

SUMMER 2020



Bridging the gap:

How Wentworth provides a personalized and local approach to college and career readiness



Introduction

Moving from high school, with its clearly defined schedule and structure, to the wide-open and largely autonomous experience of college can be a jarring experience for any student. While greater flexibility offers the opportunity to explore personal interests, there is also a heightened need for self-discipline, motivation, and perseverance—skills mature adults often struggle to master. College requires students to navigate complicated systems for registration, enrollment, and financial aid before they even step foot in their first class. Helping students get a taste of college life before they start the school year can help clarify expectations and build confidence, leading to longer-term success. Unfortunately, access to effective preparation and meaningful transition opportunities varies across communities and student populations.

To address inequities in preparation and access, many institutions of higher education have implemented summer bridge programs that allow students to explore postsecondary opportunities prior to enrollment. This precursory experience typically includes a campus orientation, guidance on available resources, and some form of academic coaching and/or remediation. With college-going rates increasing, summer bridge programs have become increasingly popular, but the design and approach of programs differs from institution to institution.

One example worth examining in greater detail is RAMP, an innovative summer bridge program coordinated by the Center for Community and Learning Partnerships (CLP) at Wentworth Institute of Technology (Wentworth). Wentworth, a small private university at the intersection of the Fenway and Mission Hill neighborhoods of Boston, focuses on providing students with access to high-quality STEM curriculum in engineering, design, technology, and management. With a mission to immerse every student in a culture of doing and learning, Wentworth provides a range of career-focused college access programming, with the RAMP program as its centerpiece.

RAMP engages Boston youth in technical training, creative thinking, and career-focused pathways. Open to all Boston residents, it provides an innovative and localized approach to project-based learning, community partnerships, and mentoring, all while offering hourly compensation to participants. This hourly compensation model is crucial to providing college access to Boston youth. RAMP's comprehensive design exemplifies many of the key characteristics of high-quality summer bridge programs. As other institutions consider how to bridge the gap between high school and college, this research brief is intended to help with program design and development by outlining the core components of effective summer bridge programs and showcasing Wentworth's personalized and community-based approach to supporting Boston youth.

Project methodology

Reviewing the best practice landscape

Rennie Center researchers first conducted a literature review on summer bridge programs, finding that research on these programs is limited, with a few experimental or quasi-experimental designs but mostly case studies on individual institutions. To gain a deeper understanding of programmatic components, we next conducted a national landscape review of summer bridge programs (see Appendix A for list of programs). This landscape review aimed to outline the best practices commonly held across a range of programs, each with its own approach and design.

Applying a local lens: RAMP in Boston

Having laid the groundwork by identifying best practices in summer bridge programs, we sought to apply a local lens to our research and engaged the Center for Community & Learning Partnerships at Wentworth Institute of Technology to learn more about RAMP, their pre-college summer bridge program. To gain a deeper understanding of RAMP's program offerings, the Rennie Center engaged in the following research activities:

- **Review of program documents and data:** This review included student-level data from 2011-2018 program years. More specifically, the Rennie Center examined program brochures, grant proposals, external evaluations, student pre- and post-survey results, and cohort lists. The review of this information provided the necessary baseline understanding of RAMP, what it offers, who it serves, and how it may benefit students.
- **Interviews:** The Rennie Center conducted a series of interviews with staff from the Center for Community & Learning Partnerships, Wentworth faculty members, local industry partners, and Boston Public Schools personnel. Each interview provided valuable insight into how RAMP is cultivating and leveraging local partnerships to facilitate real-world, project-based learning for Boston's youth.
- **Student focus groups:** After learning about RAMP's operations and offerings, the Rennie Center conducted focus groups with 2019 RAMP students and peer mentors, allowing us to hear directly from young people about their experiences with and journeys through the RAMP program.

Together these activities provided a well-rounded overview of effective summer bridge programs and identified best practices being applied in Wentworth's RAMP program.

What is a summer bridge program?

Summer bridge programs are intensive, often residential, programs for incoming first-year students designed to ease the transition from high school to postsecondary education.² They are sometimes open to all students, but more often focus on a particular student population with a higher-than-average risk of dropping out of postsecondary experiences, including first-generation students, students from low-income families, students of color, students entering STEM majors, and/or students identified as academically underprepared.³ Summer bridge programs are typically hosted by an institution of higher education or an agreed-upon off-site location, whether that be a technical lab setting or worksite shadow opportunity for students. Wherever they take place, these programs provide time for students to get acclimated to college life, with the duration of the program ranging from a few days to several weeks.

Summer bridge programs have traditionally been one of the most cost-effective ways to increase access to and persistence in postsecondary opportunities for non-traditional, first-generation, or at-risk students.⁴ By offering coaching and remediation, bridge programs help students prepare for more rigorous coursework and potentially limit the need for students to enroll in non-credit-bearing developmental classes. Furthermore, summer bridge programs help students build essential support networks by providing guidance on available resources and familiarizing students with their use, thereby reducing their likelihood of dropping out.⁵ Summer bridge programs also help mitigate summer learning loss for students and allow them to explore new interests.⁶

Core program components

Summer bridge programs usually provide a complementary blend of academic and nonacademic resources for students as they transition to a postsecondary environment.⁷ The results of our landscape analysis suggests three essential pillars for preparing students and integrating them into college.⁸ This list summarizes the core components of an effective summer bridge program, followed by a deeper explanation of each component.



