

## Institutionalization and Sustainability of Undergraduate Research across Disciplines at a Public, Urban Community College: Successes and Challenges

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### Abstract

Undergraduate research (UR) is an integral part of the culture at Queensborough Community College, CUNY (QCC), an urban community college with a diverse student population. Since 2015, more than 400 students participate in undergraduate research experiences each year, working with more than 40 faculty mentors from several academic departments. Although a large proportion of this research occurs within STEM fields, the social sciences, nursing, business, arts, and the humanities are also represented and have increased research activity each year. This article describes the various approaches of QCC to institutionalize, promote, and support UR; approaches to handling the challenging aspects of sustaining UR at a community college; and recent initiatives to expand UR across disciplines.

**Keywords:** *high-impact practices, institutionalization, partnerships, sustainability, undergraduate research*

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Community colleges face a number of unique challenges when establishing an undergraduate research program. Heavy teaching loads and other commitments leave faculty with limited time to pursue their research interests. Community colleges often lack adequate facilities and funding resources to support faculty research. In addition, many nontraditional students face their own barriers to seeking out research experiences: they often have significant work and family obligations, and may not perceive themselves as researchers. These challenges are particularly prevalent at public, urban institutions like Queensborough.

Despite these difficulties, numerous reports show that engaging undergraduate students (including community college students) in research has a strong positive impact on STEM students (President's Council of Advisors on Science and Technology 2012; Brandt and Hayes 2011; Hensel and Cejda 2015) and non-STEM students (Stanford et al. 2017). Recognizing this connection, QCC has developed a well-structured and sustainable program that supports UR in its various modalities (shown in Figure 1).

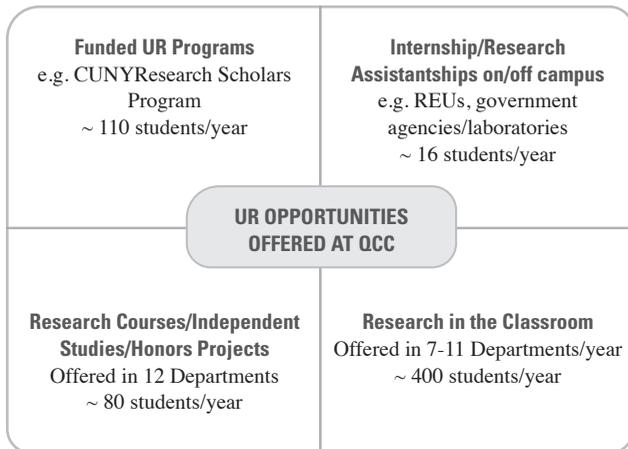
Undergraduate research at Queensborough Community College (QCC-UR) was formally institutionalized in 2014, leading to a larger and more unified presence on campus. This successful expansion has been facilitated by a multifaceted approach that includes a robust administrative support system (at the college and university levels) and several campus programs and initiatives.

### About Queensborough

Queensborough Community College (QCC) is part of the City University of New York (CUNY), the largest urban, public university system in the United States. It is located in the northeastern part of Queens—one of the most diverse counties of the nation. QCC's student body reflects the borough's diversity: students come from 130 countries, and 32 percent report speaking a language other than English at home. The college employs about 415 full-time faculty within 17 academic departments. QCC offers 37 associate degree programs, five certificate programs, and for-credit/nondegree programs.

Equally committed to open-admission access and academic excellence, QCC thus supports student learning in innovative ways. For example, the college has institutionalized

**FIGURE 1. Research Opportunities Offered at QCC**



*Note:* QCC = Queensborough Community College, CUNY. UR = undergraduate research. REU = Research Experience for Undergraduates. Students may participate in more than one opportunity (e.g., students can be supported by a UR program while taking a UR course).

6 of the 11 high-impact practices (HIPs) described by the American Association of Colleges and Universities (Kuh 2008). HIPs are teaching and learning practices proven beneficial to college students from all backgrounds: some reports suggest that students from historically underserved populations benefit the most (Brownell and Swaner 2009; Finley and McNair 2013; Huber 2010; Kuh 2008; NSSE 2007). Each QCC HIP has a faculty coordinator who works closely with the Center for Excellence in Teaching and Learning (CETL) to promote and support HIPs on campus. Pedagogical and financial support for the HIPs fall under the purview of CETL (CETL n.d.).

**The Development of the QCC-UR Program**

QCC has had a long-standing history of involving undergraduate students in research, primarily as the result of externally funded faculty-driven efforts. This commitment to UR resulted in numerous publications and presentations at national conferences, as well as multiple student awards.

