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# Remote Supergroup for Chemistry Undergraduates: An Inclusive Scientific Community for Primarily Undergraduate Institutions

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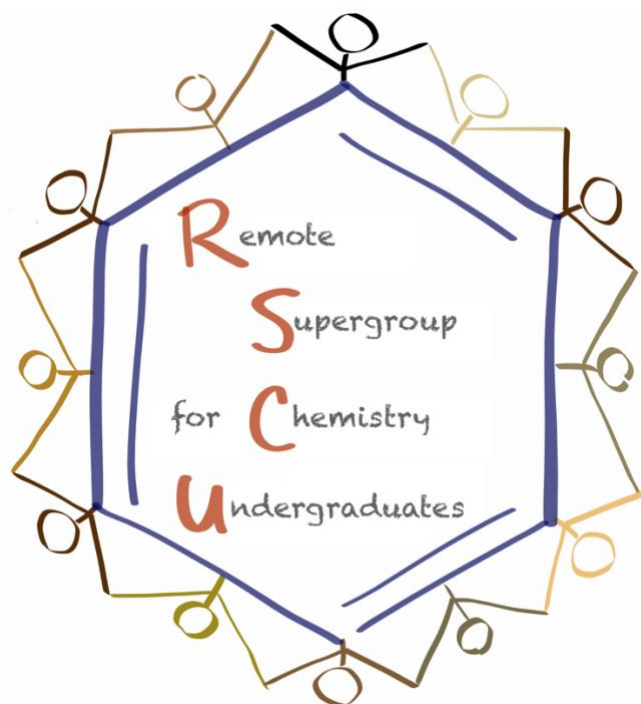
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## ABSTRACT

The Remote Supergroup for Chemistry Undergraduates (RSCU) is a community of students and faculty from primarily undergraduate institutions that aims to (1) engage students in discussions of chemical  
15      research, (2) inform students of further educational and career pathways, (3) increase awareness and  
discourse of equity issues in science, and (4) foster scientific community across institutions. RSCU  
engaged participants in impactful virtual activities during the summer of 2020 when the COVID-19  
pandemic precluded in-person undergraduate research experiences, and the program continued in  
2021 as in-person research resumed. Results from self-reported surveys show that RSCU successfully  
20      achieved its aims both years, and both students and faculty research mentors benefited from  
participation. The diverse activities and scientific network cultivated by RSCU complement  
undergraduate research experiences and could be adapted to other disciplines.

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## GRAPHICAL ABSTRACT



### KEYWORDS

General Public, Upper-Division Undergraduate, Interdisciplinary/Multidisciplinary, Distance Learning, Communication, Undergraduate Research, Learning Theories, Minorities in Chemistry

### INTRODUCTION

As the COVID-19 pandemic disrupted teaching and research laboratories in early 2020, chemistry educators responded by designing remote laboratory activities, incorporating new technologies, and reconsidering the role of laboratory learning.<sup>1,2</sup> The transition from in-person, hands-on laboratory experiments to remote instruction proved challenging, and consequently, many undergraduate research experiences and internships were cancelled or deferred, while others pivoted to virtual work. For instance, during the summer of 2020, only ten of the National Science Foundation's (NSF) approximately 60 chemistry Research Experiences for Undergraduates (REU) sites continued with summer research, and only one of these sites undertook in-person activities, according to reports by *Chemical and Engineering News*.<sup>3,4</sup>

The cancellation of summer programs negatively impacted undergraduate students, who lost scientific training, summer income, and career-informing opportunities.<sup>5</sup> Students of all backgrounds

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who participate in undergraduate research report wide-ranging positive outcomes, including gains in cognitive (e.g., formulating research questions, analyzing data), affective (e.g., increased confidence, self-efficacy), behavioral (e.g., developing scientific identity, belonging to scientific community), and practical skills both in (e.g., taking measurements, executing experiments) and outside of the laboratory (e.g., reading primary literature, presenting findings).<sup>6–12</sup> Accordingly, undergraduate research experiences are recognized as “one of the most powerful instructional tools” in science education.<sup>13,14</sup> Furthermore, mentored research experiences integrate undergraduate students into STEM fields and have been correlated with persistence in science, particularly for students from historically marginalized groups.<sup>8,12,15–18</sup> Given the substantial benefits to individual students and potential of undergraduate research experiences to broaden the diversity of the field as a whole, a complete loss of these formative opportunities due to the pandemic would likely negatively impact the future of chemistry.

Though developing laboratory skills is often a focal point of undergraduate research in the chemical sciences, many measured student outcomes could in principle be achieved without access to a physical laboratory. In 2020, chemistry educators created imaginative solutions to involve students in remote summer research activities such as devising new projects or incorporating computational methods into ongoing research. Others reviewed the literature, planned experiments, or watched video protocols, providing students with background knowledge to formulate research questions.<sup>19,20</sup> Virtual conferences, symposia, and poster sessions were also organized, and the rapid transition from in-person meetings furnished useful insights on how to conduct remote events effectively.<sup>21,22</sup> Notably, a few NSF REU and Summer Undergraduate Research Experience programs accommodated more students than in a typical year by offering virtual programming that included professional development activities, seminars, and virtual lab tours.<sup>3</sup>