Resource orientation

Enable full engagement and participation

- Financial support/compensation to program participants
- Continued guidance as students navigate campus systems



Academic advising

Identify key areas of academic support and interest while fostering academic mindsets

- Access to a variety of academic coursework (either developmental or college-level)
- Support to develop academic mindsets and study skills
- Exposure to project-based learning and academic coursework of interest (e.g., STEM)



Social & community engagement

Connect students to campus and community experience and expertise

- In-depth orientation to campus life
- Stronger relationships through mentorship
- Ongoing encouragement of a growth mindset (e.g., persistence, work ethic)

Resource orientation

Financial support/compensation to program participants. Time that students spend in a summer bridge program could otherwise be spent working at summer jobs, which students may need to pay for college and other necessities. Therefore, financial support from summer bridge programs can act as an incentive to participate. However, compensation practices vary from program to program and range from stipends to scholarships. Some institutions offer an increased stipend as an incentive for good grades and/or retention in the program.

Continued guidance as students navigate campus systems. In addition to familiarizing students with the physical location of services, summer bridge programs prepare students for the various deadlines, academic or nonacademic, in the upcoming semester. These deadlines may include course enrollment/transfer dates as well as billing cycles and financial aid or scholarship requirements. This orientation to college processes and policies is a crucial part of the onboarding process for students, especially those who are first-generation students, equipping them with the essential information that often becomes an invisible barrier for students completing first semester tasks. While administrative and financial deadlines recur throughout students' college years, ongoing contact with summer bridge programs varies across institutions, ranging from no continuation beyond the summer to support through all four years of college.

Academic advising

Access to a variety of academic coursework (either developmental or college-level). Summer bridge programs provide an essential opportunity for students to acclimate academically, although academic offerings vary across programs. They range from developmental coursework, including prerequisites for credit-bearing courses, to an introduction to college-level subject matter, to short summer courses in key subjects (e.g., math, science, and writing) that allow students to get a head start on fall enrollment. Bridge programs that effectively serve underprepared students, especially first-generation students, offer a range of summer academic programs suited for diverse needs.

Exposure to project-based learning and academic coursework of interest. Summer bridge programs offer new and important opportunities for students to explore, learn, and build interest and experience in high-demand fields, such as STEM. These opportunities may include participation in lab experiments or other “hands-on,” project-based learning experiences with real-world applications. The specific type of project-based learning generally depends on an institution's program focus (e.g., STEM, design, management, computer science).

Support to develop college academic mindsets and study skills. The opportunity to try something new or revisit challenging material allows students an on-ramp to access core course curriculum in a different and potentially less intimidating environment than a typical first-year class. Furthermore, it is an opportunity for students to develop the necessary college mindset and study skills they will need in the forthcoming semesters. Having the opportunity to “try out” a range of academic experiences helps students learn to work independently, while building agency to advocate for their academic needs. Students are able to establish relationships with professors, practice managing a college course load and meeting academic deadlines, and gain confidence in seeking out a writing lab and other resources for academic support.



Social & community engagement

In-depth orientation to campus life. Many summer bridge programs focus on increasing students' social capital by building connections to the people and offices that can help them locate and secure available resources, including those available through federal and state agencies.⁹ This “crash course” on available resources may include raising awareness of and access to tutoring services, bookstores, medical services, financial aid, transportation support, and job listings. By engaging in an in-depth orientation, students become more comfortable on campus and gain confidence in their ability to navigate it. Learning about campus resources can also help students identify support services when needed in the upcoming semesters.

Stronger relationships through mentorship. Students' social capital is also strengthened by providing mentors and establishing long-lasting relationships. Summer bridge programs frequently aim to connect students with program alumni, peer mentors, faculty members, and community leaders to help them manage both the academic and nonacademic components of transitioning from high school to college.¹⁰ Building interpersonal relationships is a key element in students' persistence in and through college, with a substantial evidence base showing how personal connections and mentorship can help students stay connected through graduation.

Ongoing encouragement of a growth mindset. Summer bridge programs offer an essential adjustment period for students as they process the culture shift from high school to college. A structured program of activities designed to help students better navigate a more autonomous and flexible learning environment encourages a growth mindset—that is, the ability to perceive growth in the face of challenges rather than getting sidetracked by obstacles. Effective bridge programs highlight key skills and competencies students need to be successful as college students, including persistence, time management, and self-awareness.

