

# MAPPING THE COLLEGE TRANSFER PROCESS

BARRIERS TO STUDENT SUCCESS  
AND OPPORTUNITIES FOR  
IMPROVEMENT

SOPHIA SUTCLIFFE AND BARBARA CONDLIFFE

DECEMBER 2020

# Funders

This research was supported by the City University of New York and by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A180139 awarded to the City University of New York (principal investigator Alexandra W. Logue). The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

Dissemination of MDRC publications is supported by the following organizations and individuals that help finance MDRC's public policy outreach and expanding efforts to communicate the results and implications of our work to policymakers, practitioners, and others: The Annie E. Casey Foundation, Arnold Ventures, Charles and Lynn Schusterman Family Foundation, The Edna McConnell Clark Foundation, Ford Foundation, The George Gund Foundation, Daniel and Corinne Goldman, The Harry and Jeanette Weinberg Foundation, Inc., The JPB Foundation, The Joyce Foundation, The Kresge Foundation, and Sandler Foundation.

In addition, earnings from the MDRC Endowment help sustain our dissemination efforts. Contributors to the MDRC Endowment include Alcoa Foundation, The Ambrose Monell Foundation, Anheuser-Busch Foundation, Bristol-Myers Squibb Foundation, Charles Stewart Mott Foundation, Ford Foundation, The George Gund Foundation, The Grable Foundation, The Lizabeth and Frank Newman Charitable Foundation, The New York Times Company Foundation, Jan Nicholson, Paul H. O'Neill Charitable Foundation, John S. Reed, Sandler Foundation, and The Stupski Family Fund, as well as other individual contributors.

For information about MDRC and copies of our publications, see our website: [www.mdrc.org](http://www.mdrc.org).

Copyright © 2020 by MDRC®. All rights reserved.

# Acknowledgments

This work builds on the knowledge of many initiatives led by Dr. Lexa Logue, principal investigator of the Transfer Opportunity Project. People working on the Transfer Opportunity Project come from across the City University of New York (CUNY) and from a variety of perspectives — from positions in advising, teaching, leadership, research, and more. Transfer Opportunity Project personnel provided comments on protocols, drafts of maps, and early-analysis memos. The diversity of their perspectives made the work stronger at every step. Thank you to Lexa for bringing us all to the same table, and to Stephanie Abbeyquaye, Kerstin Gentsch, and Colin Chellman for your consistent partnership. From MDRC, we owe thanks to Rekha Balu and Christine Johnston, who helped conceive of this project and get it off the ground, to Mike Weiss for advice, and to Caitlin Anzelone and Evan Weissman for reviewing early drafts of these publications. Finally, thanks to the MDRC publications team, Joshua Malbin, Carolyn Thomas, and Beth Sullivan, for helping us develop the language and visuals to communicate what we learned in not one but two accessible formats.

This piece would not have been possible without our friend and colleague on this project, Stephanie Abbeyquaye. Stephanie was a steady partner on the qualitative research planning, and meticulously coordinated focus groups with a variety of staff members, faculty members, advisers, and students at six partner colleges: Brooklyn College, Bronx Community College, Guttman Community College, Hostos Community College, Lehman College, and Queens College. Thanks are also due each and every CUNY Transfer Opportunity Project liaison who managed outreach to students and staff at their colleges for the focus groups.

Finally, many thanks to each of the students, advisers, faculty members, and staff members who participated in the focus groups and interviews synthesized in this brief and web product. The perspectives and experiences you shared provided irreplaceable insights into the factors in the transfer process that could be subject to change. We hope that these pieces reach you and that you feel heard.

We are grateful to be learning from and with each of you.

**SUGGESTED CITATION:** Sutcliffe, Sophia, and Barbara Condliffe. 2020. “Mapping the College Transfer Process: Barriers to Student Success and Opportunities for Improvement.” Brief. New York: MDRC.