Participation in CUR’s NSF Community Colleges Initiative (Council on Undergraduate Research n.d.) in 2012 helped the Office of Academic Affairs assert its readiness for the institutionalization of UR. UR benefited from de facto inclusion in the college’s strategic planning and leveraged the structure and resources already dedicated to support HIPs at the college (CETL office). Additionally, efforts by the CUNY Office of Research to promote and support UR at community colleges provided momentum for the development of QCC-UR.

A multidisciplinary Faculty Inquiry Group (FIG) was charged with jump-starting the research in the classroom modality, developing student learning outcomes,

and designing and facilitating professional development training for new faculty practitioners. UR became an official HIP in spring 2014, and the chair of the FIG became the faculty coordinator for undergraduate research and the research integrity officer. Members of the FIG formed the “UR Team” that helped mentor faculty and assisted CETL and the UR coordinator in advancing the UR agenda on campus. In 2016–2018, the UR team was expanded into a Research Committee composed of faculty representatives from each academic department, the library, the Office of Grants/Sponsored Programs (OGSP), the Kupferberg Holocaust Center, and the UR-HIP faculty coordinator. The Research Committee meets monthly and provides a forum for faculty to receive updated information about research events and resources on campus, and to discuss each department’s questions, concerns, and suggestions.

The Research in the Classroom (RIC) modality gained further momentum when QCC became a partner college of the Community College Undergraduate Research Initiative (CCURI) in 2016. This modality promotes equity and inclusion in UR, as it reaches a greater number of students than the apprenticeship model (Caplan and MacLachlan 2014) and is not restricted to select students (Hewlett 2018; Shanahan et al. 2017).

In 2018, the college created an Office of Research and established a dean for research position (unique for CUNY community colleges) to provide oversight of all research (including UR) on campus. The dean oversees the OGSP and the Research Committee, directs QCC’s CUNY Research Scholars Program (CRSP), collaborates with CETL and the UR-HIP coordinator, acts as a liaison between faculty and administration, and maintains the Undergraduate Research and Office of Research webpages. These webpages highlight student and faculty success and share information about UR opportunities. The dean also ensures compliance with IRB regulations and research training for students and faculty.

The UR-HIP coordinator works closely with the dean for research and CETL to collect information about UR initiatives on campus via periodic surveys, offers UR-HIP training for new practitioners, and arranges gatherings (“checking in” sessions and brown-bag lunch discussions) where experienced UR practitioners share their best practices with others. A timeline of the events that led to the development of QCC’s current UR infrastructure is shown in Figure 2; a diagram outlining that infrastructure is shown in Figure 3.

**Programs and Partnerships That Support QCC-UR**

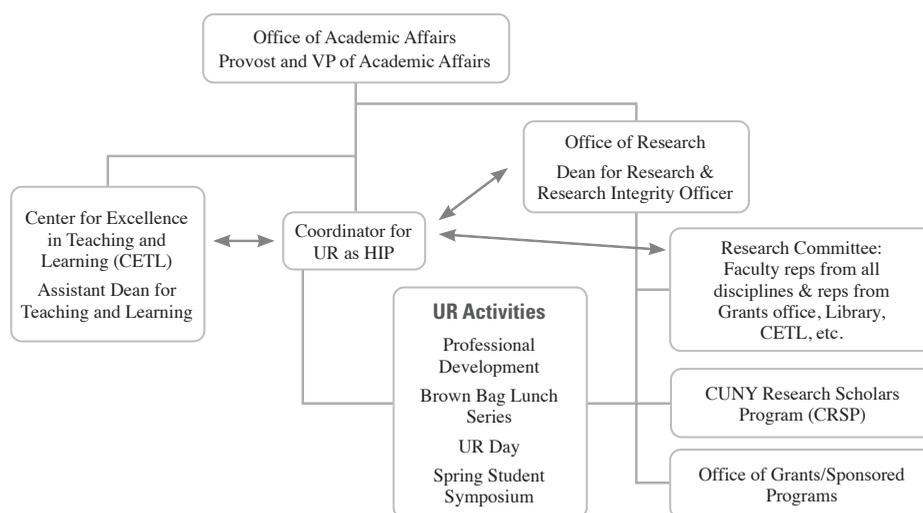
QCC-UR is supported by several grants, programs, and partnerships that provide funding and other resources for both faculty and students. For example, the CUNY Research Scholars program (CRSP) was developed in