Summer bridge programs provide essential opportunities to support students as they make a crucial transition in their learning journey. The intentional alignment of the three pillars—resource orientation, academic advising, and social and community engagement—enables summer bridge programs to increase multiple dimensions of college readiness and cultivate students' cultural and social capital. While bridge programs provide benefits for all transitioning students, they are particularly vital for students with limited support systems and knowledge of college culture, who are at a higher risk of dropping out.¹¹

Measures of success

The academic and social readiness components of a summer bridge program provide numerous opportunities to examine student progress and program effectiveness.¹² Despite the variety in design and approach, many summer bridge programs utilize common indicators to monitor their impact and success. The following chart provides a list of indicators frequently used to assess summer bridge programs. These indicators may be captured during students' participation in summer bridge programs and throughout their postsecondary experience.¹³

INDICATOR	DESCRIPTION
College persistence and retention rates	Enrollment over time (e.g., first term to second term, first year to second year) ¹⁴
Early academic measures	Course completion and grades in developmental and 'gatekeeper' courses, such as the first college-level course students take in math, reading, and/or writing ¹⁵
Grade point average	Overall value of accumulated final grades earned in courses over time ¹⁶
Credit accumulation	Number of credits earned toward a degree, qualification, and/or certificate
Academic & social engagement	Engagement can be measured by a variety of potential indicators, including: <ul style="list-style-type: none">▪ Students' self-efficacy¹⁷▪ Sense of belonging¹⁸▪ Participation in class▪ Positive interactions with peers and faculty▪ Participation in extended learning opportunities on campus▪ Student perception of campus climate¹⁹
Graduation rate	The percentage of a school's first-time, first-year undergraduate students who complete their program within 150% of the published time for the program (e.g., within 6 years for a 4-year bachelor's degree) ²⁰

These indicators provide an important starting point for measuring the effectiveness of a summer bridge program. However, each indicator must also be disaggregated based on student demographic data to ensure a full picture of program offerings, program effectiveness, and student success.



Applying a local lens

At Wentworth Institute of Technology in Boston, supporting students' transition to college and career is core to the school's identity. This includes a multi-faceted approach to building technical skills and real-world industry experience. RAMP, Wentworth's six-week summer bridge program, is a key element in promoting college access and a smooth introduction to college life for Boston youth. Organized by the Center for Community and Learning Partnerships (CLP), RAMP offers Boston residents an opportunity to familiarize themselves with college-level coursework, form a cohort of classmates, and immerse themselves in campus life. The RAMP program also connects students to the broader community, tailoring program activities to help them serve as problem-solvers on local issues as they build academic and college-ready skills.

Program evolution: From remediation to project-based learning and beyond

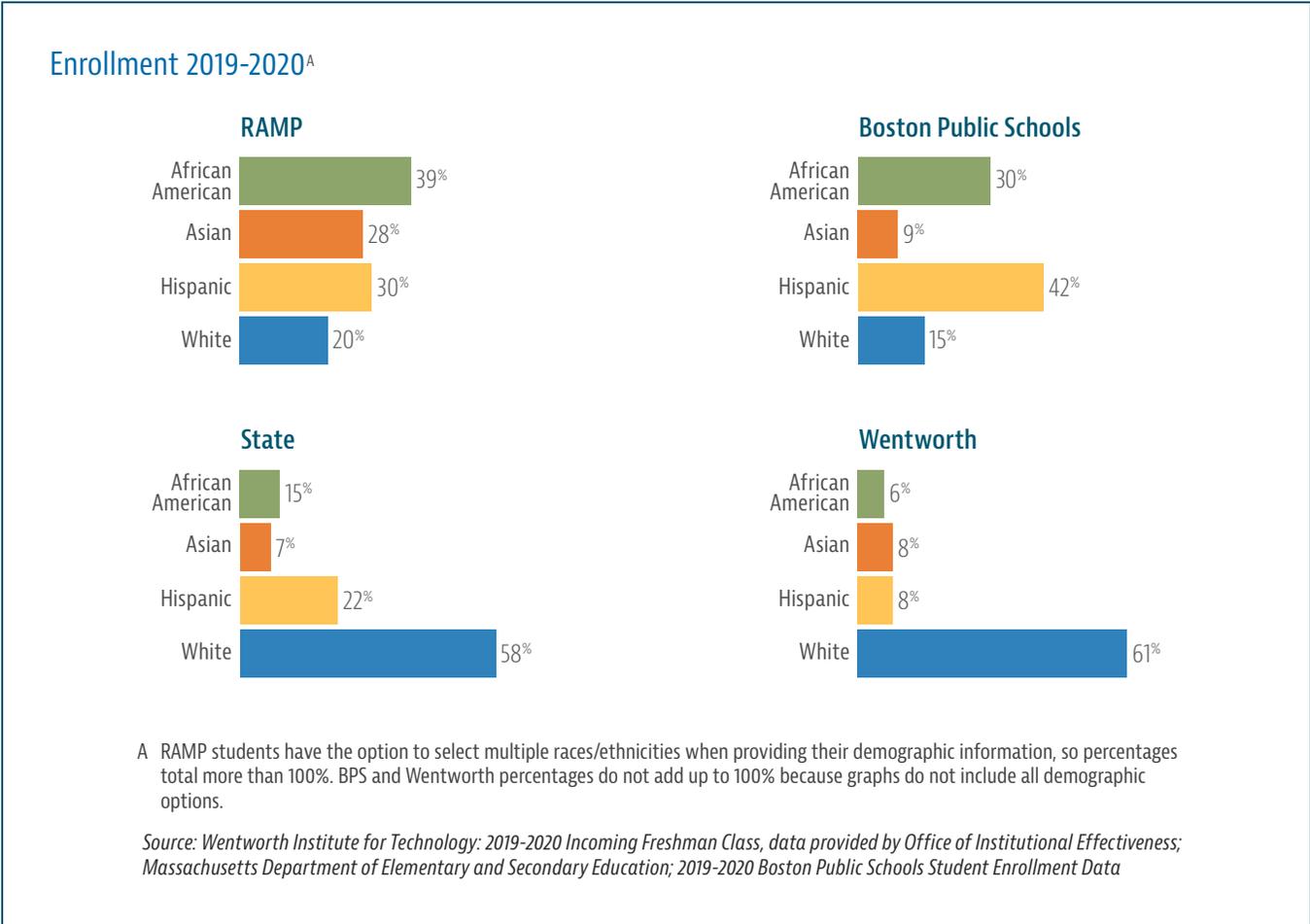
In 2011, Wentworth introduced RAMP as a six-week program available to all Boston residents that focused on the transition from high school to higher education. This program served as Wentworth's response to a citywide call to action on low college retention and graduation rates. The initial years of RAMP programming mainly focused on academic remediation to put students on track to complete college. Wentworth developed a new partnership with the Boston Private Industry Council's Summer Jobs Program. This partnership offered both a connection to local resources and a pilot source of funding to provide paid summer employment to eleven students. In 2014, under new leadership, RAMP shifted to a more asset-based, equity-centered approach to programming. Rather than grounding their approach in remedial support, RAMP staff sought to remove the various barriers challenging students' success by making project-based learning a key element of RAMP program offerings. Academic support continued to be a core program component, but the addition of project-based learning provided students opportunities to explore STEM industries, participate in workplace visits, and engage in career-focused hands-on learning. Additionally, RAMP has cultivated local and career-focused opportunities for its students by focusing on employer partnerships and connecting students with real-world experience through co-ops, internships, and future employment