As part of its [six-step approach to problem-solving](#), MDRC's Center for Applied Behavioral Science (CABS) uses **behavioral mapping** to help institutions support program participants better in achieving desired outcomes.<sup>1</sup> Mapping involves outlining the steps needed to complete a process or service as intended and then gathering insights and reactions from the participants (service providers and recipients) about their experiences moving through each step. The end result is a blueprint that reveals where and why participants face barriers, and that highlights corresponding opportunities for service improvements. The multistep college transfer process is well suited to this exercise.

Many first-time community college students in associate's degree programs express interest in attaining bachelor's degrees, for which they will have to transfer to a different college. However, these students face significant obstacles in moving through the transfer system. Nationally, over 80 percent of students who start at a community college intend to receive at least a bachelor's degree, but only 17 percent do so within six years.<sup>2</sup> As a partner with the City University of New York (CUNY) on the Transfer Opportunity Project, MDRC's CABS team used mapping to help identify the **malleable factors** (that is, the factors subject to change) that impede student transfer.<sup>3</sup>

MDRC and CUNY researchers conducted nearly 50 interviews and focus groups with around 200 staff members and students at six CUNY community and bachelor's degree colleges.<sup>4</sup> Staff members and students shared their experiences with the transfer process, and the feelings, thoughts, and questions they had at each stage. They also shared their recommendations for improvement. Drawing on these reflections as well as insights from behavioral science and research on transfers in higher education, including the work of two advisers to the Transfer Opportunity Project,<sup>5</sup> the CABS team identified barriers to student transfer at CUNY and made recommendations for improvements.<sup>6</sup> This brief offers a condensed version of the transfer student blueprint created for CUNY that is probably applicable to other systems as well.

The blueprint below is broken into four stages of the transfer process, with one or more milestones at each stage. At each stage there is also information about challenges students and staff members face. Each stage ends with interventions or opportunities informed by behavioral science that could help students transfer more successfully and complete their bachelor's degrees.

---

1 Balu, Dechausay, and Anzelone (2018).

2 Jenkins, Kadlec, and Votruba (2014).

3 See more about the Transfer Opportunity Project and related initiatives in the Associate's to Bachelor's Degree Transfer collection at [www.cuny.edu/about/administration/offices/oira/policy/a2b/about-2/top](http://www.cuny.edu/about/administration/offices/oira/policy/a2b/about-2/top). For more on the CABS mapping process, see <https://cabs.mdrc.org/our-approach/cabs-approach/diagnose/part-1-introduction-role-mapping-social-service-innovation> and <https://cabs.mdrc.org/our-approach/cabs-approach/diagnose/part-2-how-cabs-approach-mapping-can-lead-service-improvements>.

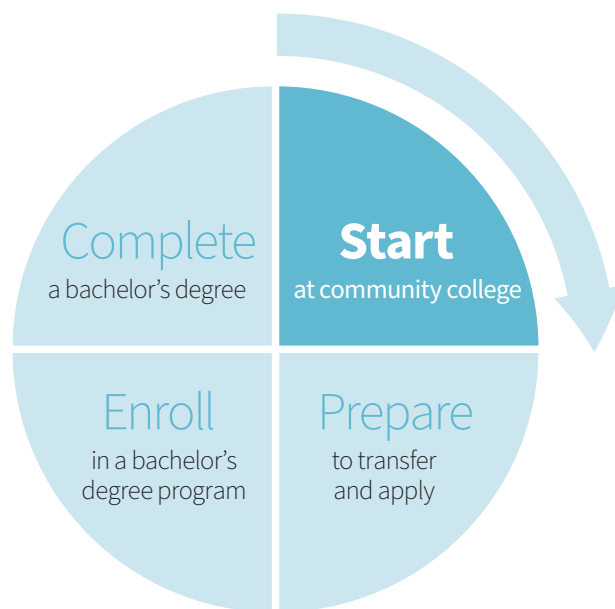
4 A total of 115 staff members and 87 students participated in interviews and focus groups for this project.

5 Ciocca Eller (2017); Fink and Jenkins (2017).

6 The information on transfer processes at these six CUNY colleges was collected from the spring of 2019 through the spring of 2020. The process at these colleges was evolving during this period and may have changed since. The authors selected the barriers and corresponding quotes presented in this blueprint either because they came up most often in focus group conversations or because they are particularly susceptible to potential behavioral interventions.