**FIGURE 2. Timeline for QCC-UR Institutionalization and Sustainability Efforts**

Year	Event
2012	CUR Community Colleges Initiative Workshop held at QCC
2013	OAA announced plans to institutionalize UR: five-member Faculty Inquiry Group (FIG) appointed to lead institutionalization efforts
2014	UR is institutionalized as a HIP: Professional development efforts and the research in the classroom (RIC) modality are launched, FIG renamed UR Team The CUNY Research Scholars Program (CRSP) is launched - Cohort 1: 15 QCC students
2015	CRSP Cohort 2: 20 QCC students
2016	QCC participates in CUR's National UR Week celebration CRSP Cohort 3: 30 QCC students UR Team grows into college-wide UR Committee with reps from all departments QCC becomes CCURI College Partner QCC holds 1st Annual UR Day
2017	National UR Week Celebration CRSP Cohort 4: 32 QCC students
2018	National UR Week Celebration QCC establishes its Office of Research and Dean for Research position CRSP Cohort 5: 29 QCC students Purview of UR Committee expanded/committee renamed Research Committee
2019	National UR Week Celebration and QCC's 1st virtual UR Showcase QCC's 1st Student Spring Symposium CRSP Cohort 6: 28 QCC Students QCC's UR Brown Bag Lunch Discussion Series is launched
2020	UR Brown Bag Lunch Discussion Series CRSP Cohort 7: 32 QCC Students 5th Annual UR Day (virtual)
2021	2nd Student Spring Symposium and UR Brown Bag Lunch Discussions Series scheduled (virtual)

*Note:* QCC = Queensborough Community College, CUNY. UR = undergraduate research. HIP = high-impact practice. CCURI = Community College Undergraduate Research Initiative

**FIGURE 3. UR Infrastructure at QCC**



*Note:* UR = undergraduate research. HIP = high-impact practice

2014 by the university to provide paid UR student-mentor opportunities in STEM and social sciences, as well as build a research community on campus. Each year, about 30 QCC students participate in CRSP and present at campus and CUNY-wide symposia (CRSP n.d.).

Several faculty members/teams have obtained external funding that directly supports student research (see Table 1A). The QCC NIH Bridges to the Baccalaureate program has been funding about 15 students per year since 2002. In addition, faculty frequently obtain CUNY grants that support their research and may provide opportunities for students as well (see Table 1A). The OGSP works closely with faculty and the Office of Research to apply for and manage grants.

Many individual faculty members partner with outside organizations and maintain collaborations with other educational institutions to support and sustain their research. Table 1B shows examples of those partnerships and collaborations that have supported UR efforts, as well as government agencies that have hosted QCC student interns.

### **Activities That Promote UR**

QCC has developed several special events and initiatives to support UR on campus, encourage interdisciplinary collaborations and student participation, and celebrate faculty and student UR accomplishments.

#### ***Professional Development***

Professional development workshops (offered biannually), facilitated by the UR-HIP coordinator and CETL, help both novice and seasoned UR practitioners develop a research idea into a pedagogically sound, student- and learning-centered research experience for students. This approach differs from the more traditional, product-centered view of UR. UR-HIP practitioners may implement their projects as Independent Research courses, Honors projects, and/or Research in the Classroom experiences. Figure 4 shows the impact of UR-HIP trained mentors on student research exposure from 2014–2019.

#### ***Undergraduate Research Day***

In 2016, a multidisciplinary group of QCC faculty representing biology (Joan Petersen), chemistry (Sharon Lall-Ramnarine), mathematics and computer science (Maria Mercedes Franco), physics (Rex Taibu), and social sciences (Rommel Robertson) attended a CCURI Strategic Planning Workshop. The group decided to plan and implement the first Undergraduate Research Day—a campus-wide event that would bring together UR from all disciplines and in all modalities while celebrating the UR efforts of faculty and students. The first Undergraduate Research Day was held in December 2016 and included a luncheon, student poster session, and networking session. UR Day has become a highly successful annual event that occurs

each fall and attracts more than 200 attendees. Participation in UR Day 2020 remained high despite the challenge of having to work remotely since March 2020. The number of UR faculty mentors who participate in UR Day each year remains steady at about 42–50 (Figure 5A). All six STEM departments at the college have been represented each year: participation by non-STEM departments has increased from 2 in 2016 to 5 in 2020 (see Figure 5B).

#### ***Brown-Bag Lunch Discussion Series***

In fall 2019, QCC-UR launched an informal series of talks where faculty from various STEM and non-STEM disciplines speak about their UR projects and experiences (Office of Research n.d.). These talks provide a forum to encourage interdisciplinary collaborations and foster a greater understanding and appreciation of the various forms of UR across disciplines. Virtual brown-bag lunches in 2020–2021 included discussions of faculty adaptations of their UR projects to an online format.