opportunities. RAMP is still refining its approach to academic support and project-based learning, providing students opportunities to “catch-up,” “get ahead,” or explore something new. Entering its tenth year of programming, RAMP continues to find innovative ways to connect students with technical content and industry expertise, while remaining responsive to the needs of the students, families, and communities it serves.

Recruitment & enrollment

When enrolling students in the RAMP summer bridge program, CLP staff focus on representing the diversity of Boston’s communities. The diversity found within RAMP (see chart below) is a result of staff’s intentional efforts and commitment to building pathways to STEM and technical professions for underrepresented populations. Since 2011, RAMP has served more than 200 young people from Boston public, private, and charter schools, almost all of whom come from low-income families and are the first in their families to attend college.

To cultivate a pathway for students, CLP has developed effective partnerships within Boston Public Schools (BPS) and connects directly with BPS high school students through an intensive and personalized recruitment process. Staff conduct annual site visits to BPS high schools, visiting 70-80% of high schools each spring. These site visits provide valuable opportunities for CLP staff to connect with students and outline RAMP’s key program components and the supports available to incoming first-year students at Wentworth. Additionally, CLP staff connect with all Boston residents who have been accepted to the college’s undergraduate programs, not just the students who have committed to enrolling. Finally, CLP staff engage with students informally through events at local community organizations and recreation centers. Starting with these individualized recruitment efforts, CLP staff remain committed to supporting students throughout the RAMP program and beyond.



RAMP at a glance

To provide a successful framework for RAMP students, each week is composed of a balanced blend of resource orientation, academic advising, and social and community engagement.

Resource orientation. Each week students engage with an array of services and resources on campus. This may include introductory presentations with the Office of Student Affairs, Health & Wellness, and the Center for Academic Excellence.

Academic advising. Each week at RAMP incorporates collaborative project time with peers and project-based learning. Students participate in workshops focused on communication skills, critical thinking, and public speaking skills to support their success in the fall semester. Students also have the opportunity to extend their RAMP experience with an optional Calculus course. To apply their learning to a real-life situation, RAMP students complete a long-term project with their peers for a client organization. Students are given a weekly goal to keep them on track to complete their project by the end of the six weeks. For example, week 1 students focus on researching their client organization and developing a problem statement. Each week, students make progress toward prototyping their solution for a final showcase. RAMP students are also exposed to project-based learning through a biweekly How to Make Almost Anything (HTMAA) Workshop that provides students with hands-on technical experience. HTMAA modules include clinics on design thinking, circuit building and coding, laser cutting and 3D printing, and working with small engines.

Social & community engagement. Each week RAMP students visit a local industry partner onsite. In 2019, RAMP students met with Turner Construction, Feldman Surveyors, Amazon Robotics, Eversource, and Cannistraro. RAMP students also engage with other local community organizations that focus on student success in college. Past presentations included Sociedad Latina, Hyde Square Task Force, and Bottom Line. These presentations build students' awareness of other organizations outside of Wentworth that offer robust support.

RAMP sample schedule

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
9:00 AM	Communications (critical thinking)	Project Time	Communications (public speaking)	Project Time	Project Time
10:00 AM				Student Affairs	
11:00 AM	LUNCH				
1:00 PM	Wellness	How to Make Almost Anything Workshop (HTMAA)	Turner Construction site visit	How to Make Almost Anything Workshop (HTMAA)	Student Presentations
2:00 PM	Project Time				Local org: Sociedad Latina
3:00 PM	Optional: Calculus I from 4:00–6:00 PM*				

*Students can extend their RAMP experience to include a free Calculus I course. This is not a required part of the RAMP program, but rather an optional add-on.



