Northwestern

OFFICE OF UNDERGRADUATE RESEARCH

2019-20 ANNUAL REPORT

FOR: DR. MIRIAM SHERIN, ASSOCIATE PROVOST FOR UNDERGRADUATE EDUCATION AND THE OFFICE OF UNDERGRADUATE RESEARCH ADVISORY COUNCIL

PREPARED BY THE STAFF OF THE OFFICE OF UNDERGRADUATE RESEARCH

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The Office of Undergraduate Research (OUR) stands in solidarity as the world cries out against the systemic racism and inequality experienced by the Black community. We have been listening, learning, and consulting with colleagues, including Sekile Nzinga, interim chief diversity officer and associate provost of diversity and inclusion and director of the Women’s Center, with whom we remain in dialogue. As Northwestern advances its own commitments to social justice, we in OUR state our commitments to engaging more fully in anti-racist practices and to becoming better community partners and advocates both now and for the long term through our engagement with undergraduate researchers across campus.

As a unit, the OUR recognizes that advancing an anti-racist agenda begins with a necessary examination of our daily work. Research creates knowledge that can transform and improve lives, but we must also acknowledge that there is a history of research and research practices that contributed directly to the systemic racism and inequalities we continue to fight today. From the U.S. Public Health Services’ infamous Tuskegee Study and Guatemala experiments that began in the 1930s and 1940s to the many biomedical discoveries in the past six decades that would not have been possible without Henrietta Lacks, whose cells were taken without her consent, bias and racism have and do show up in research. We do not aim to present an exhaustive list here, but rather to acknowledge that there are unfortunately far more examples than we could share in this one message. Today, the intersections among race, racism, bias, and research also surface in recent discussions about COVID-19, including in concerns about colonialist-mentalities during COVID-19 vaccine trials in Africa. Bias also shows up in research in data collection, data analysis, and publication opportunities. Systemic racism, bias, and microaggression diminish the work of many involved in research and perpetuate the inequities found in research environments. There are, of course, already people doing innovative work that is applied, community engaged, and social justice oriented, including many scholars at Northwestern, to counteract these practices. OUR will strive to build resources to link undergraduate student researchers more intentionally in support of this important work.

Therefore:

- **We pledge** to work with leading scholars on our campuses to support their work through undergraduate involvement, including funding from OUR grant programs. Having undergraduate researchers learn from and engage with historic and persistent forms of erasure with diverse scholars doing innovative scholarship within the research/academic context is essential.
- **We pledge** to create new online, freely-available resources to support first-generation, lower income, undocumented/DACA students, and/or minoritized students who want to get involved in research. These resources also will help support the development of more informed and engaged mentoring by faculty. This work will be achieved with funding from the Arthur Vining Davis Foundations.
• **We pledge** to establish a new grant program focused on developing a community of undergraduate research scholars from first-generation, lower income, undocumented/DACA students, and/or minoritized communities on campus. The program will provide funding to students conducting research and/or creative projects over an extended period of time and will also include extensive personal and professional development workshops. This work will be achieved with funding from the Arthur Vining Davis Foundations.

• **We pledge** to continue OUR’s work with Northwestern’s Institutional Review Board (IRB) to ensure that ethical research practices are robustly followed in all aspects of student research, including the Principles of Ethical Practice in Community-Engaged Learning, Research, and Service developed in partnership with the Buffett Institute for Global Affairs. OUR will also continue to collaborate with campus units, including Campus Inclusion and Community and Student Enrichment Services.

• **We pledge** to continue to collaborate with the Center for Native American and Indigenous Research (CNAIR) to support the development and funding of student research projects. Northwestern campus sits on the traditional homelands of the people of the Council of Three Fires, the Ojibwe, Potawatomi, and Odawa as well as the Menominee, Miami and Ho-Chunk nations, and it is our responsibility as an academic institution—and as the Office of Undergraduate Research—to help foster the dissemination of existing scholarship and the development of further Native and Indigenous research.

• **We pledge** to work with current Northwestern programs, including Chicago Field Studies, the Center for Civic Engagement, the SESP Civic Engagement Certificate to help further facilitate the collaboration of undergraduates and community groups through OUR’s existing grant funding programs.

• **We pledge** to continue to collaborate with Northwestern’s Institutional Research Office to obtain and analyze OUR application and award rate data for first generation, low income, and/or minoritized students. We pledge to share the results publicly and use them towards our goal of at minimum having these groups apply at levels commensurate to their group size and with success rates at minimum equal to the overall success rate of the program.

• **We pledge** to work as a staff to continue our ongoing education around anti-racist practices in order to inform our outreach to and advising for BIPOC (Black, Indigenous, People of Color) students to more effectively support them and their research projects. We will devote staff time to these efforts.

• **We pledge** to continue our work with groups within the Evanston area that support these communities, and we pledge to promote to our students the work of local community groups through posting their events in our undergraduate e-newsletter

• **We pledge** to support BIPOC (Black, Indigenous, People of Color) and women owned businesses in Evanston whenever possible.
OUR PLEDGE

We realize that these pledges are preliminary steps, but they speak to our stated commitment to engage more fully in issues regarding anti-racist practices in general and within the worlds of research and Evanston in particular.