#### ***National UR Week***

Since spring 2016, QCC has celebrated national UR week by planning events in individual departments. In 2019, QCC hosted a virtual celebration that highlighted UR projects on the QCC website throughout the week (Office of Academic Affairs n.d.a). The event was shared with CUR to promote UR initiatives.

#### ***Spring Student Symposium (SSS)***

In 2019, QCC-UR added a springtime campus-wide event that included oral presentations, musical performances, and readings to highlight all student accomplishments, including UR and other HIPs. Seventy-six UR students presented at this event. Although the campus closure forced cancellation of the 2020 event, it will be held virtually in 2021 during UR Week (Office of Academic Affairs n.d.b).

#### ***QCC UR Journal***

This journal will publish results of student research from all disciplines. The inaugural issue, scheduled to be published in fall 2021, will include literature reviews and research plans of CSRP students who have been unable to do laboratory benchwork during the pandemic (Office of Academic Affairs n.d.c).

### **The QCC-UR Student Experience**

Since QCC offers several modalities of UR across disciplines, students may have extensive research experiences before graduating. For example, a student who is exposed to UR in the classroom may then continue working one-on-one with a faculty mentor, enroll in sequential research courses, and/or serve as a summer intern. CRSP participants are supported for a full year of UR (including summer). QCC-UR events ensure that all participants have at least one or two chances to present their work. In addition to on-campus events and recognition, many

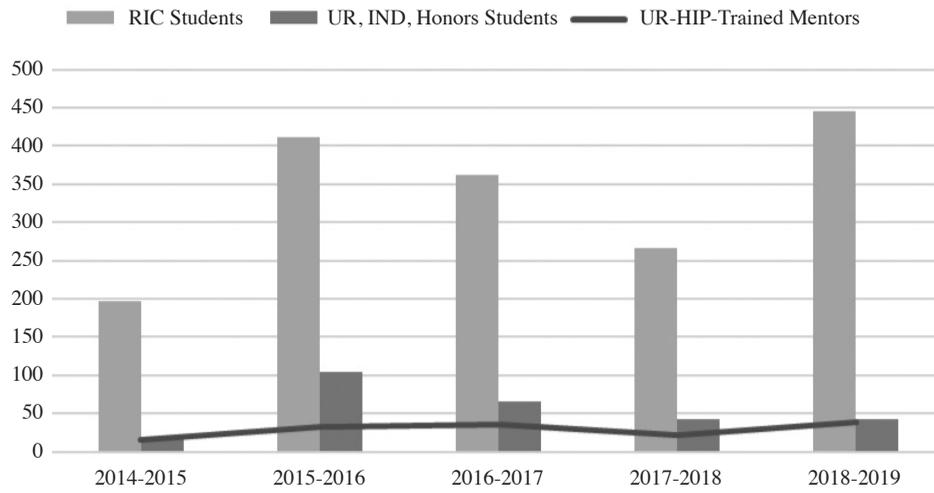
**TABLE 1. Select Funding Sources and Partnerships That Support UR**

A		Program name	Funding source	Description (students served; year started)
What makes sustainability possible:	Support for UR students	Bridges to the Baccalaureate	National Institutes of Health	URE focused on underrepresentation and transfer to baccalaureate programs in biomedicine or science (15 per year; 2002)
		Science Education Alliance-Phage Hunters Advancing Genomics and Evolutionary Science (SEA-PHAGES)	Howard Hughes Medical Institute (HHMI)	Research in the classroom (up to 25 students per class; 2011)
		Research Experiences for Undergraduates (REU)	National Science Foundation (NSF)	Research in physics, physics education, or interdisciplinary projects in biology, the geosciences, or astronomy (approximately 9 per year; 2014)
		CUNY Research Scholars Program (CRSP)	City University of New York (CUNY)	Year-long, laboratory-based research experiences in STEM and social sciences for associate degree students (30 students in 2019–2020; since 2014)
		CUNY-NASA Solar and Atmospheric Research Program and Education Partnership	National Aeronautics and Space Administration (NASA)	URE focused on underrepresentation in STEM (4 students in 2018–2019; 2015)
		Smart Energy Scholars	NSF	Scholarships for academically talented students who demonstrate financial need, guaranteed transfer to Binghamton University–SUNY (7 students in 2018–2019; 2017)
		Summer Intensive Research Program	CUNY (since 2019)	Trains social science students in research methods (12 students in 2019; 2017)
		The Harriet and Kenneth Kupferberg Holocaust Center	National Endowment for the Humanities (NEH) and fund-raising	Internship/fellowship project areas include archival research, exhibition development, public programming, and social media/marketing (approximately 6 students per year)
	Support for faculty research	Community College Research Grant program	CUNY	Track 1: Collaborative Research Incentive grants; UR student participation highly encouraged. Track 2: Mentored Undergraduate Research Grants (2016)
		Research in the Classroom Fellows Program	CUNY	Supports projects that integrate authentic research in the curriculum (2016)
		William P. Kelly Research Fellowship Program	CUNY	Provides release time for tenured community college faculty (2014)
		PSC-CUNY Research Award Program	CUNY and Professional Staff Congress-CUNY	Created and funded by the Collective Bargaining Agreement between CUNY and the Professional Staff Congress/CUNY, it supports the research and creative works of full-time instructional staff
		Pedagogical Research Challenge Award	QCC	Focused on research projects that impact student learning outcomes