# Stage 1

## START AT A COMMUNITY COLLEGE



### 1 Select a degree program and register for first-semester courses

#### STAFF STEPS

- Confirm a student's interest in a degree program (major)
- Assess the student's interest in transferring and plan courses
- Register the student for first-semester courses

*Some definitely have an idea of transferring eventually, but some have no idea where they are starting, what major they might want to do, what they're even interested in, what they're even there for.... A lot of our role is just kind of figuring out what the student might be interested in first. Maybe if they have no idea, guiding them towards a major that's more flexible, like liberal arts and sciences, and have opportunities to transfer down the road.*

— Academic adviser, community college

#### STUDENT STEPS

- Mark a program of interest on the application
- Attend a first meeting with an adviser to register for courses

*If I could have changed one thing throughout all the years, it's from freshman year had someone that advised me, "Hey, these are these schools. There are these majors. This is what you have to do now in order to get there.... I came here because I wanted to be an engineer. That's what I wanted to do, but I had a coach that told me, "Hey, that's a lot of math. That's a lot of math." And he kept going in my head."*

— Student, community college

## CHALLENGE

Selecting a degree program is a complex and consequential choice. Choosing an academic degree program is foundational to a student's academic experience at community college and the student's ability to transfer credits in the future. Ideally, before making this choice, a community college student and adviser would know whether the student plans to transfer, what degree program the student wants to apply to, and how degree programs at community colleges line up with potential bachelor's degree programs. At most of the colleges observed, students must choose a degree program upon enrollment, and often during the first advising session. At this point both students and advisers face information gaps that prevent them from matching students' educational and career interests optimally to degree program options. Without complete information or enough time to gather information, advisers could fall back on mental shortcuts such as defaulting to the status quo (for example, the preference indicated on a student's application), suggesting a popular degree like liberal arts,<sup>7</sup> or relying on implicit biases about student's potential.<sup>8</sup>

## OPPORTUNITY

Breaking down consequential decisions, like degree program choice, into a series of lower-stakes decisions made over time offers students more time to explore their options and make choices that fit with their long-term goals and interests.<sup>9</sup> Helping students to align each of these smaller choices to long-term goals — such as transfer or career goals — can also keep students motivated to stay in school.<sup>10</sup> Letting students and staff know that degree program choice can be a decision made over time could relieve time pressure and thereby protect against the use of mental shortcuts.

### TRY IT!



Sketch a decision-making tool that breaks big goals like ultimate degree program completion into smaller ones. Consider how the tool integrates with the timing of services, and how you will measure the tool's success.

---

<sup>7</sup> Samuelson and Zeckhauser (1988).

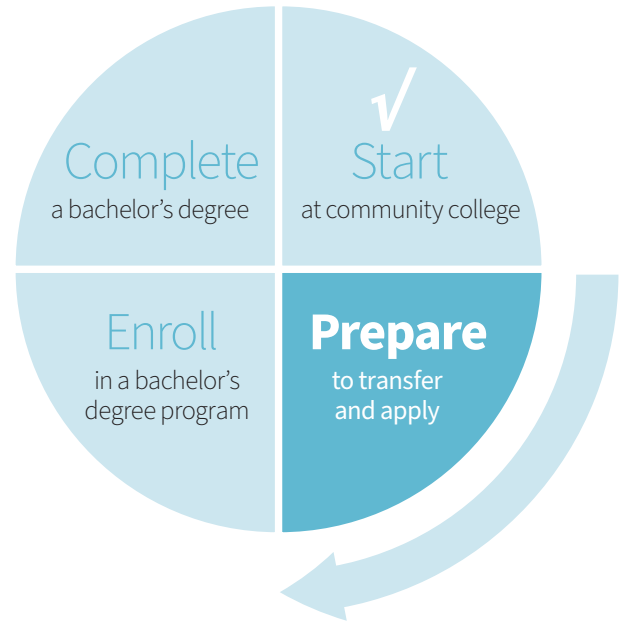
<sup>8</sup> Dovidio and Gaertner (2000).