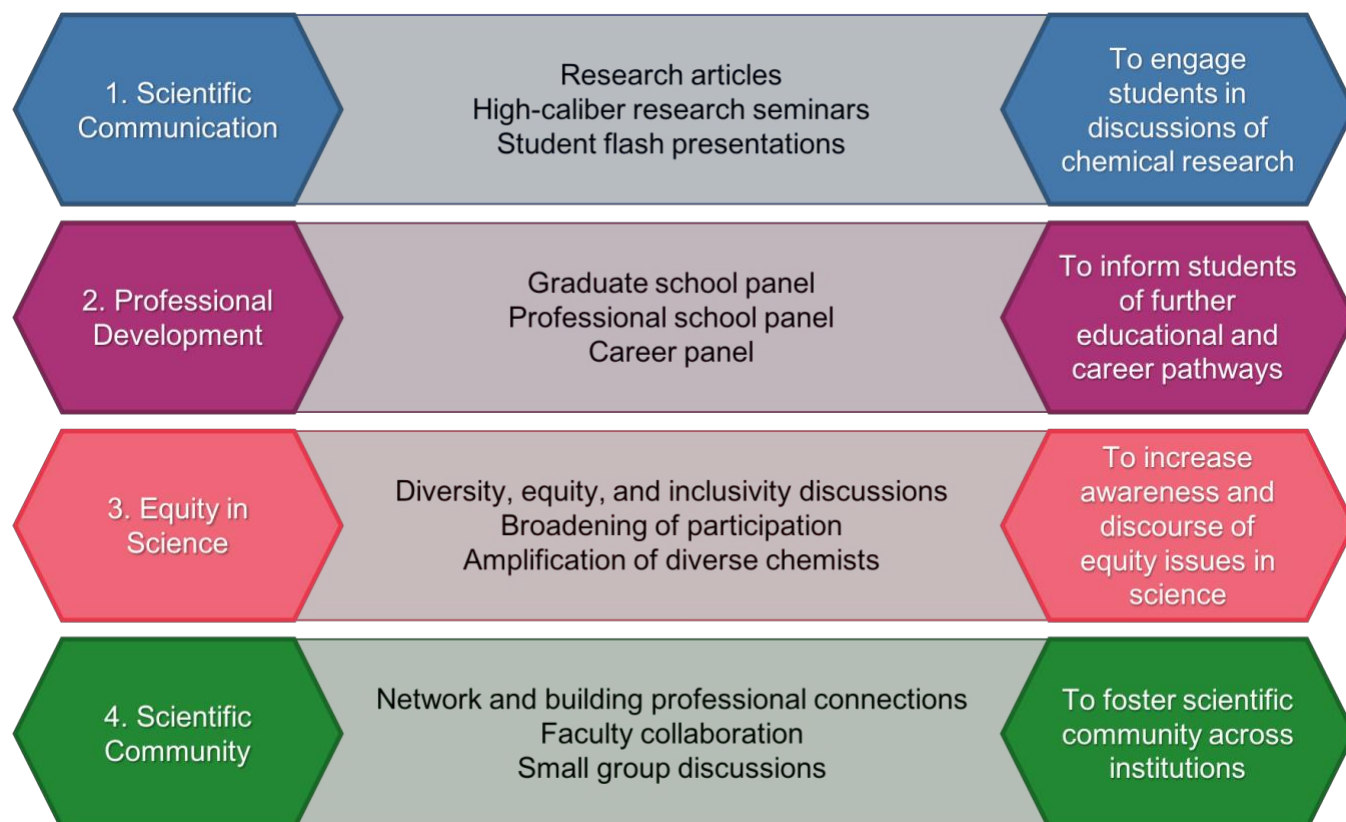
As professors at primarily undergraduate institutions (PUIs), we aimed to productively engage our summer research students beyond simply reframing individual projects. To afford many of the benefits of traditional research experiences in a remote setting, we designed a virtual, multi-institutional program incorporating high-impact activities such as research seminars tailored to undergraduates, explorations of postgraduate opportunities, and examinations of disparities in science. We envisioned this program would supplement undergraduate research experiences and facilitate networking across

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PUIs that is valuable well beyond the isolation due to the pandemic. In 2020, we established the Remote Supergroup for Chemistry Undergraduates (RSCU), a community of chemistry students and research mentors from 18 PUIs, which bolstered undergraduate summer research during the disruption of COVID-19.<sup>23,24</sup> As many in-person laboratory experiences were reinstated in 2021, the  
75 supergroup program continued to enhance research experiences at PUIs. Here we describe the objectives, organization, implementation, and outcomes of RSCU as an impactful program that provides a template for fostering and broadening scientific communities.

### DESCRIPTION OF SUPERGROUP

The objectives of RSCU are (1) to engage students in discussions of chemical research, including  
80 both that of established scientists and their own work, (2) to inform students of further educational and career pathways, (3) to increase awareness and discourse of equity issues in science, and (4) to foster scientific community across institutions. The nine-week summer series featured activities that would both provide an enriching experience for students and translate well to a virtual environment (Scheme 1). Weekly virtual meetings were held via Zoom, and each 60–90 minute-meeting included a  
85 short presentation on a diversity, equity, and inclusion (DEI) topic; a keynote or panel presentation (Table 1); and optional breakout discussions. Other asynchronous communication, file sharing, and online sign ups were conducted using Basecamp and Google Sheets.<sup>25</sup> In 2020, the group was intentionally kept to a modest size (50–80 participants from 18 different institutions) and was developed primarily through personal contacts. Additional promotion through Twitter and department-  
90 wide email announcements in 2021 enabled broader participation of students not affiliated with a research group.