B	Program name	Description
What makes sustainability possible: Partnerships and collaborations	Council on Undergraduate Research (CUR)	The Community Colleges Initiative is a catalyst for institutionalization efforts; offer support for faculty/students presenting at CUR conferences. Showcases UR activities on its national platform (e.g., Undergraduate Research Week)
	Community College Undergraduate Research Initiative (CCURI)	Funds professional development workshops and conferences; supports networking among UR practitioners. Supports and showcases the works of community colleges on the national stage. QCC has been a partner college since 2016.
	Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)	UR students, faculty, and staff are fully or partially funded to attend and present at its national conference. UR students started a SACNAS chapter in 2016.
	Other	Individual faculty efforts lead to collaborations that help expand the range of UREs in which students can participate. Recent collaborations have involved the Dept of Environmental Protection (DEP), Food and Drug Administration (FDA), Brookhaven National Laboratory (BNL), NYC Parks, and Presencing Institute

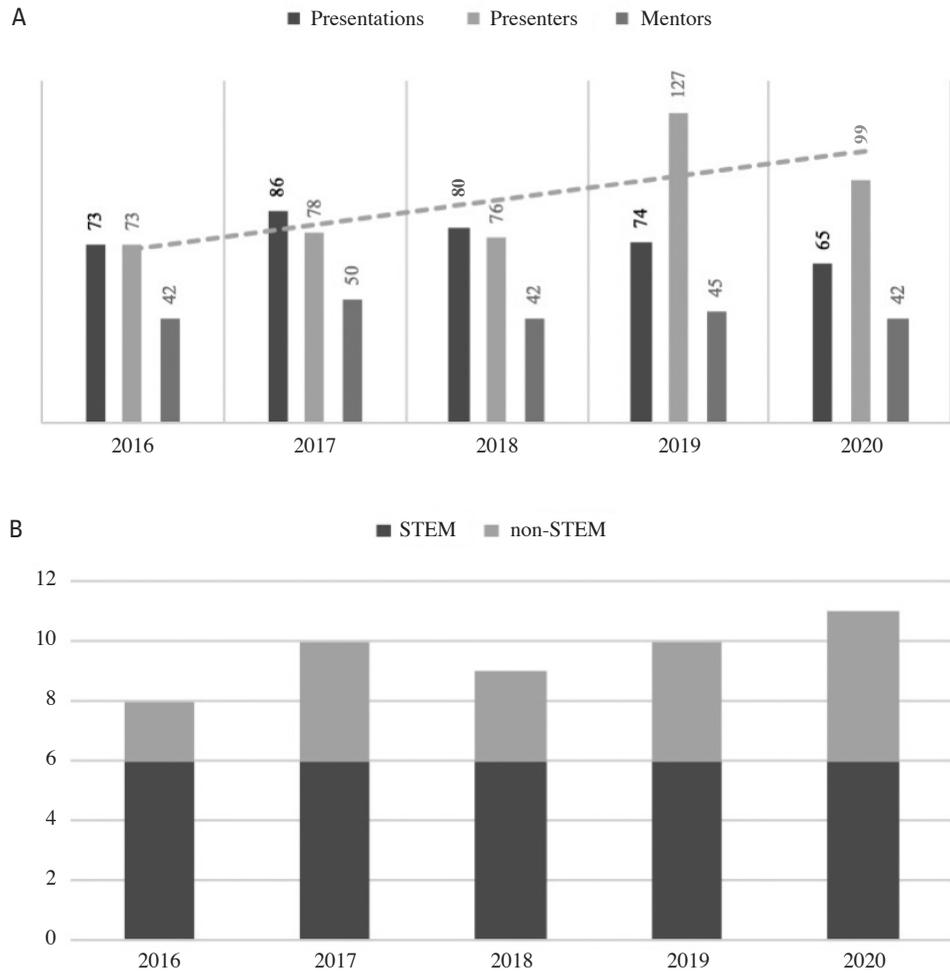
Note: UR = undergraduate research. URE = undergraduate research experience. QCC = Queensborough Community College, CUNY