<sup>9</sup> Johnson et al. (2012).

<sup>10</sup> Kurose (2013).

# Stage 2

## PREPARE TO TRANSFER AND APPLY



### 2 Plan courses at community college according to transfer and degree plans

#### STAFF STEPS

- Advise on degree program and financial aid requirements
- Support skill building in course and degree planning
- Advise on bachelor's degree transfer options and the prerequisites available at community college

#### STUDENT STEPS

- Attend class and complete course work
- Attend tutoring (if needed)
- Make and attend meetings with advisers
- Attend transfer advising
- Do independent research on transfer options and requirements
- Decide on programs to apply to and understand admissions requirements and how credits will transfer
- Register for courses

### 3 Apply to transfer

#### STAFF STEPS

- Conduct outreach about deadlines and available transfer services
- Host group and individual advising sessions to prepare students to apply to transfer

*It's somebody else's responsibility, so to speak, to get them through the transfer. Once we convert them to think in terms of transferability, I don't think we think about the next step because somebody else is doing that. Somebody else is doing the paperwork. Somebody else is making the calls ... but that's not our job.*

— Faculty member, community college

#### STUDENT STEPS

- Complete application
- Submit supplementary materials if required: transcripts, application essays for specific degree programs, scholarship applications, etc.

*Once you leave [community college], the only thing you got on your mind is either work, going home, and then do your homework. It's not you gonna think about, "Oh, I gotta go transfer." ... I got this paper due tomorrow. You think I'm gonna transfer right now?*

—Student, community college

*I feel that the teachers, or the ones that we see the most, especially, should be the ones to tell us. Especially when they know that we're right there.*

—Student, community college

#### CHALLENGE

Preparing to transfer requires advance planning from students and staff members. At minimum, students and advisers need to understand how the courses they take today will count toward prerequisites and degree programs when they transfer. However, staff and students face information gaps and limited resources to close those gaps (for example, limited time and attention). When resources are scarce, people tend to focus on more present challenges.<sup>11</sup> Students may be more concerned with course work and family responsibilities, and staff members with meeting institutional benchmarks to keep students moving toward an associate's degree.<sup>12</sup> As a result, staff members and students may focus attention on more immediate needs (for example, course work) and put off longer-term goals like preparing to transfer, despite the consequences for future opportunities and success.

#### OPPORTUNITY

Colleges could reduce the amount of attention students must pay and steps students must take to plan and prepare to transfer.<sup>13</sup> For example, a college could incorporate transfer planning into existing course requirements (by providing the faculty with information on how

<sup>11</sup> Mullainathan and Shafir (2013).

<sup>12</sup> Wyner, Deane, Jenkins, and Fink (2016).

<sup>13</sup> Verschelden (2017); Kling et al., (2012).



credits will transfer, so that faculty members can then include that information in syllabi), or provide transfer services in readily accessible media (by offering YouTube webinars or virtual advising). A college could also coordinate course pathways to specific degree and transfer opportunities, so that students do not have to seek information and understand the nuances of credit transfer in order to design a cohesive sequence of courses for themselves that aligns with their transfer goals.<sup>14</sup>

These adapted services could be supplemented with **personalized outreach** to prompt students to plan for transfer in advance.<sup>15</sup> Colleges could use technology to automate the delivery of personalized **implementation prompts** — prompts to take specific actions — with transfer deadlines and resources.<sup>16</sup>

Since staff members also have limited time and attention, these additional staff efforts may require institutional incentives for staff members (including faculty members) to make a priority of supporting students in transfer planning, along with investments in technology to make transfer advising easier.<sup>17</sup>

### TRY IT!



Develop an informational campaign with important information, reminders, and prompts to take steps to prepare to transfer. Create a sense of urgency by tying actions to deadlines. Consider variations for different audiences (for example, students in different majors, faculty members, and general advisers).