Scheme 1. Summary of supergroup objectives and activities.

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**Table 1. Outline of keynote or panel presentations**

| Activity                         | Number of sessions (2020) | Number of sessions (2021) |
|----------------------------------|---------------------------|---------------------------|
| Research seminars by R01 faculty | 3                         | 2                         |
| Research seminars from industry  | –                         | 1                         |
| Research seminars by PUI faculty | 1                         | 1                         |
| Other activity by PUI faculty    | 1                         | –                         |
| Student flash presentations      | 1                         | 1                         |
| Panel discussions                | 3                         | 2                         |
| DEI-related seminar              | 1                         | 1                         |

### Scientific Communication

During a typical undergraduate research experience, students practice scientific communication by reading the primary literature, attending research seminars, presenting results, and/or preparing a manuscript. The skills developed from these activities are essential for STEM careers; therefore, RSCU integrated numerous engaging communication opportunities into the summer curriculum. Seminars are commonplace at research institutions; however, PUIs often encounter obstacles to bring speakers to campus due to geographical or financial constraints. With the consortium of institutions and virtual

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format organized by the supergroup, we were emboldened to invite a diverse range of prominent  
105 scholars to share their research and experience. Speakers represented a variety of chemistry  
subdisciplines from academia and industry to engage participants with varied interests and introduce  
students to different fields.<sup>25</sup>

To promote interaction between the undergraduate students and virtual guests, speakers provided  
a representative research article related to the seminar topic for participants to read beforehand.<sup>26–33</sup>

110 This exercise allowed students to examine journal articles and formulate questions before the meeting,  
which has been reported to boost student engagement.<sup>34,35</sup> The lecture then reinforced important  
scientific concepts, and guest speakers often clarified further or provided details not included in the  
literature. Moreover, many speakers used the opportunity to share their personal experiences and to  
promote graduate or internship programs to talented undergraduates from across the country.

115 RSCU also invited participating students to introduce their research to the supergroup in short  
two-to-three-minute presentations. This flash presentation or elevator pitch format challenged  
students to succinctly describe the purpose of their projects and afforded an opportunity to present to  
a broad, affable scientific community. Following the seminars and presentations, participants asked  
questions and continued the dialogue in smaller breakout sessions.

#### 120 **Panel Discussions**

Early career exploration and network building empower students, regardless of the stage of their  
studies, to discover and achieve their career aspirations.<sup>36,37</sup> Because undergraduate research  
experiences promote student interest and persistence in scientific careers,<sup>12,15–17</sup> we organized three  
panel sessions for separate RSCU meetings to illustrate the breath of possible educational and career  
125 paths available: (1) graduate school panel, (2) professional school panel, and (3) career panel.<sup>38</sup>

Panelists from various backgrounds, demographics, institutions, career stages, and positions were  
invited to share their perspectives.<sup>25</sup> Panel discussions were driven by student questions with  
facilitation by a RSCU faculty moderator. Panelists provided valuable advice for both students  
discerning future educational and career plans and faculty who advise students during their career  
130 development. After each panel discussion, panelists were divided into breakout rooms where students  
could speak with guests further based on their interests, facilitating interactions and building  
professional connections and a sense of community.

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### Diversity, Equity, and Inclusion (DEI)

In the days leading up to the first supergroup meeting in the summer of 2020, we recognized the urgency to address the renewed momentum of the Black Lives Matter (BLM) movement. We considered RSCU as an opportunity to educate ourselves, cultivate inclusivity within the field of chemistry, and encourage participants to examine their own behaviors and biases. Therefore, each meeting included a short presentation by a RSCU faculty participant on DEI-related issues, such as the demographics of STEM fields,<sup>39–41</sup> bias and disparities in hiring and funding,<sup>42–44</sup> accessibility of laboratories for people with disabilities,<sup>45,46</sup> and bias in standardized tests.<sup>47,48</sup> As with the research seminars, a journal article or editorial related to the DEI subject was shared with participants to read in advance of the meeting.<sup>25,45–52</sup>

In 2020, the DEI presentations formed the basis for further small group discussions in breakout sessions. Together, students and research mentors brainstormed ideas to improve inclusivity in their own research labs and campuses, resulting in a compiled list of actions. In 2021, we intentionally invited more Black, Indigenous, and People of Color (BIPOC) and LGBTQ+ scholars to present research seminars and incorporated a workshop focused on microaggressions.<sup>25,53</sup> We also requested financial support from our respective universities to provide honoraria for guest speakers and panelists so as not to rely on unpaid labor of historically marginalized groups.<sup>54</sup> These efforts to learn from and amplify the voices of scientists from marginalized groups introduce undergraduate participants to STEM role models and may inspire changes in chemistry.