**FIGURE 4. Impact of UR-HIP Trained Mentors on Student Research Exposure**



Note: Figure only reflects the number of students who have participated in undergraduate research (UR) with UR-HIP trained faculty either in Research in the Classroom (RIC) or Honors/Independent Research courses. HIP = high-impact practice

**FIGURE 5. UR Day Participation, 2016–2020**



Note: Number of undergraduate research (UR) students and mentors (A), and number of departments (B), represented at UR Day. UR Day participants do not represent all QCC students who participate in research.

students present and receive awards at regional, national, and international conferences. Travel may be funded by the research grant, the college, and/or by travel scholarships provided by the conference organizer.

QCC-UR students have received significant recognition for their achievements. Each year, QCC-UR students are accepted into Research Experiences for Undergraduates programs at highly regarded research universities (e.g., University of Pennsylvania, Vanderbilt University, and Columbia University) and participate in summer internships in industrial, national, and research laboratories (see Table 1). QCC students also have coauthored several peer-reviewed publications.

As a result of these extensive UR experiences, QCC students are well-trained and highly competitive for opportunities beyond their QCC experience (Office of Academic Affairs n.d.d). Professional organizations, four-year colleges, and graduate programs have recognized the comprehensive UR preparation of QCC students and therefore recruit QCC students for educational and career opportunities.

### The QCC-UR Faculty Experience

QCC-UR faculty also benefit from their mentoring experiences. UR practitioners recognize both the personal satisfaction and the positive impact on students, and most continue with this HIP after their first experience. Working with student researchers allows faculty to collect and analyze data that may be presented at conferences, published in peer-reviewed journals, and used to apply for additional funding. They may also publish and present the pedagogical aspects of their UR projects that may then be adopted by others. In faculty focus groups, CRSP mentors mentioned that having year-long support resulted in students who were both better trained and more committed to their research (Nerio et al. 2019). In addition, several UR mentors have been invited to participate in external UR initiatives, further enhancing their own professional development.

### The Measurement of UR Impact on Students

Faculty surveys have provided information about the measurement of the impact of UR experiences on students. Individual UR practitioners assess learning outcomes in several ways, including evaluation of laboratory reports, laboratory notebooks, research papers, and presentations. They also use student surveys such as the Undergraduate Research Student Self-Assessment (URSSA), Classroom Undergraduate Research Experience survey (CURE), Survey of Undergraduate Research Experiences (SURE), and Student Assessment of Their Learning Gains (SALG) to track students' self-reported gains. All UR-HIP activities include student reflections. Currently, student assessments and reflections vary by discipline and by individual practitioners; one challenge

that remains is developing a universal assessment of all UR experiences across disciplines and for all modalities of UR. Developing and implementing this assessment is planned for the 2021–2022 academic year.

The impact of CUNY's CRSP program, which supports approximately 240 STEM and social science projects per year throughout all CUNY community colleges, has been evaluated (Nerio et al. 2019); the results showed that participants were significantly more likely to graduate (59 vs. 50 percent) in almost all STEM fields. CRSP participants also demonstrated better retention in STEM and were more likely to transfer to research-active four-year institutions. Surveys of self-reported gains revealed that students felt more connected to their college; many attributed this to the efforts of their mentors.

### Success and Sustainability

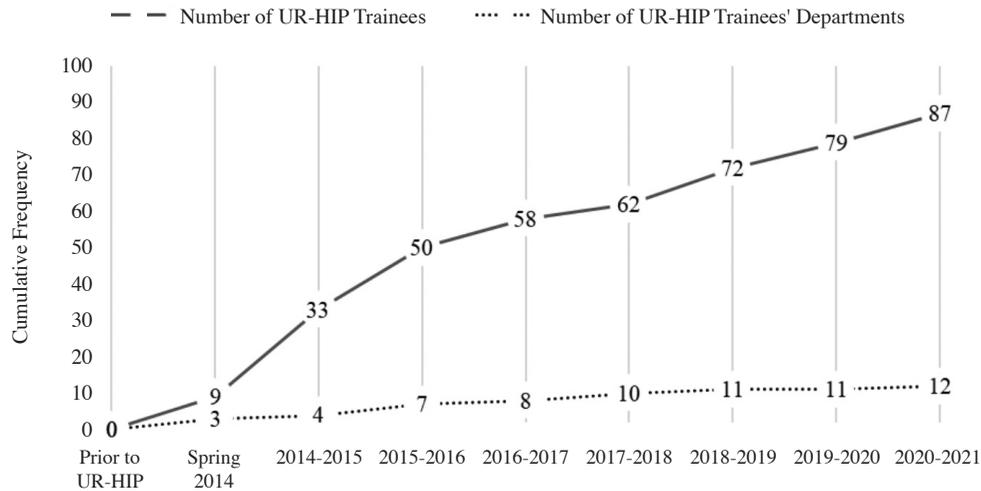
Four main components of the UR program have contributed the most to its success and sustainability:

1. Strong administrative support
2. Faculty buy-in
3. On-campus collaborations
4. External partnerships

Strong administrative support has clearly affected the ability to foster and grow the culture of UR on campus. This includes financial support for UR initiatives and faculty travel; logistical support for promoting UR on campus; and recognition and value placed on UR mentoring in the reappointment, tenure, and promotion process.

Faculty buy-in also has been an integral component of QCC-UR success. The college has adopted an inclusive view of what constitutes UR, recognizes that it can take many forms across disciplines, and encourages an interdisciplinary and transdisciplinary approach. Faculty are given opportunities to attend professional development sessions, check-ins, and other events that offer support throughout the planning and implementation of their UR projects. This has resulted in growth and continuity in UR: about 71 percent of the faculty members (58 out of 82) who have participated in UR-HIP professional development in the period 2014–2019 have continued to implement their UR course designs, affecting large numbers of students. In addition, new faculty continue to attend professional development for UR-HIP each year. To date, 87 faculty members from 12 departments have attended professional development workshops in UR-HIP (see Figure 6). In a spring 2021 UR survey, 23 percent of respondents (40 out of 174) indicated that they have published and/or presented with UR students, or about the impact of UR. In addition, 26 percent of respondents (45 out of 174) are currently implementing RIC or teaching independent research courses. This is consistent with five years of UR

**FIGURE 6. Participation in UR-HIP Professional Development Workshops**



Note: : UR = undergraduate research; HIP = high-impact practices

Day participation data indicating that, in a typical semester, 40–50 faculty engage in UR. It is remarkable that UR activity is being sustained at this level despite the college’s closure and completely remote status for the past year due to the COVID-19 pandemic. The RIC modality has been particularly effective: an average of 400 students engage in RIC in a typical year (see Figure 4).

Another key to QCC-UR’s success has been strong collaboration on campus that includes regular, effective communication among all faculty, staff, and administrators involved to discuss ideas, share information, and collectively support UR initiatives. In addition, several external partnerships—including collaborations with professional organizations, educational institutions, and government agencies that support UR—have resulted in countless opportunities for UR faculty and students that would not have been possible otherwise.

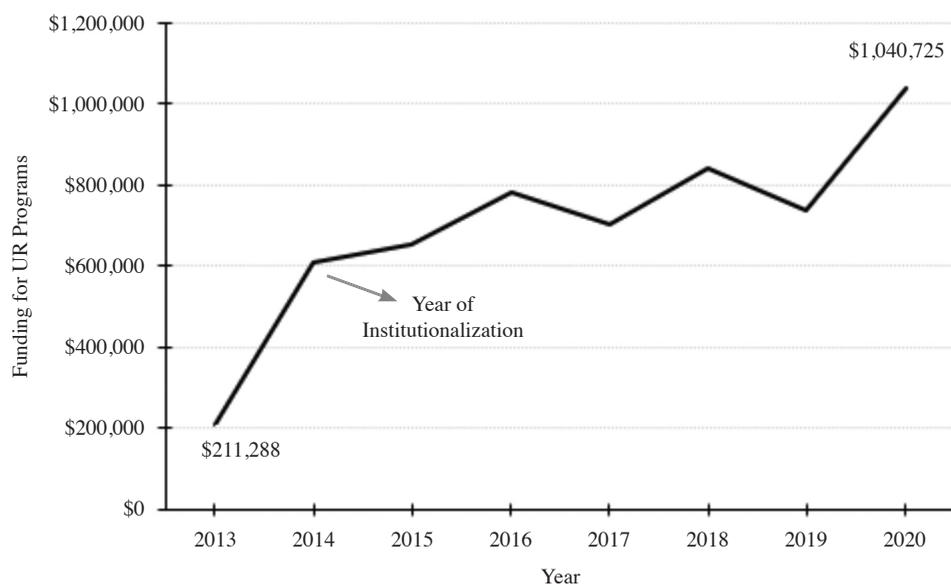
The success of QCC’s UR model is also demonstrated by the growth of research courses in several departments. Between spring 2011 and fall 2013, the Department of Biological Sciences and Geology offered 1–2 sections per year of research courses (8–9 students): since institutionalization, the department has offered an average of 11–12 sections per year that enroll 39–40 students per year from spring 2014 to fall 2020. In the Mathematics and Computer Science Department, no research courses were offered before institutionalization—the department now offers 9–10 sections per year that enroll 12–13 students. Currently, UR courses are offered in 12 academic departments: Art and Design, Biological Sciences and Geology, Business, Chemistry, Engineering Technology, English, History, Mathematics and Computer Science, Nursing, Physics, Social Sciences, and Speech Communication and Theatre Arts.