---

<sup>14</sup> Bailey, Jaggars, and Jenkins (2015); Johnson et al. (2012).

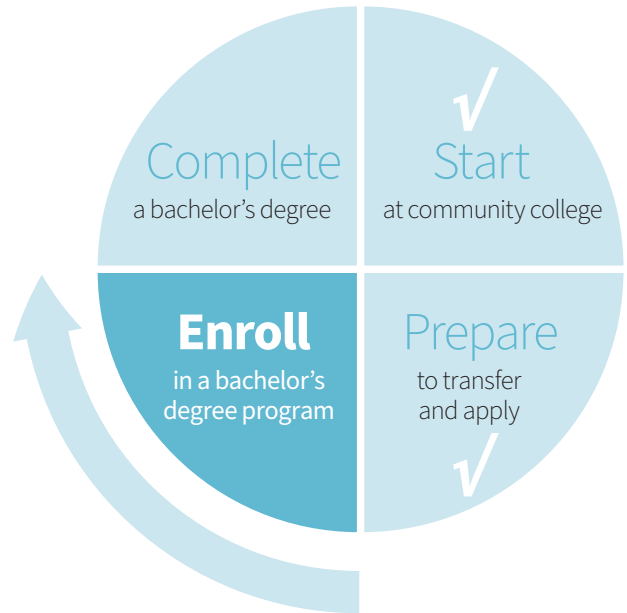
<sup>15</sup> Headlam, Cohen, and Reiman (2020).

<sup>16</sup> Kalamkarian, Boynton, and Lopez (2018).

<sup>17</sup> Wyner, Deane, Jenkins, and Fink. (2016).

# Stage 3

## ENROLL IN A BACHELOR'S DEGREE PROGRAM



### 4 Make admissions decisions

#### STAFF STEPS

- Send admissions offers
- Inform students about enrollment steps and support them in taking those steps

#### STUDENT STEPS

- Compare admissions offers
- Accept offer and pay a deposit (if not waived)

### 5 Attend advising appointments at bachelor's degree college

#### STAFF STEPS

- Advisers:** advise on general education requirements and steps to enroll
- Transfer admissions staff:** evaluate credits and provide students and advisers with a transfer credit evaluation
- Faculty members:** advise on degree program requirements

#### STUDENT STEPS

- Make and attend a general advising appointment
- Make and attend a faculty advising appointment
- If denied course credit transfer, submit an appeal

## 6 Declare a major/degree program and register for first-semester courses

### STAFF STEPS

- Advisers:** describe major degree requirements and advise on selection
- Faculty members:** approve degree program choice (if required) and credit-transfer appeals

*For freshmen, you have about three semesters where you can explore.... With transfers, mostly, we have about two months, which is not much time.... The process is more difficult for them, but they get all of this information within one hour of advisement and they have to figure it out, and then they can come up with follow-up sessions with us, but it's just a lot.*  
—Adviser, bachelor's degree institution

### STUDENT STEPS

- Meet with faculty members
- Understand options for degree programs and first-semester courses
- Register for first-semester courses on time

*If everyone is in their own little bubble and we have to visit it in order to get what we need from it, that's a huge problem.... There is no team here. And so it's frustrating because you literally could spend thousands of dollars making mistakes that shouldn't be made because someone should know the whole job. So there has to be more meetings. There has to be more coordination campus-wide.*  
—Student, bachelor's degree institution

### CHALLENGE

The information gaps and insufficient time students and staff face during community college enrollment are experienced again, and amplified, during bachelor's degree enrollment. Course registration is the final milestone at this stage and crucial to students' getting on track academically in their first semester at a bachelor's degree institution, but transfer students are often finishing courses at community college and waiting to receive transfer admissions decisions when the course registration period begins.<sup>18</sup> When admissions decisions arrive, transfer students face pressure to act quickly but do not always have the tools they need to make informed decisions. For example, students may lack information about whether they have been accepted to the majors that they plan to pursue and whether their community college credits will transfer as prerequisites to degrees in those majors; this is important information to have when deciding among options. While many of the steps at this stage need to be taken at the bachelor's degree colleges, transfer students have not yet established connections to support systems at those colleges that could help them navigate challenges. They may even be refused advising services until they are enrolled.

