAMPAIGN		
	Info Campaign + Tuition	Info Campaign	Control	Difference	SE	P-Value	Difference	SE	P-Value	Difference	SE	P-Value
Summer 2017												
Registered (%)	37.8	28.7	23.2	14.6	1.8	<0.001	5.5	1.7	0.001	9.1	1.9	<0.001
Total credits attempted	2.34 (3.48)	1.72 (3.17)	1.44 (3.02)	0.90	0.13	<0.001	0.29	0.12	0.020	0.61	0.13	<0.001
Total credits earned	1.79 (3.02)	1.38 (2.89)	1.19 (2.71)	0.60	0.11	<0.001	0.19	0.11	0.093	0.42	0.12	<0.001
Total credits earned (%)												
0 credits	68.1	76.4	79.8	-11.8	1.7	<0.001	-3.5	1.7	0.035	-8.3	1.8	<0.001
0.5 - 4 credits	12.9	9.7	7.9	5.1	1.2	<0.001	1.9	1.1	0.104	3.2	1.3	0.011
5 - 8 credits	14.4	9.9	8.4	6.1	1.3	<0.001	1.5	1.2	0.186	4.5	1.3	0.001
9 or more credits	4.6	4.0	3.9	0.7	0.8	0.420	0.1	0.8	0.909	0.6	0.8	0.487
Fall 2017												
Registered (%)	58.3	57.6	57.4	0.9	2.0	0.655	0.2	2.0	0.927	0.7	2.0	0.720
Sample size (total = 3,689)	1,227	1,237	1,225									

SOURCE: MDRC calculations using transcript data provided by Columbus State Community College, Marion Technical College, Stark State College, and Southern State Community College.

NOTES: A two-tailed t-test was applied to differences between research groups.

Estimates are adjusted by college and spring 2017 enrollment level (full time/part time) interactions as well as race/ethnicity, gender, age, and dependency status. Estimation model specifications, including the specific list of covariates, were determined before data analysis in an analysis plan. In addition to the covariates included in the analyses, the plan also specified the inclusion of Expected Family Contribution (EFC) in the estimation model. Due to concerns regarding the quality of the currently available EFC data, it was decided not to include EFC in the impact model. This decision was made before any analyses were run.

Fall enrollment is based on attempting any credits at the end of the add/drop period.

Standard deviations are in parentheses beneath the average outcome levels, and "SE" indicates standard error.

Rounding may cause slight discrepancies in sums and differences.

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