### Scientific Community

Social integration and sense of belonging to a scientific community impact persistence in STEM fields, which is particularly important for students from historically underrepresented groups.<sup>12,16</sup> Thus, the supergroup brought together student and faculty scientists in a virtual setting to foster a scientific community across PUIs with multiple avenues for engagement and interaction. RSCU included participants from public and private institutions throughout the United States and the People's Republic of China,<sup>25</sup> allowing students to broaden their network and perspectives beyond the scope of their own research laboratory and institution. To facilitate interpersonal interactions, participants were invited to join optional small group discussions in Zoom breakout rooms during the last portion of each RSCU meeting for informal conversations about research seminars, panel discussions, DEI presentations, or other casual matters. Invited guest speakers and panelists also

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often took part in the breakout discussions, providing opportunities for students to ask additional questions and connect with distinguished scholars.

165 The RSCU network aimed to benefit both student and faculty participants as they built professional connections, interacted with other scientists, and engaged in scientific discourse. Apart from the social isolation resulting from the COVID-19 pandemic, scholars from PUIs face unique challenges as they are often the solitary expert in their subdiscipline at a given institution. Consequently, faculty were eager to commune with one another and establish a supportive,  
170 collaborative community, and RSCU organized separate virtual meetings for faculty to share strategies for teaching and research.

## ASSESSMENT

Studies examining the impact of undergraduate research experiences often rely on self-report surveys. Despite criticisms to this approach,<sup>55</sup> surveys provide valuable insight into important  
175 outcomes that are not readily assessed using direct measures, including attitude toward science, confidence, and intention to pursue a scientific career.<sup>8,56</sup> Furthermore, reliable, validated self-report survey instruments have been developed to evaluate undergraduate research experiences.<sup>8,11,57,58</sup> To assess RSCU, we designed two surveys—one for students and one for faculty—based on these previously established methods to interrogate the four RSCU objectives discussed above. The student  
180 survey incorporated questions modified from validated instruments to collect data about self-reported learning gains after participating in RSCU. Separately, the faculty survey asked research mentors to report their perception of student gains and connections made during the remote experience. The finalized surveys consisted of Likert-scale items and open-ended questions and were administered online via Google Forms.<sup>25</sup> Furthermore, this study was approved by the Washington and Lee  
185 University Institutional Review Board for Research with Human Subjects, and all subjects gave their informed consent before participating in the study. Participants completed the anonymous online surveys within a week of the last meeting of RSCU, and for their participation, survey respondents received a RSCU sticker and were entered into a raffle to win a \$25 gift card. Full assessment data are available in the supporting information.

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## RESULTS AND DISCUSSION

### Participation

In 2020, the supergroup was comprised of students and faculty from 18 public and private PUIs located in 14 U.S. states and the People's Republic of China. The supergroup expanded slightly in 2021 to include participants from 23 PUIs; however, the average weekly attendance decreased from 68 participants in 2020 to 52 participants in 2021. We attribute this decline in measured attendance to two factors: (1) in contrast to 2020, the majority of participants were also involved in in-person research activities during the summer of 2021 and (2) participants often joined the online meeting in small groups using a single Zoom login, leading to an underestimate of actual attendance.

Prior to their participation in RSCU, most student respondents in 2020 (54%) had participated in multiple semesters and/or at least one summer of research; however, in 2021, only 34% of the students had comparable research experience. Moreover, a few students who were not affiliated with a research group in 2021 were able to participate in RSCU and reported similar learning gains. The demographics indicate the RSCU student participants included more underrepresented groups than the broader field of chemistry. To illustrate, a majority of RSCU student respondents self-identified as female (63% in 2020 and 59% in 2021), whereas women earned 49% of chemistry bachelor's degrees in 2016.<sup>40,59</sup> Likewise, RSCU included 19% Hispanic or Latino/a and 28% Asian students in 2021, whereas these groups represent 10% and 13%, respectively, of earned bachelor's degrees in 2016. Additionally, many student respondents were first-generation college students (34% in 2020 and 28% in 2021). Faculty respondents were mostly male and white, and most were assistant professors mentoring 1–5 student participants. The authors, who identify as female, did not participate in the survey; therefore, adjusted faculty demographics would be 53% male in 2020 and 47% male in 2021.

### Scientific Communication

Evaluation of the scientific communication program components suggest that reading the journal article in combination with attending the research seminar was an effective strategy to increase student engagement. Students reported good or great gains (78% in 2020 and 66% in 2021) in “understanding journal articles”, and the majority of students noted moderate, good, or great gain in their “confidence in developing and asking questions related to the literature” (Figure 1a). In response to an open-ended item, one student independently summarized a key objective of RSCU:

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220 This whole thing really did help me learn a little better about how to pull information  
from articles that is actually relevant. It was cool being able to read the articles before  
hand [sic] and hear from the presenters what they themselves feel was important and  
elaborate on it.

In contrast to students' self-reported gains in understanding journal articles, faculty perceptions of  
student gains in this area were more varied. Only 53% of faculty responded "agree" or "strongly agree"  
225 to the statement, "RSCU increased my research students' understanding of journal articles" in 2020  
(64% in 2021, Figure 1b). Several free responses indicated that faculty thought students did not read  
the articles, and others suggested incorporating guiding questions or facilitating discussions of the  
article to increase engagement.<sup>34</sup> Nevertheless, the high-caliber research seminars tailored to PUI  
students were a favorite RSCU element among faculty participants.