Written and signed by the staff of the Office of Undergraduate Research,

Peter Civetta, Director
Megan Wood, Associate Director
Tori Saxum, Administrator
Jennah Thompson-Vasquez, Outreach Coordinator
Evangeline Su, Research Workshop Coordinator
“I think SURG program really offers NU undergraduates unprecedented autonomy in designing a summer experience. The whole process, not just the summer research, was incredibly valuable particularly because of the SURG office staff and faculty mentor requirement. These resources gave me a runway and a head start from which to engage with research.” – quote from student feedback survey, others accompany the rest of this report

Despite the challenges of this year, the Office of Undergraduate Research still celebrated many successes, including the second highest total of awarded students in our history (532). Despite the truncated nature of some programs (URAP was capped, Conference Travel Grants requests dropped in half due to conference cancellations, and most language grant programs were cancelled), OUR still provided meaningful experiences to a significant number of students. These efforts are highlighted by the experience of the Summer URG program, where we saw a nearly 15% increase in applications over last year even though the deadline occurred as students departed campus in response to the pandemic. The review committee awarded a record number of grants, but to accommodate the new circumstances, OUR conducted subsequent individual review of each student’s COVID/remote revision and solicited an updated approval from every faculty sponsor as well. Surprisingly, only a dozen students (out of 256) declined the grant (with another 50 deferring the experience until fall quarter), providing numerous opportunities for students to have meaningful experiences this summer. Summer URGs funded record numbers of Communications, McCormick, Medill, and NU-Q students along with record highs of first year students and students with creative arts/journalism projects- both areas of dedicated outreach for us. We also converted the Undergraduate Research and Arts Exposition to an online event with over 3,000 unique page visits and over 950 comments on student presentations, providing a deeply engaging event remotely for the first time. We believe OUR’s most important work this year was to provide authentic experiences in a tumultuous and anxiety-riddled environment when other opportunities were drying up. We provided a chance for students to adapt and overcome – underscoring the importance of undergrad research in teaching resiliency and problem-solving skills.

“I have doubted myself many times throughout the process of formulating this study over the last two years and especially in facing the obstacles presented by the COVID-19 pandemic. I expect that I will doubt myself many times again in working towards the study’s completion. Uniquely, I now feel equipped with the understanding that when a situation feels impossible, even when people tell you it is time to give up, there is a choice. A choice between surrendering to the impossibility of your plan in the current circumstance or creatively, flexibly, redesigning your plan to be fit and perseverant through changing times and environments. Even more, I have come to feel the extent to which the decision to “give up,” the out, is a symptom of privilege. As my study became more complicated and faced more obstacles, the problem my study related to, pediatric malnutrition, became ever more dire. While I could decide that it was too complicated and agree to the impossibility, the families, children, and healthcare workers on the ground dealing with the growing and overwhelming burden of disease had no choice but to persevere. I am extremely grateful to the Undergraduate Research Grant for making this study and these learning experiences possible and look forward to continuing to work towards this project’s productive completion.”

Advising remains central to OUR, and we continue to expand beyond our signature one-on-one advising. We held 140 class visits and 85 information sessions this year (including weekly Finding a Lab/Finding a Faculty Mentor sessions during the Academic Year). In addition, we expanded the types of
workshops that we offer, holding over 73 workshops. These workshops include the winter quarter Science Research and Arts, Humanities, and Social Science Research Workshops as well as new offerings around onboarding into research and presentation of research findings. We also built out self-guided Canvas courses to support the Finding a Lab/Finding a Faculty Mentor workshops and for the Expo. The initial feedback on them has been so strong that we are converting the Expo course into a more general conference presentation course that will be shared with all Conference Travel Grant winners and future Expo presenters. We continued to offer a significant volume of individual advising. For example, OUR’s advisors (three full time and one part time) met with nearly 400 students potentially applying for Summer URGs, totaling nearly 900 separate meetings. This advising has a tremendous positive impact on students often writing proposals for the first time. Nearly two-thirds of all winners used OUR advising (65%), including over 87% of students in non-lab/research group settings indicating that the parallel infrastructure created by OUR for is crucial to student success. For the third consecutive year, we met with over 1,000 students for a total of over 1,900 individual meetings in 2019-20. Through advising, workshops, and classroom visits/information sessions, we estimate that we reached over half of the Northwestern undergraduate student population with our four full time and one part time staff (Director, Associate Director, Administrator/Finance, Outreach Coordinator, and Research Workshop Coordinator).

In our 2018-19 annual report, we identified three areas of focus; therefore, we want to begin this report reflecting on our progress before we outline our priorities for 2020-21.

• COLLABORATION: “OUR continues to take a leading role working across institutional silos, including cost-sharing with units to further fund opportunities and streamlining and promoting resources that support students who are not applying to OUR programs. Additionally, we seek to take a leading role in promoting and supporting undergraduate research both in and out of the university.”

This year OUR worked with Financial Aid to expand access to funding for students presenting at conference (more below). OUR joined the new Cross Unit Advising Council, a collection of non-academic advisors started by Director of Undergraduate Education in the Provost Office Lee West. The group seeks stronger collaboration and support of students across all areas of the University. We continued to collaborate with a number of units across aspects of OUR’s work, including the Office of Residential Academic Initiatives on workshops and info sessions, Career Advancement in support of the Summer Internship Grant Program, and with various departments on the joint funding of summer grants. We added partnerships with SROP and Synthetic Biology to offer summer programming for their students. Throughout the COVID crisis, OUR collaborated with the Provost’s Office, APUE, Legal, and Global Communications in changes to programs, funding, and communications. Megan and Peter together gave three presentations at the Council of Undergraduate Research’s Annual Conference around our Finding a Faculty Mentor workshops, our new sample grant proposal resources, and supporting arts and humanities students pursuing research and creative projects.