The increased presence of UR on campus also is reflected in the amount of funding that directly supports UR students (see Figure 7). Grants that include direct support for UR students have increased about fivefold from 2013 to 2020.

### Challenges and Goals

On a recent faculty survey (spring 2019), the three most prevalent challenges identified by UR practitioners were time (41 percent of respondents, or 23 out of 56), lack of resources (20 percent of respondents, or 11 out of 56), and student readiness (12.5 percent of respondents, or 7 out of 56). Both faculty and students noted several other commitments that limit the time available to work on research. In particular, UR in the classroom practitioners mentioned facing challenges in balancing the research component with course content. Several faculty mentors also reported that the college does not have adequate facilities (lab space, supplies, and equipment) to support their research. Many faculty conduct their research at off-campus facilities, and difficulties with student travel, time schedule, and security access to these remote sites prevents the inclusion of QCC students. Student readiness was also mentioned as a challenge: students may lack the requisite skills needed to engage in research. This presents a unique challenge for course-based research when projects must be balanced with traditional course content, and limited time is available for research training.

Despite these challenges, faculty mentors persist in engaging students in UR, as they recognize the benefits to both students and to their own professional development (Laursen et al. 2010). QCC-UR has remained an integral part of the campus culture even during the pandemic as faculty have continued to engage students remotely.

**FIGURE 7. Growth in Funding for UR Programs on Campus**

Note: : UR = undergraduate research. The figure reflects funding for programs that provide student stipends.

To address these challenges and increase the number of practitioners across all disciplines, the QCC-UR program seeks to expand the methods of support to faculty and students. Specific program goals include (1) developing a uniform assessment plan to measure the impact of UR and inform future initiatives; (2) promoting UR across all disciplines, with particular focus on the research in the classroom modality; and (3) increasing awareness of UR opportunities (conferences, funding resources, and publications) for both mentors and students, especially in non-STEM disciplines.

### Summary

By institutionalizing UR as a HIP, QCC increased and diversified the opportunities for students to participate in meaningful research. The college has successfully grown UR to include authentic research embedded into the curriculum (resulting in an increase in the number of students reached) and created a student-centered and learning-centered approach to UR that stands across disciplines and research modalities. The UR infrastructure that has been built over the years provides students with a strong research background and a valuable skill set that will contribute to their success at a four-year institution and beyond. Recognition of QCC's successful UR program by institutional partners has led to collaborative research and professional development opportunities for faculty as well as scholarly and career opportunities for students. The QCC-UR program has been made sustainable by strong internal support as well as successful partnerships with outside organizations. The successful structure established by QCC can serve as a model for other institutions that seek to create or enhance UR programs on their campuses.

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*Joan Petersen is a professor of biology, coordinator of the Environmental Science Program, and the UR-HIP coordinator at QCC. She has mentored many students via the apprenticeship model as well as in course-based research. In addition, she has worked extensively with local high school students and has engaged precollegiate students in course-based research. She is a currently a CUR Biology Division Councilor.*

*Maria Mercedes Franco is an associate professor of mathematics. In 2013-2014, she co-led institutional efforts that established UR-HIP and launched the research-in-the-classroom modality on campus. Between 2014-2016, Franco served as UR-HIP coordinator and founding campus director for the CUNY Research Scholars Program and was instrumental in securing QCC’s participation in CCURI. She is co-principal investigator/co-director of MSRI-UP and CURM, two NSF-funded programs that support UR and address issues of underrepresentation in the mathematical sciences.*

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*Shiang-Kwei Wang, vice president of academic and student affairs at Harold Washington College, City Colleges of Chicago, served as QCC’s dean for research in 2018–2020. She was responsible for expanding and developing research activities and creative works on campus, ensuring compliance with federal legislation and CUNY policies, and for supporting QCC’s research mission. Her research focuses on the impact of new media and technology on learning motivation and performance.*