230 Students also noted improvements in interactive scientific discussions and presentations. In both  
years, 81% of student participants reported good or great gain in "comfort in discussing scientific  
concepts with other people". In response to "explaining my project to people outside my field", about  
68% reported good or great gains each year (Figure 1a). Many students who participated in the  
voluntary short flash oral presentations acknowledged the value of the experience. As one student  
235 noted, "Preparing a concise way to explain something complex really made me hone in on what's  
important, and I feel like I'm better prepared for interviews." Another student commented:

I thought that it was extremely beneficial for me to familiarize myself with explaining my  
research in a short, concise manner. I really do believe that in order to do such a thing,  
you have to fully understand your work thoroughly enough to relay the major points. I  
240 also really enjoyed seeing other students present their work. Seeing how accomplished  
my peers are further helped me appreciate being a part of RSCU.

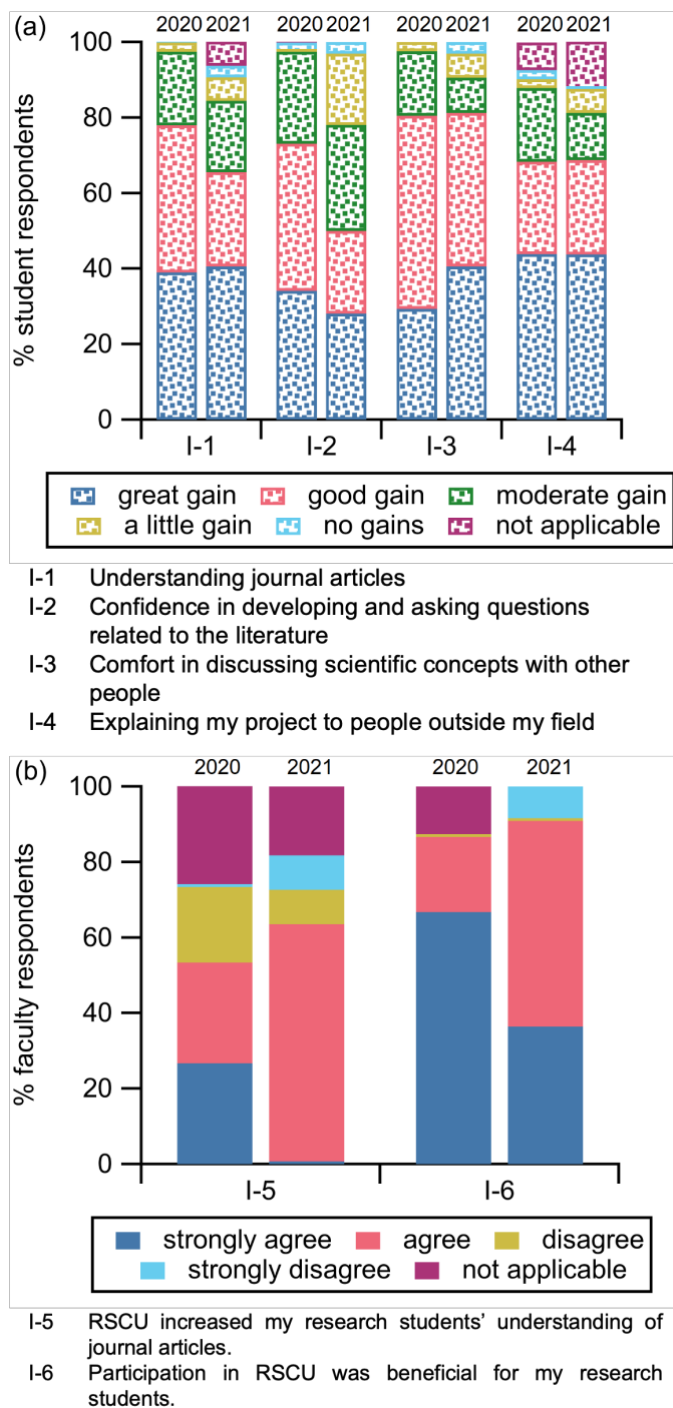


Figure 1. Responses to selected post-RSCU survey questions. (a) Student responses regarding discussions of chemical research. (b) Faculty research mentor responses regarding perceived student gains.

### Career Development

The panel discussions received highly positive feedback from both student and faculty participants. Among student participants, the panels were a favorite component of the RSCU program.

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In both summers, over 95% of student respondents agreed or strongly agreed with the statement “I am  
250 more informed about what I can do with my degree”, and over 90% agreed or strongly agreed with “I  
am more informed about how to pursue and succeed in graduate school/professional school/career  
opportunities” (Figure 2). By hearing the perspectives of many panelists, students may view the  
various educational and career pathways as more attainable. One student remarked on the diversity of  
the panels commenting, “Everyone that spoke, even the students, had something unique to bring to  
255 the table and it really was a pleasure to broaden my mindset over the last weeks.” Another student  
mentioned:

I gained so much knowledge about education after undergrad... it was so nice to be able  
to talk to someone that was just in my shoes and is living the life I hope to be living in  
just a couple of years.