• EQUITY AND ACCESS: “As Northwestern grows more diverse, OUR continues to take steps to ensure all students are afforded the opportunity to succeed, including lowering barriers to participation. We also focus on outreach and advising approaches which meet students where they are and provide support as they seek out academic and professional goals.”
We recently received a $300,000 grant from the Arthur Vining Davis Foundations with Peter Civetta and Megan Wood as co-investigators. The three-pronged project will create a new grant program focused on minoritized populations as well as significant video and curricular resources for students and faculty. The funding starts in the summer of 2020 and will run for three years. We continued to advocate for the usage of the Global Research and Opportunities Database as a broader resource for the first generation, low income, and/or minoritized students. We met with Kourtney Cockrell (SES) and Dav Velazquez Phillip (MSA) who are enthusiastic about its potential. Peter worked with NUAMPS to get a quote for a revamping of the site, which was presented to the Associate Provost for Undergraduate Education. Given its low cost and high potential, we hope it will be funded in spite of current financial constraints. Jennah Thompson-Vasquez, our Outreach Coordinator collaborated with Kourtney and Dav to reach more minoritized students, including having weekly OUR office hours in Black House and MSA. As mentioned above, we created a Canvas course to supplement the experience of our Finding a Faculty workshops, providing additional support for students. We continued to expand our revamped sample grant proposals which have greatly increased our capacity to support students applying for URGs by providing online access to annotated examples of successful applications. We have also updated our Peer Mentor training to include more Diversity, Equity, and Inclusion training and support.

• FACULTY ENGAGEMENT: “Every undergraduate research program is based upon the willingness of faculty to mentor and support students along the bumpy path of learning research. OUR seeks to work with faculty to both relieve their burden through our own advising and seeking their guidance in areas of expertise. With more intentional partnerships, we seek to find ways to allow faculty the opportunity to engage with students fully in their areas of greatest ability with as little administrative burden as possible.”

In 2019-20, 479 unique faculty members sponsored OUR applications with 363 of them receiving an award. Peter met with then-Associate Provost for Faculty Kathleen Hagerty about establishing both a mentoring award for faculty and recognition of their mentoring efforts in their formal reviews (tenure/promotion). She was receptive to the ideas. With Kathleen’s promotion to Provost, we are not sure of the status of these initiatives. Peter and Megan met with WCAS Undergrad Dean Mary Finn about the need for independent study options for students working at the Feinberg School of Medicine (FSM); we collaborated on data supporting the volume of the need, and she expressed interest in pursuing options. We plan to reconnect with her when appropriate given other demands on her time. We continue to do additional outreach with FSM faculty to build more opportunities for students. Peter led an initial meeting with a group to be charged with developing an undergraduate research mentoring white paper; however, with COVID and the new AVDF demands on our time, this project has been put on hold.

Given these developments, we propose the following goals for the 2020-2021 year, which will be expanded upon in this report.

• EQUITY AND ACCESS:

Using the OUR Pledge as our guide, we will work expand equity and access to all OUR programs and, to the extent that we can, undergraduate research experiences more broadly.

• REMOTE EXPERIENCES/COMMUNITY:
OVERVIEW

Embracing the reality of more students being remote, OUR will work to 1) support and expand meaningful research experiences that can be done remotely and 2) work to build a greater sense of community for all participants.

- ARTHUR VINING DAVIS FOUNDATIONS GRANT PROJECTS:

We will work towards the fulfillment of our AVDF goals: 1) starting a new 15-month grant program focused on first generation, low income, and/or minoritized students with an emphasis on opportunities in the humanities and arts, 2) creating new arts and humanities modules to add to the publicly available and free Entering Research curriculum (CIMERproject.org), and 3) creating a new video series seeking to help students to navigate the challenges of getting involved, and thriving, in undergrad research experiences.

Undergraduate research at Northwestern continues to thrive. However, we know there is more work to be done.

“Even though I am about to begin my third year, I still can’t help but shake the imposter syndrome that troubles so many students at Northwestern. I knew that I was interested in research, but I struggled with relentless bouts of self-doubt. Do I possess the intelligence and analytical skills that are so crucial to the success of a researcher? Will I be able to persevere through mistakes, criticism, and occasional slumps in my mental health? Receiving an Undergraduate Research Grant and working through my own independent project subdued many of these reservations. I was able to catch sight of my personal potential to drive forward a project. I managed my time and maintained organization throughout the summer with the help of color-coded spreadsheets and lists. I powered through technological difficulties. I remained diligent while completing labor-intensive tasks such as FACS training and coding for smiles. Most notably, I did this all during a global pandemic, a time when academic strength is inherently difficult. With this in mind, I feel more confident moving forward in the field of research. I recently have begun to look into PhD programs in both clinical and counseling psychology. If you had asked me a year ago if I thought that I was capable of pursuing a doctoral degree, I would have deemed it an unachievable fantasy. I am proud to say that I now see this future as a potential reality.”
ARThUR VINING DAVIS FOUNDATIONS GRANT PROJECTS

Pledge... page 1-3
Overview... page 4-7
Arthur Vining Davis Foundations Grant Projects... page 9-12
Remote Experiences/Community... page 13-15
Equity/Access... page 16-18
Budget Overview... page 19

Individual Program Review...
  Undergraduate Research Grants (SURG/AYURG)... page 20
  Undergraduate Research Assistant Program (URAP)... page 21
  Conference Travel Grant Program (CTG)... page 22
  Circumnavigators Travel-Study Grant Program... page 23
  Undergraduate Language Grant Program (ULG)... page 23
  Undergraduate Research and Arts Exposition... page 24

Other Initiatives...
  Beckman Scholars Program... page 26
  Research Workshops... page 26
  Global and Research Opportunities Database... page 27
  Peer Mentor Program... page 27
  Research Community Building... page 28
  Chicago Area Undergraduate Research Symposium (CAURS)... page 28
  TEDx Northwestern... page 28
  Office Communication/Branding... page 28

“I believe [undergrad research] makes you more ambitious, thoughtful and creative.”

Total = $1.4 Million

AYURG
AYURAP
ULG
SURG
SURAP
CTG
“I think every undergraduate should do research, which was not something I previously thought. This project is the first thing in my undergraduate career that was fully about my interests and pushed me to design and manifest exactly what I wanted.”

ARTHUR VINING DAVIS FOUNDATIONS GRANT PROJECTS:

The biggest change for OUR in 2020-21 will be the commencing of our three new projects funded by the Arthur Vining Davis Foundations. If fully achieved, we anticipate them having a transformative impact on OUR moving forward. In the appendix, we have included our arguments and justification for the projects from our AVDF proposal; therefore, here we will focus on the projects themselves, our timeline, and their intended impact.