Best practices with a local touch

RAMP fosters student success through their personalized approach to college and career readiness. This section outlines RAMP's model, focusing on the three essential pillars for preparing students and integrating them into a college environment: resource orientation, academic advising, and social and community engagement.

Resource orientation

From initial recruitment efforts to the start of the academic year, CLP staff aim to support a smooth transition from high school to college. This is evident in how staff design the program to minimize barriers to participation, as well as how they help students navigate campus systems well into the fall semester.

Financial support/compensation to program participants.

RAMP provides hourly compensation for its program participants at a rate of approximately \$13.75/hour, \$1 above MA minimum wage. This compensation signifies a commitment from RAMP to help students prioritize academics while balancing financial need. Additionally, RAMP provides transportation support like monthly MBTA passes for students commuting to and from campus. CLP staff recognize that time spent at RAMP could otherwise be spent working a summer job. The hourly compensation model is core to providing college access to underrepresented Boston youth. CLP staff believe, that for many students, hourly compensation is the only way to support their participation in the program: “We know our students cannot do the program without getting paid—if they didn’t, we wouldn’t have the level of diversity we have. Anything we do is free, or we pay you. That’s it.” To hold students accountable, CLP staff record day-to-day attendance to track payment. This compensation model is supported by annual grant funding and corporate donations.

 “I had a job already but getting paid here made me commit more. I knew I had to take it seriously.”

2019 RAMP Peer Mentor

 “I had \$5 in my bank account, I needed money for books and projects, and I wanted to do RAMP. It helps pay for those things.”

2019 RAMP Peer Mentor

Continued guidance as students navigate campus systems.

RAMP offers an individualized case management approach to ‘onboarding’ students and helping them navigate college policies and procedures. More specifically, CLP staff work with each student to discuss upcoming deadlines as they move into the fall semester. Whether it is reviewing a high school transcript or discussing financial aid options, CLP staff support RAMP students to ensure that logistical challenges with registration and enrollment do not derail their full participation in college.

This level of individual consultation is not only available during the summer; rather, CLP staff conduct monthly check-ins with RAMP students during their remaining years at Wentworth. For example, as students transition into their fall semester, they meet monthly with the college access coordinator in the CLP office. Yet the support provided goes beyond monthly meetings: “We probably see 80% of first-year students at least once a week, whether it is help with fall semester or more severe challenges. Last year, we had a student who came to us at the end of the last day and said they’d probably be homeless in the next couple of months. We talk about individualized case management but it’s about building relationships and knowing where there will be issues to support students in navigating them.” This individualized approach allows CLP staff to connect with students as they navigate both campus systems and life challenges.

RAMP’s approach to helping students access financial and logistical support equips students with the tools and resources they need to thrive over the summer and beyond. This provides foundational support as students prepare for college-level coursework.



Academic advising

RAMP makes a concerted effort to prepare students for the academic transition to higher education. During the six-week program, RAMP students engage in introductory STEM workshops, 1-on-1 academic consultations, and project-based learning with local community and industry partners.

Access to a variety of academic coursework.

Historically, RAMP students participated in introductory courses that provided academic exploration and growth in STEM. As the program expanded, RAMP transitioned from remedial coursework to hands-on, project-based learning, fostering an inclusive educational environment for all learners. The program’s evolution from remedial coursework to project-based learning has allowed Wentworth faculty to intentionally craft their instruction to be student-centered and hands-on. The available workshops allow students to learn about various technologies and their in-field application. For example, in a laser cutting workshop, Wentworth faculty teach students about laser cutters, identify similar equipment, and offer prototyping opportunities. Working directly with technology help students connect with the material—as one faculty member reflected, “Some students aren’t fully engaged until they start doing some hands-on activities. These workshops get students engaged and excited to learn about STEM and technology use.”

The project-based workshops also connect faculty and students. A number of staff and faculty engage with RAMP by providing course instruction and other program activities, allowing students to build stronger connections throughout campus. And since Wentworth faculty often have direct experience in technical fields, they are able to highlight how learning connects to real-world careers, helping students explore new content and interests while planning their course of study in the fall.

“During RAMP, [CLP staff] help with everything you need to take care of. They helped me with FAFSA and different scholarships, I don’t know how to do that.”

RAMP alum

“I got to take calculus over the summer. This was a big bonus. I didn’t take it in high school, and I failed it over the summer but passed it later in the year.”

RAMP alum

In addition to project-based workshops, students also have the opportunity to extend their RAMP experience with an optional Calculus I course. The course, taught by Wentworth faculty, is available at no cost to all incoming RAMP students whose major requires it. Wentworth students who need to take both Calculus I and Physics I during their first semester often earn a D/F in one or both those courses. Participating in this optional summer course allows RAMP students to experience Calculus I material before they are required to take it later in the academic year. This opportunity can provide relief during their fall semester or a launching pad into Calculus 2, giving students who opt in the invaluable opportunity to “catch up” or “get ahead” as they plan out their first-year course work.

CLP staff continue to refine and adapt academic offerings to support students’ needs and interests. For instance, CLP staff are considering a math prep elective for RAMP students. This math prep will allow students access to college-level math material and include opportunities to individualize content and support to help students prepare for the fall semester.

Support to develop academic mindsets and skills.