260 Congruent with the outcomes of other undergraduate research experiences,<sup>8,11</sup> our results suggest  
that the RSCU program provided career-informing opportunities. The post-RSCU survey indicated that  
students agreed or strongly agreed that “this experience has confirmed my interest in my field of  
study” (88% in 2020 and 91% in 2021), and the majority of students reported that “this experience  
has helped me clarify my career path” (over 78% responded “agree” or “strongly agree” in both 2020  
265 and 2021, Figure 2). Additional longitudinal studies would determine the long-term impacts and  
career trajectories of student participants.<sup>7,16</sup>

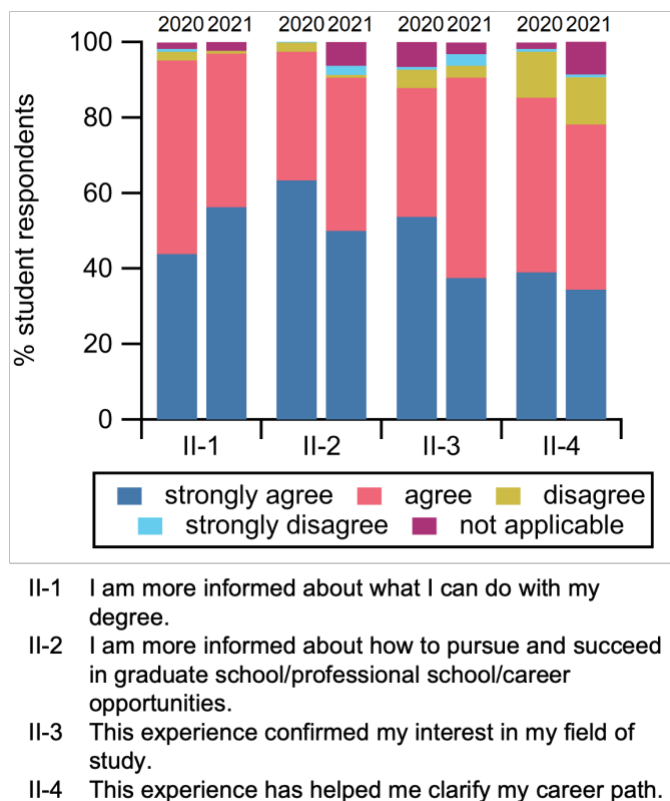


Figure 2. Student responses to selected post-RSCU survey questions regarding educational and career pathways.

### Inclusivity in Science

The survey results reveal the DEI activities were effective in increasing awareness of equity issues in science, and the supergroup fostered an inclusive community. In response to the statement, “I am more aware about equity issues facing the scientific community”, over 90% of students and faculty selected “agree” or “strongly agree” in 2020 and 2021 (Figure 3). Over 86% of both student and faculty respondents agreed or strongly agreed that they “have ideas on how I can contribute to a more equitable environment” after the summer programs. As one student noted, “The highlights on these issues in science really opened my eyes up to them and helped me learn more about how to face the challenges at my own university and lab.” Faculty mentors learned from the experience as well, as the majority of faculty respondents agreed that they are “more comfortable leading and participating in discussion about equity with my students.” Though discussions of DEI topics are often challenging, student participants were very receptive, and additional faculty training may encourage more mentors to lead these conversations.<sup>60,61</sup>

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Our results suggest that brief presentations inform and provide a starting point for meaningful discussions about DEI obstacles and progress, and RSCU affords a unique opportunity to educate, advocate, and build an inclusive community. To educate ourselves further, the summer 2021 program included a meeting dedicated to cultural competency training on microaggressions, which was well received by both student and faculty participants. For future iterations, we will continue to invite other DEI specialists to present seminars as there is a need to continue these important discussions more broadly. The summer supergroup meetings represent one of many ongoing efforts to improve the culture of the field,<sup>62–65</sup> and together, these initiatives present a hopeful outlook for future generations of scientists.