VIDEO RESOURCES: We know students desire more resources to help them enter, and ultimately navigate, the unfamiliar pathways of research, and we know there is a specific deficit of resources for students not in traditional lab-based, largely STEM disciplines. In non-lab fields, the path (and even the purpose) to research is unclear to most students. Since its inception, OUR has been dedicated to creating a parallel infrastructure for students in the arts, humanities, and other non-lab based disciplines, mainly focused on one-on-one advising and other proposal-centric resources. We realize that students have many additional questions about the process, and so our first project is to create a series of short YouTube videos. Following our successful The Adventures of Grant Man series, we believe that short, humorous videos have the ability to reach a wide audience.

Our proposed new series will utilize a comic talk show format, where the host interviews students with questions about parts of the research process. A talk show is an ideal tool to cover a variety of different topics while still keeping the video series cohesive. As with Grant Man, the videos will be written and created by Peter, a former professional actor with the Screen Actors Guild and Actors’ Equity Association. He will play the host as an intentionally ignorant character that needs everything explained in simple, but comic, terms, similar to The Colbert Report, where we can use the ignorance of the host as the device to impart our content. The host’s comic foils in the series will be the “show’s director” and a “student intern.” Each episode will begin with a new student sharing a problem that they are facing to which the host will begin offering nonsensical and/or horrible advice before the director and student intern intercede to offer the real material. Each episode will be edited to 3-5 minutes of essential content and captioned with subtitles. However, we realize there will be more content that we will want to share than can fit in the short standards for video length. Therefore, we will create a podcast to provide a forum for the additional material we know is valuable for students. The podcast will also follow the exploits of the faux-talk show with extended interview segments and recorded “production meetings” including the host and intern. In addition to providing space to communicate more material, the podcast will also help us build a character connection with our audience, as they will be granted “behind the scenes” access to the show.

We have contracted with Northwestern’s Media & Technology Innovation group to film the series. We are surveying students to gain insight into what specific concerns they may have, and we will adapt them into the content for the videos/podcast. We anticipate student concerns on topics such as: managing relationships with faculty mentors; diversity, equity and inclusion in research; translating research skills to potential employers; and effectively communicating their research to non-experts. The videos/podcasts will be disseminated on multiple platforms. Filming is set to begin in the fall of 2020.
and will continue intermittently through the summer of 2021. Given time for post-production, we ultimately plan to disseminate 10-12 videos and 3-4 podcasts during the 2021-22 year.

**Entering Research Expansion:** Students and faculty alike need support in developing the strong mentoring relationships that sustain successful UR experiences. However, current resources are largely limited to STEM fields. There is widespread need to develop more universal curricula, but progress is largely limited by lack of funding for material development. To accomplish this goal, we will partner with Drs. Janet Branchaw and Amanda Butz (WISCIENCE and Center for the Improvement of Mentored Experiences in Research [CIMER]) to adapt their modular Entering Research curricula, a publicly available process-based curricula and assessment tool for undergraduate trainees entering STEM research developed through funding from the National Science Foundation and the National Institutes of Health. Drs. Branchaw and Butz are the current leading experts on this type of training and support. They developed the material that serves as a model for our project, and they run the current website where the material we propose to create will ultimately reside. Therefore, their particular expertise and infrastructure are critical to the success of this project. Megan will be the project lead in this area.

The Entering Research content supports seven areas of trainee development: Research Comprehension & Communication Skills, Practical Research Skills, Research Ethics, Researcher Independence, Researcher Confidence & Independence, Equity & Inclusion Awareness & Skills, and Professional & Career Development Skills. The content is presented as individual activities which can then be combined to create workshops or curricula of any length, offering great flexibility. Each activity also includes “Inclusion Considerations,” which is particularly important when working with FGLI/URM students.

Together, we will work to adapt current resources for the independently focused research that takes place outside of labs and to develop original content in areas not currently covered. For example, activities in the current curricula do not focus on the importance of IRB/ethics review, so we will create new material to cover this important topic. Other areas where we plan to develop new modular activities include: exploring how research works in non-STEM lab fields, creating a solid research question, and developing a feasible research methodology.

Entering Research already has excellent modules on Diversity, Equity, and Inclusion; however, it focuses on the research lab environment. Thus, we will adapt it to reflect the very different research environments found outside of labs. Examples of additional adaptations will include modifications on existing activities like Responding to Mentor Feedback or Barriers to Effective Mentor/Mentee Communication. Finally, we will assess other areas to determine whether to adapt existing materials or create anew. For example, the existing Reading Academic Scholarship activities focus on academic papers, whereas in the arts/humanities, monographs are the most common form of critical scholarship. Thus, we will need to evaluate existing material to determine whether we need to create something entirely new or just augment current offerings.

We identified 30-40 modules to either revise or create to complete this work, and the assessment of the work will be done in collaborate with Drs. Lisa Davidson and Susanna Calkins from Northwestern’s Searle Center for Advancing Learning and Teaching. Megan will lead the creation/adaptation of the materials which will be internally tested at Northwestern before eventually being added to the full Entering Research curriculum, hopefully by the end of the three year grant term. In addition to
promoting the new resources to all Northwestern relevant units, OUR will use the new materials to create workshop series to support the development of students engaging in research. Our plan is to include mandatory workshops based off this work for all relevant grant winners in the future.