<sup>18</sup> At CUNY, students are told they will receive a decision six to eight weeks after submission. Institutions operate on different timelines within this range. Students described frustration and uncertainty waiting to hear back from admissions offices and for available advising appointments.

## OPPORTUNITY

University administrators could audit their enrollment and registration processes for access and ease, aiming to remove or simplify enrollment steps to support equitable outcomes for transfer students. For example, some CUNY colleges have automated the transfer-credit-evaluation process to speed up the process for students and reduce the steps that they must take. In simplifying enrollment processes, it is important not only to simplify how information is presented to students, but also to provide assistance for students in navigating the process.<sup>19</sup> Colleges also could alleviate the time **scarcity** transfer students face during the registration period by reserving spots for transfer students in high-demand courses. Finally, as some CUNY colleges reported, bachelor's degree colleges could help fill **information gaps** and relieve time pressure for transfer students by offering transfer advising services for prospective or accepted students (or both) before enrollment.

It is important to note that expanding and simplifying access to support services for transfer students (for example, by offering advising and orientation services) is probably not as effective as enrolling transfer students into those services automatically.<sup>20</sup> Colleges could consider enrolling transfer students into important advising services automatically rather than requiring them to sign up.

### TRY IT!



What is the current transfer enrollment process at your institution? Draw out [a process map](#) from a transfer student perspective. What steps do transfer students struggle with the most and why? Are any steps duplicated among offices? What could a simplified process look like? Who would need to be included in deciding on and implementing process changes?

<sup>19</sup> Bettinger, Long, Oreopoulos, and Sanbonmatsu (2012).

<sup>20</sup> Bergman, Lasky-Fink, and Rogers (2020).

# Stage 4

## COMPLETE A BACHELOR'S DEGREE



### 7 Complete bachelor's degree requirements

#### STAFF STEPS

- Advise on degree program and financial aid requirements
- Support academic and professional progress

*There's like this culture shock or transfer shock because they're so used to having their hand held at the community college.*

—Enrollment adviser,  
bachelor's degree institution

#### STUDENT STEPS

- Attend classes and complete course work
- Plan and register for courses
- Monitor financial aid status

*It's almost like [community college] cared about you. Even if it was all business, they cared about it. They kind of helped you and tried to push you to get your degree. But over here ... it's like nobody gives a damn.*

—Student, bachelor's degree institution

*I feel that in [community college] they would emphasize [community]. They would hand out flyers. There would be loads and loads of emails. They'll even come and announce it real quick. And you either go or you don't. To be honest, I never had the time. I have things to do before class, after class. It's nice to be invited though, right? Even if you don't go, it's nice to be invited.*

—Student, bachelor's degree institution

## CHALLENGE

Many transfer students reported a notable difference between the social environments of their community and bachelor's degree colleges, and some expressed a feeling of limited **social belonging** when they reached the bachelor's degree college. For example, some students described challenges in meeting new friends and felt there was less opportunity for support and connection at the bachelor's degree college than at community college. Some also believed transfer students were perceived poorly by the staff, faculty, and students at the bachelor's degree college. If transfer students believe others perceive them to be less capable, it could make them feel more isolated and less confident in their abilities. Lack of confidence in one's abilities has been linked to higher stress and lower academic success.<sup>21</sup>

If they have not already, transfer students at this stage may also face the consequences of information gaps from previous stages. Graduation could be delayed and financial aid depleted for transfer students if the credits they took at community college do not count toward their bachelor's degree requirements. Students and staff members perceived that there were fewer resources for advising transfer students in bachelor's degree colleges than there were at community colleges, which means that students did not necessarily know where to turn for help in navigating these challenges.