RAMP aims to foster growth in professional skills such as critical thinking, oral and written communication, and teamwork to prepare students for success at Wentworth and in their future careers. For example, RAMP students engage in a once-a-week workshop on public speaking where students tell personal stories and build confidence. In this workshop and throughout the program, RAMP students provide updates through weekly presentations to their peers, faculty, and staff. Furthermore, due to the project-based focus of the program, RAMP students have multiple opportunities to develop collaboration skills by working with peers and faculty members on STEM content.

“RAMP offerings in the summer were a game changer for me. I got to do things I haven’t before and see how I would do as a college student.”

RAMP alum

Exposure to project-based learning and STEM.

RAMP students, supported by full-time faculty, participate in bi-weekly “How to Make Almost Anything” workshops to help them apply prototyping strategies. “How to Make Almost Anything” is a series of exploratory activities that integrate hands-on education with math and science concepts. In the past, the workshop has included explorations in 3-D printing, laser scanning, and circuit building, as well as a small engine clinic that required students to take an engine apart and reassemble it. These activities provide an opportunity for students to apply STEM-related concepts and increase their ability to prototype ideas.

In addition to the “How to Make Almost Anything” workshop, interdisciplinary teams of RAMP students also collaborate with local partners to develop a complex solution to community-based challenges. Past collaborations between student teams and Boston-based organizations have addressed ever-increasing food insecurity and food deserts, the lack of outdoor educational spaces, animal enrichment for zoo animals, and the use of engineering to better the lives of those in rehabilitation from spinal cord injuries. While these community-based challenges have looked different over the years, they are meant to help students take what they are learning about design and engineering and connect it to the real world. Immersing RAMP students as leaders in their community is one of the many ways RAMP strives to prepare students for higher education and beyond.

“What I have found, like with field trips and school projects, some students aren’t fully engaged until they start doing the hands-on activity. In my workshop, I try to showcase capabilities.”

Wentworth faculty member

“I didn’t know what engineering was. We did different projects with kids and then with clients. It was great working with these guys and going on site.”

2019 RAMP Student

Future STEM workforce: Connecting students to local industry partners

Wentworth, through CLP, works diligently to build local industry partnerships that provide real-world experiences to their students. In particular, CLP has discovered a true partner in Turner Construction, which shares a vision of increasing access to opportunities for underrepresented Boston youth—and females—in technical professions such as design, engineering, and construction. Turner Construction offers career-focused opportunities for RAMP alumni and Wentworth students, including hosting several site visits where RAMP students, staff, and faculty shadow Turner employees and discuss specific aspects of construction management. These on-site experiences provide critical exposure for students to understand the daily reality of the profession. Furthermore, Turner Construction has actively recruited RAMP alumni; over the past two years, Turner has hired five RAMP participants for internship opportunities, and three of the five were later hired for permanent full-time positions. Together, CLP and Turner Construction strive to place and retain well-trained local youth in technical fields.



Social & community engagement

To supplement the academic supports provided by RAMP, CLP staff work to intentionally and authentically connect students with each other and the broader community. This sense of creating a welcoming space persists beyond the six-week summer program: RAMP alumni frequently use the CLP office as a ‘home base,’ a space to hang out, study, and connect with staff and faculty. RAMP uses a cohort model, mentorship opportunities, and locally based projects to help students develop a sense of belonging with each other and their community that persists throughout their time at Wentworth.

In-depth orientation to campus life.

During the six weeks of RAMP, students are immersed in campus life. Each week CLP staff intentionally connect students with Wentworth faculty and available resources on campus and in the surrounding community. Connections to on-campus and community resources allow RAMP students to build a network of support. RAMP students connect with available resources through formal and informal channels, ranging from participating in group presentations to individualized case management tailored to students’ needs. This personalized approach to orientation builds students’ social capital and increases self-confidence as they get comfortable with becoming a college student.

RAMP also utilizes a cohort model for students, creating subgroups that stick together as a unit as they connect with campus resources and work through a collaborative problem-solving process. CLP staff make an intentional effort to group students from different Boston-area high schools within the same cohort. As cohorts engage with program content, they may be asked to divide into smaller groups to tackle projects together. This model allows students to build self-confidence, demonstrate leadership, and recognize that group success is a mutual responsibility. With RAMP enrollment numbers rising, the cohort model provides an opportunity for CLP to incorporate small-group support within a larger program.

“When the semester comes you know like 60 people. There’s at least one person you know in each class.”

2019 RAMP student

“I see RAMP people often. Every time I run into a mentor or CLP staff, I get to chat for a minute.”

2019 RAMP student

Stronger relationships through mentorship.

Over the years, RAMP has cultivated a tight-knit group of peer mentors and alumni. RAMP peer mentors—program alums who come back after their first year to support cohorts of RAMP students—help orient students to campus life. Peer mentors provide 1-on-1 coaching to students to help them work through the transition experience, build their familiarity with campus resources, and ultimately grow their network of support. Like participants, RAMP peer mentors also receive an hourly compensation, but at a slightly higher rate (\$2 over minimum wage). RAMP peer mentors participate in the planning, coordination, and execution of RAMP program offerings. As alumni of the program, their insight and feedback provides a valuable continuous improvement opportunity for CLP staff as they refine and adjust program offerings year after year. Additionally, RAMP peer mentors act as a key support system for RAMP students once the fall semester begins. This support is provided through informal check-ins and “homework hangouts” in the CLP office, helping RAMP students navigate both the academic and nonacademic aspects of their first semester at college.