**New Emerging Scholars Grant Program:** With targeted outreach in place through our new videos/podcasts and more arts/humanities-aligned support resources as a result of the expanded Entering Research, we will be positioned to develop a program (Scholars Program) to support first generation, low income, and/or minoritized students in their undergraduate research journey, particularly outside of STEM lab environments. There are a number of elements that will be crucial for a successful program. First, the pilot program will be cohort-based. Since research in arts/humanities is undertaken on an individual basis, we want to make sure that students do not become isolated and can learn from the experiences of their peers. Second, the program will seek to pair students with faculty from a diversity of backgrounds. While it will be impossible to offer direct matches of all student and faculty backgrounds, we know how important it is for students to be able to see themselves in the faculty with whom they work.

The program will provide 15 months of funding to selected student-faculty pairs. The program is limited to first year students with a focus on those with interests in arts, humanities, or other non-lab disciplines and on first-generation, lower income, undocumented/DACA, and/or minoritized students. Students will receive stipends of $3,500 for the first summer, $2,000 for work during their sophomore year, and $3,500 for their sophomore summer. Faculty mentors will receive $1,000 to help support the student experience.

We are already in the process of recruiting potential faculty mentors through recommendations from students and administrators such as Kourtney Cockrell (SES) and school undergraduate deans. These faculty will offer brief descriptions of their overall work and their expected project for the coming summer, and this information will be collected into a “faculty viewbook” for potential students, who will be recruited through a combination of traditional OUR outreach (first year seminars, information sessions, etc.) and collaboration with units that already support these students, such as SES, MSA, and the Kaplan Institute for the Humanities. The student application will consist of short answer questions around their interests and goals, a resume, and a brief statement about why they want to work with their 1-3 selected faculty from the viewbook. The deadline will be at the end of winter quarter.

Selected faculty will review the requests, confirming their interest in working with the student (and ranking candidates if they receive more than one). Peter and Megan will use this information to build an initial cohort of 7-8 student-faculty pairing with as much diversity, across a range of issues, as possible. We hope to expand the cohort to 8-10 student-faculty pairs the following year, pending a budget request for additional funding.

The initial summer will work similarly to the Undergraduate Research Assistant Program, where the student will primarily be working on the faculty’s project while learning the methodologies and thought-processes in their discipline. Through the following academic year, the faculty will work with the student to help identify and develop an independent project for the following summer. During the entire 15-months, the cohort will participate in personal and professional development workshops, based on the newly developed adaptation of the *Entering Research* curriculum and utilizing some of the
new videos as well. In addition to building strong, long-term relationships with faculty members, the program seeks to build concrete methodological skills in the student’s chosen field and the opportunity to pursue their own independent work. Following completion of the program, students will be eligible for other OUR programs such as URGs to continue their path.

At the end of the three-year grant term, we plan to have significantly increased the amount of online, freely-accessible resources to support student involvement in research and to have built the foundation for a sustainable and expandable Scholars Program.

“I learned what it’s like to embark on a journey that has no destination; how to go about asking a question that no one has answered. Unlike the American education system, which provides a key for every assignment, an answer for every test question, my research experiences this summer were so vastly different. I have begun to learn how to go about answering the unanswered, which, unlike the beginning of this sentence, has nothing poetic or philosophical about it. This summer has certainly had its fair share of frustration, headscratching, head-banging, doubt, and other various adverse feelings that come with research. And though it’s more difficult than my typical homework assignment, it is that much more rewarding when I accomplished even the smallest of things.”

2020-21 GOALS:

- Complete filming of 10-12 videos and 3-4 podcast episodes by the end of summer 2021.
- Complete creation/adaptation of 30-40 modules for the *Entering Research* curriculum and begin usage and assessment of them in workshops by the end of summer 2021.
- Establish the new Emerging Scholars Program (creating web page, information sessions, promotional materials, application, etc.), and run the application cycle for the first cohort of 7-8 student-faculty pairing.
- Run summer personal and professional development workshops with Scholar Program cohort as well as offer workshops for other grant winners.
“I feel that doing research as an undergraduate is invaluable. Not only does it help improve your personal and academic skills, but the guidance that I have received from faculty and graduate students has been instrumental in setting up my future.”

REMOTE EXPERIENCES/COMMUNITY:

OUR has been built as an advising/student-centric office. We seek to meet repeatedly with students, often over multiple years, to help them to develop their interests and projects. These advising tallies show the depth and breadth of the advising offered. Nearly two-thirds of all winners used OUR advising (65%), including over 87% of students in non-lab/research group settings indicating the parallel infrastructure created by OUR for arts, humanities, and social science research is crucial to student success.

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<tr>
<th>Advisor</th>
<th>Total Meetings</th>
<th>Total Students</th>
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MEETINGS (BY PROGRAM)

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<th>ULG Meetings</th>
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<th>General/Lab Meetings</th>
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<tr>
<td><strong>All Advisors</strong></td>
<td><strong>866</strong></td>
<td><strong>276</strong></td>
<td><strong>107</strong></td>
<td><strong>95</strong></td>
<td><strong>127</strong></td>
<td><strong>368</strong></td>
<td><strong>20</strong></td>
<td><strong>43</strong></td>
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This focus on advising requires us to do substantial outreach through class visits, information sessions, and workshops to support our advising offerings. In 2019-20, we had 266 collaborative meetings with faculty, staff, or other campus partners. We conducted 140 class visits, held 85 information sessions, and offered 29 drop-in opportunities for students. We also offered 73 workshops for students who received an OUR award. This outreach offers significant value to other University programs and faculty by providing foundational information and support for students seeking to get started. Students can apply this knowledge when exploring a range of opportunities, whether or not they end up applying to OUR, from department-specific funding to inviting faculty as guest speakers for their student organization.

Even with the challenges of our current COVID environment, it is our intention to continue to offer the same level of investment to our outreach and advising efforts in the coming year. While the majority of
this work will be conducted remotely (until COVID restrictions are lifted), we are well positioned to continue to deliver at our current levels. Since March, we have been meeting with students regularly via Zoom, and we do not see any reduction in the quality of the interactions that we have. In spring quarter, we continued class visits over Zoom and offered online info sessions and workshops that were well attended. We built strong relationships with colleagues across the University with whom we will collaborate to help reach students. Plus, we will continue to do our regular outreach to faculty, departments, and advisors; in the past year, 479 unique faculty sponsored OUR applications from 73 Northwestern departments (Feinberg broadly categorized as one department).