## OPPORTUNITY

Colleges should emphasize institutional support for transfer students during and after the enrollment process (through text or email communication campaign and connections to advisers and faculty mentors) to support them in navigating common transfer challenges. Targeted efforts to support transfer students' transition to a new social environment could start during enrollment. For example, an exercise mentally preparing students for the transition to college has been found to improve college enrollment and achievement for students who are members of groups expected to face challenges in a higher education environment.<sup>22</sup> Adapting interventions like this for transfer students at the time of their enrollment in a bachelor's degree program may hold promise. After enrollment institutions could continue to target social support for transfer students in the form of facilitated connections to peers who also recently transferred or are in the same degree program.<sup>23</sup>

### TRY IT!



What does the first communication or engagement with transfer students look like? How can it recognize the difficulty of this transition and offer social support to transfer students?

<sup>21</sup> Zajacova, Lynch, Espenshade (2005).

<sup>22</sup> Yeager et al. (2016)

<sup>23</sup> Walton, Cohen, Cwir, and Spencer (2012).

The CABS mapping process for the Transfer Opportunity Project allowed CUNY and MDRC to visualize the multiple steps students and staff members must take to facilitate students' journey from community college to a bachelor's degree. By uncovering student and staff experiences at each of these steps and aligning those findings to insights from behavioral science, the mapping process also highlighted where and why participants may be presented with barriers in this process. Many of the CUNY colleges that partnered on this project have already taken steps to address these barriers. For example, as part of the [Articulation of Credit Transfer Project](#), CUNY and partners have developed an online tool funded by the Heckscher Foundation called [Transfer Explorer](#), which aims to address the information gaps aspiring transfer students and their advisers face regarding how community college credits will transfer to bachelor's degree colleges. As CUNY and other systems develop these sorts of initiatives, [the mapping process](#) showcased here can be updated to illuminate how staff members and students should engage in those new initiatives and in further opportunities for improvement.

Do the challenges and opportunities shared here sound familiar? Are you interested in trying to apply these insights to the design and delivery of your program? We want to hear from you! Visit us at [CABS.mdrc.org](http://CABS.mdrc.org) or email us at [CABS@mdrc.org](mailto:CABS@mdrc.org).

For more findings from CUNY's Transfer Opportunity Project and affiliated initiatives, please visit [www.cuny.edu/about/administration/offices/oir/policy/a2b](http://www.cuny.edu/about/administration/offices/oir/policy/a2b).

# References

- Bailey, Thomas, Shanna Smith Jaggars, and Davis Jenkins. 2015. "What We Know About Guided Pathways." New York: Community College Research Center, Teachers College, Columbia University.
- Balu, Rekha, Nadine Dechausay, and Caitlin Anzelone. 2018. "An Organizational Approach to Applying Behavioral Insights to Policy: Center for Applied Behavioral Science at MDRC." Chapter 11 in Kai Ruggeri (ed.), *Behavioral Insights for Public Policy: Concepts and Cases*. New York: Routledge.
- Bergman, Peter, Jessica Lasky-Fink, and Todd Rogers. 2020. "Simplification and Defaults Affect Adoption and Impact of Technology, but Decision Makers Do Not Realize It." *Organizational Behavior and Human Decision Processes* 158: 66-79.
- Bettinger, Eric P., Bridget Long, Philip Oreopoulos, and Lisa Sanbonmatsu. 2012. "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment." *Quarterly Journal of Economics* 127, 3: 1,205-1,242.
- Ciocca Eller, Christina. 2017. "Increasing Success for Two-to-Four-Year Transfer Students Within the City University of New York." Website: [http://blogs.cuit.columbia.edu/cm2304/files/2016/06/GNYC\\_CioccaEller\\_TransferReport\\_EMAIL-FINAL.pdf](http://blogs.cuit.columbia.edu/cm2304/files/2016/06/GNYC_CioccaEller_TransferReport_EMAIL-FINAL.pdf).
- Dovidio, John F., and Samuel L. Gaertner. 2000. "Aversive Racism and Selection Decisions: 1989 and 1999." *Psychological Science* 11, 4: 315-319. <https://doi.org/10.1111/1467-9280.00262>
- Fink, John, and Davis Jenkins. 2017. "Takes Two to Tango: Essential Practices of Highly Effective Transfer Partnerships." *Community College Review* 45, 5: 294-310. <https://doi.org/10.1177/0091552117724512>
- Headlam, Camielle, Benjamin Cohen, and Kayla Reiman, with Dan Handy. 2020. *EASE Handbook for Community Colleges: Encouraging Additional Summer Enrollment*. New York: MDRC.
- Jenkins, Davis, Alison Kadlec, and James Votruba. 2014. "The Business Case for Regional Public Universities to Strengthen Community College Transfer Pathways (with Guidance on Leading the Process)." Washington, DC: HCM Strategists.
- Johnson, Eric, Suzanne Shu, Benedict Dellaert, Craig Fox, Daniel Goldstein, Gerald Häubl, Richard Larrick, John Payne, Ellen Peters, David Schkade, Brian Wansink, and Elke Weber. 2012. "Beyond Nudges: Tools of a Choice Architecture." *Marketing Letters* 23, 2: 487-504.