“[My mentor] is like a big brother to me. He’s encouraging but he’ll yell at me, like, ‘Yo, get to class—don’t be messing around!’”

2019 RAMP student

Beyond peer mentors, CLP and Turner Construction are piloting an industry mentorship program where RAMP students can connect with Turner Construction industry professionals to network, gain feedback on their resumes, conduct mock interviews, and participate in job shadows. Turner Construction sees the mentoring pilot as a mutually beneficial opportunity: “Mentor programs offer a structured setting to develop beneficial one-on-one relationships between students and professionals. Acting as a friend, a teacher, and a guide to the real world, mentors have the opportunity to encourage and advise students by sharing their own experiences and knowledge of [their respective] profession. For employers, mentoring increases retention, promotion rates, and employee satisfaction.” In the 2019-2020 academic year, Turner Construction worked with a cohort of seven RAMP students as a pilot. Going forward, they anticipate that up to 50% of RAMP students will have the opportunity to be paired with industry mentors during the 2020-2021 academic year, and that up to 90% of RAMP students could work with industry mentors during the 2021-2022 academic year.

Ongoing encouragement of a growth mindset.

RAMP provides multiple opportunities for students to foster a growth mindset. As students step out of their comfort zone in the classroom and on campus, they have many chances to recognize their own learning and development. CLP staff also support students as they develop key skills such as self-efficacy and independence, contributing to a sense that hurdles are not insurmountable.

For many RAMP students, taking Calculus I during the summer offers the chance to build confidence in their ability to engage in college-level coursework and increases their academic stamina. CLP staff, Wentworth faculty, and peer mentors scaffold support as RAMP students learn how to persevere through their classes. Meanwhile, group projects allow students to demonstrate leadership, collaboration, and communication skills as they work together to overcome obstacles and complete key project tasks throughout the six-week program.

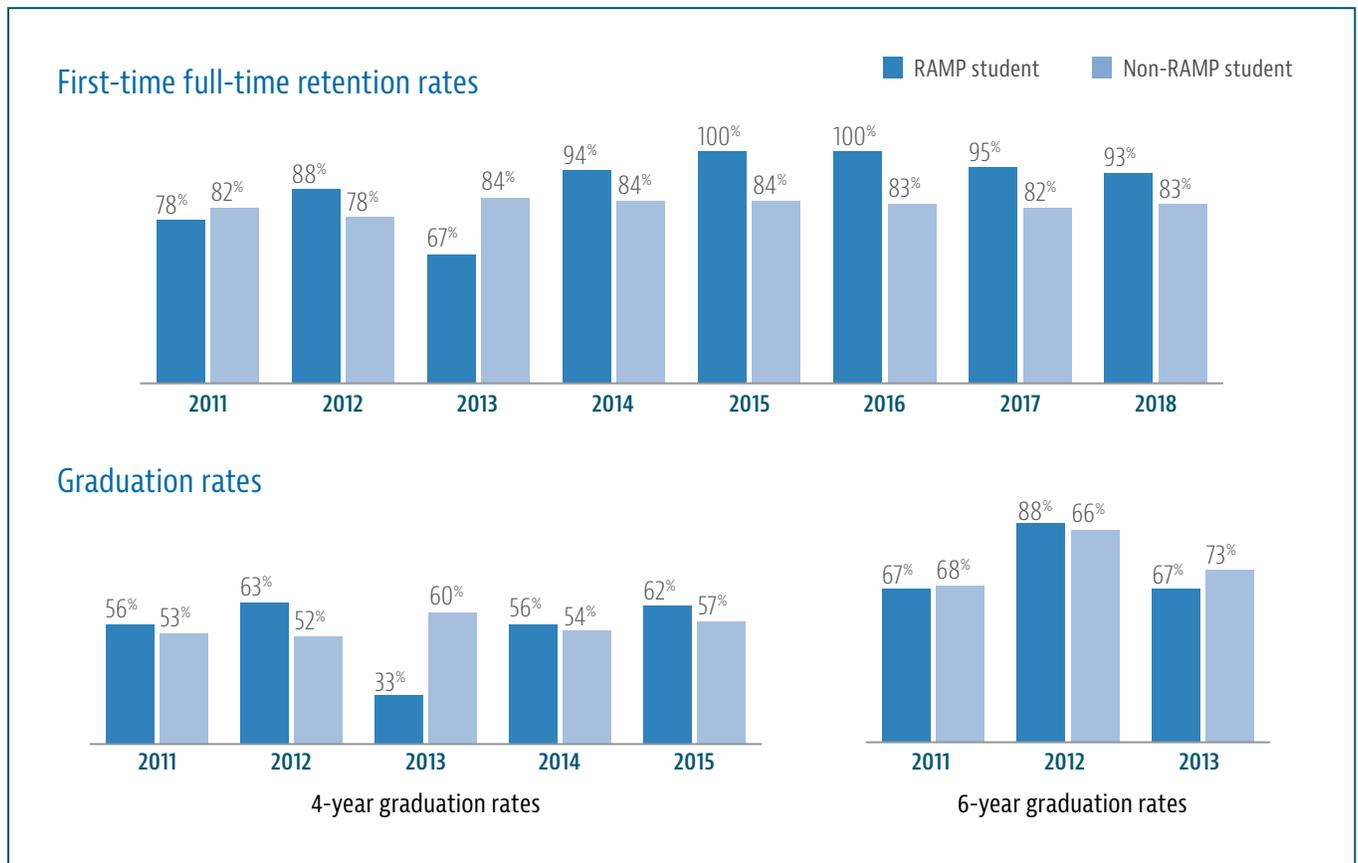
RAMP students also foster a growth mindset through community projects, which connects students with organizations addressing local needs in the greater Boston area. For example, in recent years, RAMP students painted local churches, supported food banks, and worked at an urban farming project. This provides an opportunity for students to engage in teamwork and leadership tasks while addressing a community need. Students “learn by doing,” work together to confront challenges, and recognize that improvement occurs through hard work, effort, and practice.