However, we realize that we need to do more to offer students resources in means that are convenient for them. We continue to develop our widely-utilized sample grant proposals. There are now 28 different annotated proposals from a wide variety of disciplines exploring many different types of research and/or creative projects. Other departments and university units regularly link to this resource as a guide to help students applying to their programs, particularly if no individual advising is offered.

As mentioned previously, we developed two Canvas courses this year. The first was designed to support our Finding a Lab/Finding a Faculty Mentor workshops. The high volume of information communicated in those hour-long workshops could be overwhelming for students, so we supplemented the workshop with a Canvas course that allows students to revisit the materials at their own pace and provide concrete steps for them to take. The second self-guided course was designed to support our move of the Expo to an online format; however, as we built it out, we added and expanded existing resources to help students learn to deliver successful presentations. The material was well received by students, and we are currently revising it for future use; for example, we will now enroll students who receive Conference Travel Grants. Given our new comfort level with this technology, we feel we will be able to expand our offerings if the need presents itself.

In addition, it is our goal to increase the amount of opportunities for remote research experiences, particularly for first and second year students. We aim to work with faculty to expand participation in URAP during the academic year by allowing faculty to hire more than one student and providing a faculty supplement payment to recognize faculty contributions in this intense and demanding time.

Finally, the previously articulated resources to be created through the Arthur Vining Davis Foundations grant will add significantly to our ability to offer valuable, online resources for students. It is our hope that not only will the collection of these resources combined with our advising-centric approach provide increased support for students, but also help to build a sense of community. By holding (and potentially even requiring) more workshops, it can bring researchers together to not just share knowledge, but also to build a sense of community. The more we can share about the experience of undergraduate research, the more students can connect and bond through it.

“It has confirmed my passion for research, which makes me incredibly excited for the future. The project has given me a competitive advantage in the graduate school admissions process and the necessary skills to succeed in a PhD program.”

2020-21 GOALS

• OUR will continue meeting with undergraduate deans for all schools each year to discuss how their students are performing within our competitions, set goals for the coming year, and strategize how to best reach their students.

• Expand Academic Year URAP participation by faculty, specifically focusing on remote opportunities for first and second year students.
REMOTE EXPERIENCES/COMMUNITY

- Develop the Arthur Vining Davis Foundations resources.
- We will seek to match levels of advising and outreach even with the challenges of COVID in order to provide as many opportunities as possible to students.
- We will continue to advocate for an expansion/revisioning of the Global and Research Opportunities searchable database, a collection of hundreds of diverse opportunities including study abroad, fellowships, community engagement, and research that could include a wider variety of undergraduate opportunities, particularly around support programs like those run by Student Enrichment Services and Multicultural Student Affairs. An expanded G&RO (likely renamed/rebranded) would be of incredible benefit for all students, particularly low income, first generation, and/or minoritized students.
“I was able to openly dip my brain in the research world without any economic restraints. I learned that there is much more knowledge in hidden places all you have to do is pay close attention. You will get surprised.”

OUR does not ask for any demographic or financial information on any of our applications. The faculty review committees are charged with conducting a merit-based review, looking at the quality of the proposal against the program’s stated expectations. Since undergraduate students overwhelmingly have no familiarity or experience in research, we believe our programs provide an equal starting point for students across different backgrounds. This belief is predicated on OUR’s model of individual advising, where advisors are trained to meet students where they are and to guide them on this new and often confusing journey. We feel this approach is the best way to bring down barriers to participation; however, we need to know how different student populations are faring. Starting in 2014-15, we provided our data to Institutional Research and received a report back. This year’s report showcases our progress; in particular, we will highlight where we stand with our two largest programs: the Undergraduate Research Assistant Program (URAP) and the Undergraduate Research Grant (URG) program – see Appendix for full data.

URAP: Our introduction to research program has grown significantly, and it effectively reaches a wide range of students. The graphs on the left hand side track representation in applications compared to the size of that community in the undergraduate population. The graphs on the right show the success rates of applications across groups relative to the program’s overall success rate (dashed line). The top graphs are for Academic Year URAP, and the bottom graphs are for Summer URAP.

The results are particularly good for Pell Eligible and First Generation students, who succeed at higher rates than the general population and are at, or close to, their representation levels. Latinx students show another success story, as they are over-represented compared to their relative population and have higher rates of success. We are pleased with the growth for Black/African American students, where participation rates have grown to closely match their undergraduate levels (and they were the top performing group with AY URAP). While small fluctuations are to be expected, we are pleased with the overall standing and progress of diversifying this core program.
**URGs:** Our more advanced URG program funds students doing independent projects and requires a full project proposal and faculty endorsement. Whereas academic year and summer URAP programs are largely identical, there is a key distinction with URGs. Academic Year URGs are tied to enrollment in a thesis seminar or an independent study; there must be a course of this kind for the student to be eligible for the grant. Additionally, Academic Year URGs fund research-related expenses, so fields like mathematics or philosophy that largely do not require research expenses are underrepresented. Summer URGs are open to all undergraduates who will be returning as students in the fall. As with URAP, the graphs on the left hand side track representation in applications compared to the size of that community in the undergraduate population. The graphs on the right show the success rates of applications across groups relative to the program’s overall success rate (dashed line). The top graphs are for Academic Year URGs, and the bottom graphs are for Summer URGs.