- Kalamkarian, Hoori Santikian, Melissa Boynton, and Andrea Lopez. 2018. "Redesigning Advising with the Help of Technology: Early Experiences of Three Institutions." New York: Community College Research Center, Teachers College, Columbia University.
- Kling, Jeffrey R., Sendhil Mullainathan, Eldar Shafir, Lee Vermeulen, and Marian V. Wrobel. 2012. "Comparison Friction: Experimental Evidence from Medicare Drug Plans." *Quarterly Journal of Economics* 127, 1: 199-235. doi: 10.1093/qje/qjr055
- Kurose, Charles. 2013. "Motivation, Behavior, and Performance in the Workplace: Insights for Student Success in Higher Education." Washington, DC: The George Washington University Graduate School of Education and Human Development.
- Mullainathan, Sendhil, and Eldar Shafir. 2013. *Scarcity: Why Having Too Little Means So Much*. New York: Times Books.
- Samuelson, William, and Richard Zeckhauser. 1988. "Status Quo Bias in Decision Making." *Journal of Risk and Uncertainty* 1, 1: 7-59.
- Verschelden, Cia. 2017. *Bandwidth Recovery: Helping Students Reclaim Cognitive Resources Lost to Poverty, Racism, and Social Marginalization*. Sterling, VA: Stylus Publishing.
- Walton, Gregory M., Geoffrey L. Cohen, David Cwir, and Steven J. Spencer. 2012. "Mere Belonging: The Power of Social Connections." *Journal of Personality and Social Psychology* 102, 3: 513-532. doi:10.1037/a0025731
- Wyner, Joseph, K.C. Deane, Davis Jenkins, and John Fink. 2016. "The Transfer Playbook: Essential Practices for Two- and Four-Year Colleges." Washington, DC: Aspen Institute. <https://eric.ed.gov/?id=ED565894>
- Yeager, David S., Gregory M. Walton, Shannon T. Brady, Ezgi N. Akcinar, David Paunesku, Laura Keane, Donald Kamentz, Gretchen Ritter, Angela Lee Duckworth, Robert Urstein, Eric M. Gomez, Hazel Rose Markus, Geoffrey L. Cohen, and Carol S. Dweck. 2016. "Teaching a Lay Theory Before College Narrows Achievement Gaps at Scale." *Proceedings of the National Academy of Sciences* 113, 24: E3,341-E3,348.
- Zajacova, Anna, Scott M. Lynch, and Thomas J. Espenshade. 2005. "Self-Efficacy, Stress, and Academic Success in College." *Research in Higher Education* 46: 677-706. <https://doi.org/10.1007/s11162-004-4139-z>

**New York** 200 Vesey Street, 23rd Floor, New York, NY 10281, Tel: 212 532 3200 **Oakland** 475 14th Street, Suite 750, Oakland, CA 94612, Tel: 510 663 6372 **Washington, DC** 750 17th Street, NW, Suite 501, Washington, DC 20006 **Los Angeles** 11965 Venice Boulevard, Suite 402, Los Angeles, CA 90066 [www.mdrc.org](http://www.mdrc.org)