A holistic approach to measuring success

To refine and improve RAMP programming, CLP measures a range of academic and nonacademic indicators of success, based on self-reported feedback as well as retention and graduation rates. To start, RAMP cohorts complete pre- and post-surveys that prompt students to reflect on skills like growth mindset, positive attitude, teamwork, and personal growth. Results from the 2018 survey indicate positive results across social, emotional, and academic domains, with students reporting increases in emotion control, assertiveness, empathy, and relationships with adults. Overall, RAMP cohorts identified the top five skills gained during the program as public speaking, teamwork, communication, critical thinking, and leadership.

In addition to building students' skills across multiple domains, RAMP promotes long-term success at Wentworth by helping students navigate financial needs, enhancing academic skills, and building a stronger network and community on campus. CLP monitors how many RAMP alumni return for their second year of school to see whether these efforts pay off. The graphs below shows the retention and graduation rates of RAMP and non-RAMP students over time. Notably, since 2014 the percentage of RAMP students returning for their second year has exceeded 90%, while retention rates for non-RAMP students have remained at 82–83% during the same period. Four-year graduation rates for RAMP students also exceeded those of non-RAMP students for four of the first five years of the program, though post-2015 data (reflecting the results of more recent iterations of RAMP) is not yet available.

Additionally, CLP staff track students' post-college plans to understand the impact of RAMP's efforts to engage students in career experiences with local industry partners. A number of RAMP students have reported receiving job offers from the employers where they interned, including Turner Construction, Janey Construction, Google, Amazon, BETA Group, and National Grid. Together, the retention/graduation data and evidence of employment pathways highlight RAMP's promising approach to preparing students for postsecondary and career success.





Looking ahead

As RAMP enters its tenth year, program leaders are looking at new and innovative ways of supporting their students' needs and equipping Boston youth for success in college and beyond. Program staff are considering several ideas to strengthen the program moving forward, including the following.

Baseline assessment

The information collected during the RAMP recruitment and onboarding process is crucial to understanding students' abilities and mindsets. Faculty and industry partners share an eagerness to build on current data collection by implementing a baseline assessment that helps them develop effective program curriculum. For faculty, this includes accessing the results of the pre-survey and administering a preliminary academic assessment to better understand students' knowledge upon entering RAMP workshops. For industry partners, this includes a survey of students' career interests and understanding to gauge their prior familiarity with STEM-related fields and engage them appropriately.

Employer network

CLP has developed an effective partnership with Turner Construction to provide career-focused opportunities for RAMP students. Going forward, CLP and Turner Construction look forward to engaging other Boston-based STEM employers in an employer-partner network. This network would offer an opportunity to build a human capital pipeline that connects underrepresented Boston youth with industry partners throughout the city.



Conclusion

Summer bridge programs are a key strategy for building on-ramps to postsecondary success, particularly for first-generation students and others who have had limited opportunities to experience college culture and norms. In Boston, staff from the Center for Community and Learning Partnerships at Wentworth Institute of Technology are committed to adapting, refining, and expanding the RAMP summer bridge program. Now in its tenth year, RAMP continues to promote college persistence and success for Boston students, expand employment opportunities for local youth, and ultimately build a more diverse workforce in technical fields. Through reciprocal community partnerships with local industry partners and authentic relationships with Boston youth, RAMP offers a personalized pathway to college and career readiness, serving as a worthy model for other local and national institutions to emulate.

Appendix A

Institutions included in landscape review:

- Bowling Green State University
- College of St. Benedict and St. John's University
- Louisiana State University
- Middle Tennessee State University
- Massachusetts Institute of Technology
- Ohio State University
- Southern Illinois University Carbondale
- Syracuse University
- University of Alabama
- University of Cincinnati
- University of Maryland Baltimore County
- University of Memphis
- University of Wisconsin Milwaukee

Endnotes

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About the Rennie Center

The Rennie Center for Education Research & Policy's mission is to improve public education through well-informed decision-making based on deep knowledge and evidence of effective policymaking and practice. As Massachusetts' preeminent voice in public education reform, we create open spaces for educators and policymakers to consider evidence, discuss cutting-edge issues, and develop new approaches to advance student learning and achievement. Through our staunch commitment to independent, non-partisan research and constructive conversations, we work to promote an education system that provides every child with the opportunity to be successful in school and in life.

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