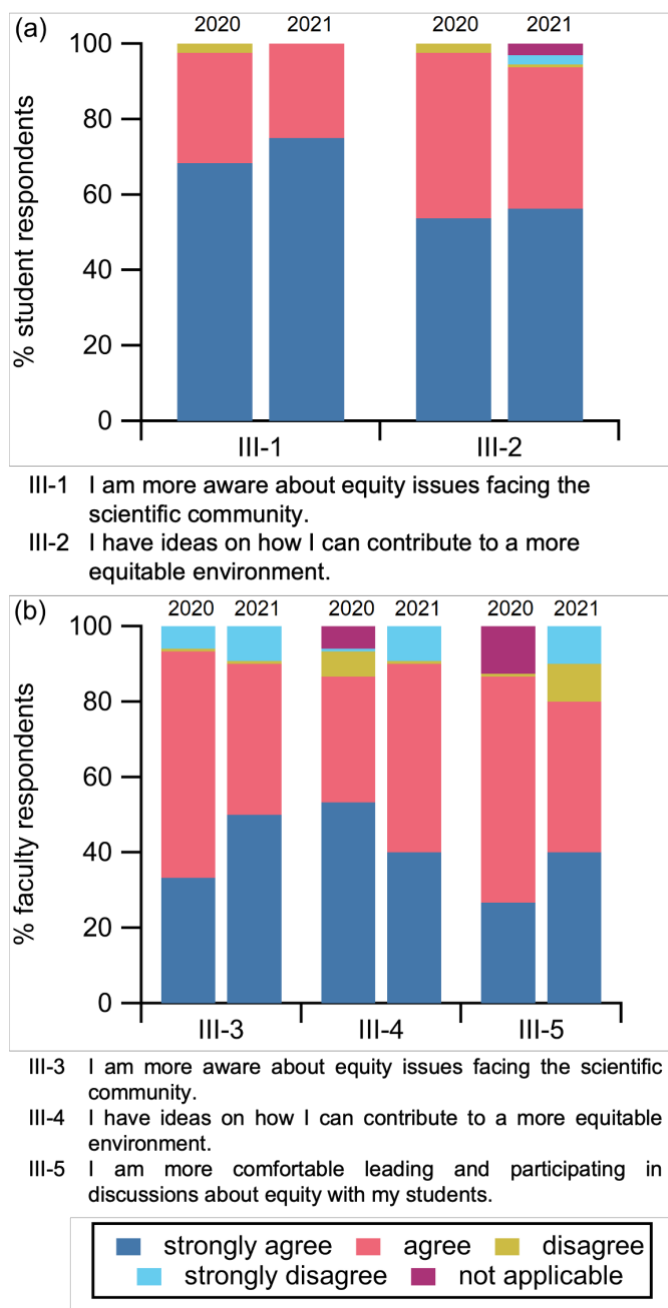


Figure 3. Responses to selected post-RSCU survey questions regarding equity in science from (a) students and (b) faculty research mentors.

## 295 Community and Networking

Based on the self-reported surveys, RSCU was successful in fostering scientific community across institutions. Notably, students reported good or great gain (93% in 2020 and 88% in 2021) in “feeling part of a scientific community”, and in both years, over 93% agreed or strongly agreed that they “felt included as a valued member of the RSCU community” (Figure 4a). Additionally, over 97% of

300 student respondents agreed or strongly agreed that they are “more confident in my identity as a  
scientist”. In response to an open-ended question, one student stated, “I think that RSCU is a  
wonderful opportunity to start to see that you are actually a part of the scientific community and  
meeting others that are as well.” These results suggest the virtual format and remote network are  
effective approaches for promoting students’ sense of belonging to a scientific community, which has  
305 important implications for supporting a diverse group of future scientists. As one faculty member  
noted in a free response:

This type of format shows that conference-style events aren't always necessary to  
establish a nice learning environment. Something remote, once a week, but still  
inclusive, is a great way to bring different groups together.

310 The small group discussions received mixed feedback from students – many mentioned that  
meeting students and scientists from other institutions was their favorite part about RSCU, while  
other students criticized the awkwardness of Zoom breakout rooms. The majority of student  
respondents, however, reported gains in “confidence in networking with students and faculty at other  
institutions”. Furthermore, in response to the statement, “I enjoyed interacting with scientists from  
315 other universities”, over 93% of students and 81% of faculty responded “agree” or “strongly agree” in  
both 2020 and 2021 (Figure 4).

Responses from the faculty survey provided evidence that research mentors also benefited from  
supergroup participation. In both years, over 86% of faculty respondents agreed or strongly agreed  
that they “feel more connected to other PUI faculty” (Figure 4b). Many faculty participants also  
320 reported that they “made connections that will help me in the future” (87% in 2020 and 70% in 2021)  
and stated the connections and community were highlights of the experience. One research mentor  
concluded, “I had a great experience. It's helped me embrace networking and developing connections  
with other PUI faculty, which are valuable aspects of this career”. Together, these results suggest this  
scientific community among PUIs is important for personal, professional, and scientific development  
325 for all participants, even as in-person research and educational opportunities resume.