There is continued good news regarding Pell Eligible and First Generation student who apply and succeed well in these advanced programs. While there is some confusion in the data (students listing two or more races boasted the highest success rate with AYURGs and the lowest for SURGs), the overall relationships between representation, success rate, and demographic groups remain solid. A consistent challenge has been the participation levels of Black/African American students, which, while improving, lags behind their size in the undergraduate population; however, we are happy to see that their success rates [slightly] exceed program norms.
EQUITY/ACCESS:

Two other significant developments have occurred regarding equity and access. This year we collaborated with the Financial Aid Office on behalf of students in our Conference Travel Grant (CTG) program. CTG offers to pay 50% of expenses up to $500; however, it leaves students with additional expenses. Financial Aid determined that students receiving financial aid would be eligible to apply for the balance of their expenses using their Emergency Aid Form. We altered our website, award emails, and other communications to alert students, providing them with significant relief. Financial Aid was able to work quickly to implement the new program, moving from initial conversations to full implementation in weeks over fall quarter. This partnership is now standard moving forward. Second, the Undergraduate Language Grant program provides up to $5,000 for expenses connected to summer intensive language programs. The program had been willing to pay up to 75% of expenses. While most programs are very expensive, we realized this approach disadvantaged students who sought out cheaper options, i.e. they would find a cheaper program, but then they couldn’t receive the full $5,000. Therefore, starting in 2020-21, ULGs will offer up to $5,000 of all program expenses in order to encourage (not dis-incentivize) students to find less expensive options.

Finally, in late spring and early summer, the staff of OUR discussed how we would like to respond to the ongoing crisis regarding systemic racism in our country. Collaboratively, we created the OUR Pledge in consultation with Dr. Sekile Nzinga, Interim Chief Diversity Office and Associate Provost of Diversity and Inclusion and Director of the Women’s Center. It is our strong desire to convert our words and feelings into concrete actions, and we plan to use the items listed in the pledge as our guiding principles moving forward.

“Coming from a country where such research opportunities are not as accessible for students, I have found this experience to be vital for bringing me up to speed with some of my American peers.”

2020-21 GOALS

• We will use the OUR Pledge as action items to encourage better anti-racist practices in our office and our field. We will report back on our progress at every OUR Advisory Council meeting is 2020-21 and beyond.
• We will have Outreach Coordinator Jennah Thompson-Vasquez continue to work to build relationships with first-generation, lower income, undocumented/DACA students, and/or minoritized students, particular with Black students through her ongoing drop-in office hours at Black House and MSA.
• As mentioned previously, our Arthur Vining Davis Foundations project will significantly assist in our efforts in these areas.
BUDGET UPDATE:

In response to financial challenges across the University, the Office of Undergraduate Research will experience a budget cut of 15% for the 2020-21 academic year. Here is our plan to deal with this situation.

- Budgets for Academic Year and Summer Undergraduate Research Grants will be cut. We already anticipated a reduction in demand for AY URGs given that thesis seminars and participation in independent studies will likely be down given majority-remote instruction. Even given these cuts, we do not anticipate changing the decision-making process for these programs. Our two endowment funds are specifically designated for these programs and remain untouched. Therefore, the final authority for who is funded will remain with the faculty review committee to ensure that all quality applications are funded. If awards exceed current budget levels, funding will be cut from the Summer URAP budget (the only program which won’t have completed applications at that point).
- The Conference Travel Grant budget will be significantly reduced. We are not cutting the program entirely, as virtual conferences with registration fees are continuing, but we anticipate a lower demand this year.
- We allowed 8 Undergraduate Language Grant students to defer to the summer of 2021, so we must honor those commitments. We will lower the number of available ULGs for this year from 10 to 7. Students will not be given the opportunity to defer or do fully online programs this year, so if programs do not happen, available funding will be re-directed to Summer URG and/or Summer URAP. NU-Q students are reviewed/awarded by OUR, but the costs associated are paid by NU-Q; however, we need to confirm this arrangement with the new NU-Q Dean.
- We are proposing to expand the Academic Year Undergraduate Research Assistant Program to create more opportunities for high-quality remote experiences for first and second year students. In this adjusted program, faculty will be allowed to fully fund up to two students each, and we will be providing faculty $500 in supplemental funding to their discretionary accounts to acknowledge their commitment at this challenging time. Student awards will be adjusted to a maximum of $1,500 (at $15/hour) in order to keep the cost per award flat; they will be allowed to work up to 100 hours. We plan to increase this program’s budget by 25%. Students must still be new to research to be eligible, and the program’s focus would remain on humanities, arts, and social science experiences in non-lab environments.
- Some budget lines will not be changed. The 2021 Undergraduate Research and Arts Exposition may take place in both a physical and virtual environment, so we need to keep the budget steady there. The Circumnavigator’s Grant is fixed $5,000 expense.
- Finally, we will continue to offer thank you gifts of $100 to all students who participate as Peer Mentors for any of our programs. We do not feel we can cut budget there (and the overall cost of $3,000 is modest given the amount of work done by the students).

“The fear of beginning, and of being too small to begin, is something that I have let disqualify me from many opportunities. I believe this experience was a lesson in being as big (or as small) as you make yourself. I know I will carry it with me for a very long time. Thank you.”
“Research has definitely opened my eyes to what I look for in the medical schools I have chosen to apply to. I have chosen to apply to schools that are heavily focused on research, as I have seen how valuable research is in integration with academia.”

“[This grant] allowed me to seriously prepare for a master’s program in either creative writing or visual art and has helped to clarify the style and media that I wish to study further in the future.”

“[My grant] made me want to pursue journalism even more, upon hearing people stories, I understood the power of journalism that gives a platform to these particular stories.”

Here we begin a breakdown of our core programs.

UNDERGRADUATE RESEARCH GRANTS (Academic Year, Summer, and Advanced URGs):

Undergraduate Research Grants are among the most prestigious research awards on campus, funding students across all disciplines to conduct independent research and/or creative projects. Academic Year URGs offer up to $1,000 in research-related expenses to students enrolled in an independent study or thesis seminar. Summer URGs offer a $3,500 living expense stipend to conduct an 8 week project. Both programs offer additional travel support for student projects conducted internationally.