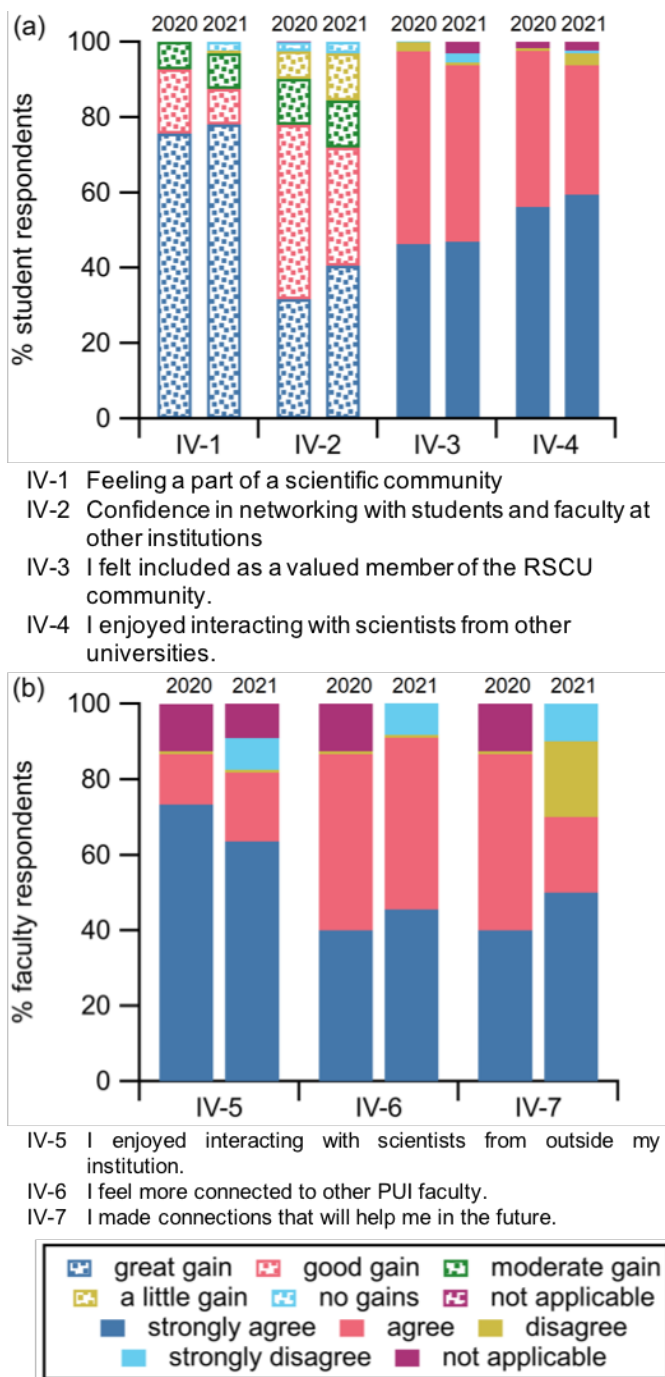


Figure 4. Responses to selected post-RSCU survey questions regarding scientific community from (a) students and (b) faculty research mentors.

### Overall Perspectives

The results from the anonymous online surveys assessing RSCU were highly positive and suggest the objectives of RSCU were achieved. In both 2020 and 2021, over 90% of students and faculty

research mentors selected “agree” or “strongly agree” in response to the statement, “The overall experience participating in RSCU was beneficial.” Likewise, the vast majority of faculty agreed or  
335 strongly agreed that “participation in RSCU was beneficial for my research students” (87% and 91% in 2020 and 2021, respectively, Figure 1b). When asked to comment on their overall experience with RSCU, student and faculty participants alike provided many affirmative statements,<sup>25</sup> including:

- I really enjoyed being a part of RSCU. It made me feel important and I loved  
340 having the opportunity to expand my research knowledge and think about research that other universities and students are doing... It was a great way to open my horizons about future pathways and just becoming more comfortable speaking about research. –Student respondent
- I wasn’t sure what I was expecting going into it, but I’m so glad I attended. I  
345 learned so much about various research. I learned about possible career paths and graduate schools I might be interested in. The whole experience was so educational and encouraging. I felt heard and seen as a woman in science! – Student respondent
- [F]antastic! I loved the research discussions and the chance to see students ask  
350 questions and meet one another. –Faculty respondent

In 2021, survey respondents were also asked to comment on the “benefits and/or drawbacks of participating in RSCU while also participating in in-person research”. The most commonly mentioned drawback was the timing of the meetings. Laboratory time during the summer months is invaluable, especially at PUIs where both student and faculty investigators have significant course commitments during the academic year. Nonetheless, several research mentors speculated that planning  
355 experiments around meetings was a useful exercise for students, and others suggested the combination of laboratory research with RSCU was advantageous. In 2021, 94% of students and 91% of faculty responded “agree” or “strongly agree” to the statement, “RSCU added unique aspects to my summer research experience”, and the majority of faculty research mentors reported that they “intend to participate in this supergroup next summer, regardless of whether my research is remote or in-  
360 person.” This feedback, in combination with the highly positive assessment results in both 2020 and 2021, suggest that RSCU complements in-person laboratory research experiences at PUIs and is worth continuing.

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## CONCLUSIONS AND OUTLOOK

365 The Remote Supergroup for Chemistry Undergraduates implements high-impact activities in a virtual setting that engage and benefit students and research mentors at PUIs both in lieu of and in addition to in-person laboratory research experiences. Post-RSCU evaluation surveys in 2020 and 2021 indicated the objectives of RSCU were successfully realized, and student participants achieved many positive cognitive and affective outcomes associated with traditional undergraduate research experiences. Specifically, students reported gains in understanding the scientific literature, discussing scientific concepts with others, clarifying their career path, and feeling part of a scientific community. While a remote program cannot replace in-person, hands-on laboratory experience, the supergroup provides impactful programming that enhances collaborations and undergraduate research experiences at PUIs. We also discovered vast benefits as a result of the network created among PUIs, 375 including broadening the experiences of students, building connections among faculty and students, and supporting a diverse scientific community. Future iterations of RSCU will assess other possible impacts of the program, including the long-term benefits to participants and variations in student experiences based on demographics.

Importantly, RSCU serves as a model to build professional communities and broaden participation 380 that is applicable to both chemistry and other disciplines. Using collaboration tools that are available online,<sup>25</sup> the format of RSCU is readily adaptable to a variety of disciplines by tailoring keynote and panel presentations and DEI discussions to other areas of expertise. Moreover, our work demonstrates that a virtual setting and remote network are effective in fostering community among students and faculty at PUIs. Teacher-scholars at small or secluded institutions with likeminded objectives to 385 advance students' professional growth and network may therefore benefit by creating similar virtual communities.

## ASSOCIATED CONTENT

### Supporting Information

The Supporting Information is available on the ACS Publications website at DOI:  
390 10.1021/acs.jchemed.XXXXXXX.

Details on the organization of the supergroup and complete survey results (PDF)

Student and faculty survey responses (XLS)

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