This year we received a total of 370 Summer URG applications. This number is an almost 50 student increase over last year and just off the program’s record high, a remarkable outcome given the timing of the deadline right as campus shut down for the pandemic. The 35 faculty member review committee completed over 1,100 reviews of proposals over the fractured end of winter quarter and while converting spring courses to remote instruction. In fact, we project over 775 faculty and staff hours were dedicated to this program, indicating the incredible level of support and importance of this program in the eyes of the faculty. The review committee awarded 256 proposals with an average score of 1.5 based on a 5 point scale. All winners were required to submit an addendum to their application for review by OUR in order to determine the impact of COVID-19 on their proposed project. In consultation with their faculty sponsors, students were given the chance to adapt their projects for the current circumstances, providing some flexibility to keep opportunities viable. We allowed students to covert the award into a $1,000 Academic Year URG if summer accommodations cannot be made. 193 students were able to continue with the summer grant experience; 50 students (almost exclusively from labs) converted their grants into Academic Year URGs for the fall, and only 13 students had to decline the grant (with 8 of them planning on applying to do their projects next summer).

We awarded students from all 7 undergraduate schools, including SPS. We are funding an incredible range of disciplines, including record numbers in Communications, McCormick, Medill, and NU-Q.

BIENEN: 10 winners out of 13 applications (-6 over last year)
COMM: 34 winners out of 43 applications (+6 over last year)
McCORMICK: 48 winners out of 74 applications (+18 over last year)
MEDILL: 15 winners out of 22 applications (+3 over last year)
NU-Q: 5 winners out of 6 applications (+3 over last year)
SESP: 8 winners out of 14 applications (-1 over last year)
SPS: 1 winner out of 1 application (+1 over last year)
INDIVIDUAL PROGRAM REVIEW:

WCAS: 140 winners out of 214 applications (+15 over last year)

Summer URGs funded a record number of first year students (72, +37 over last year). We funded a record 49 students with creative arts projects (screenplay, music, dance, etc.) or journalism, including documentaries. This number indicates strong success for OUR’s long term outreach efforts to get arts/journalism students involved. Finally, 20 URAP students transitioned from URAP to URG, indicating an intended and growing (+25%) pipeline for students to move from research assistantships to conducting their own projects. This pipeline particularly supports low income, first generation, and/or minoritized students, as we offer outreach and advising to help students transition from working on faculty research to exploring their own.

Academic Year URG saw a significant drop in applications. This drop cannot be connected to COVID as all of the deadlines passed before campus life changed. This year we funded 79 proposals out of 121 applications, as compared with 134 funded out of 203 applications last year. We conducted the same amount of outreach as in previous years, so the drop was unexpected, especially after years of steady growth in that program. It did appear that there were less students enrolled doing senior theses, which does account for a significant amount of AYURG traffic. We plan to continue to reach out directly to faculty leading thesis seminars and those leading independent studies to let them know that their students are eligible for funding.

Finally, this was the third year for the new URG-Advanced program, which offered students who had already received the grant the opportunity to apply for subsequent funding. If awarded, the funding costs were shared 50-50 between the student’s school and OUR. 14 students were funded this year across 4 schools: Communications (3 Summer URG Advanced), McCormick (1 Academic Year and 4 Summer URG Advanced), Medill (2 Summer URG Advanced), and WCAS (1 Academic Year and 3 Summer URG Advanced). All indications are that the program is working effectively, and we plan to continue it.

Given that many students will not be returning to campus for fall quarter and some departments are restricting access to independent study courses, we anticipate a lighter than normal year for AYURG programs, as there will likely be less eligible students. Regardless of restrictions, we expect a normal Summer URG cycle.

UNDERGRADUATE RESEARCH ASSISTANT PROGRAM (URAP):

The Undergraduate Research Assistant Program pairs inexperienced students with faculty who are in need of assistance on their own research projects. In doing so, students who do not have sufficient research experience to pursue independent projects gain first-hand mentored knowledge of research practices in their discipline, while faculty who would not otherwise be able to hire Research Assistants get help with their own projects. The program has three funding priorities: 1) To help students from any discipline who have no prior research experience and are not yet ready for independent research to get training and mentoring in the research methods of their chosen discipline. 2) To support opportunities in the arts, humanities, journalism, and non-laboratory based social sciences where funding for research experiences is uncommon. 3) To support pairings of residential college faculty and students. The Academic Year URAP and Summer URAP operate similarly; students are hired as temp workers and earn their hours in Kronos. Students can earn up to $2000 during the academic year (133 hours of work) or $3,500 during summer (233 hours of work).
INDIVIDUAL PROGRAM REVIEW:

We were forced to cap the program given funding and hiring limitations, particularly in the summer. For Summer URAP, awards were only given to faculty applicants who presented an opportunity that could be completed remotely. While we had similar number of faculty members apply (166 this year versus 172 last year), the committee awarded 114 grants (compared to 133 last year), a 14% decrease overall. Unfortunately, student interest (and need) was critical this past year, and we saw an increase of student applicants (793 applications compared to 644 applications last year; 23% increase). Given this, the success rate for faculty dropped from 77% to 69%, and for students from 24% to 15% (average across both cycles).

Applicants 85 AY Faculty + 81 Summer Faculty = 166 Faculty Applicants  
Awards: 61 AY Faculty + 53 Summer Faculty = 114 Faculty Mentors  
Applicants: 370 AY Students + 423 Summer Student Applicants  
Awards: 68 AY Students + 52 Summer Students Mentees  
Money Awarded: $116,000 AY and $168,000 Summer

Given last year’s success, we continued implementing administrative changes that better accommodated the high volume of both applications and awards. URAP awardees attended mandatory onboarding workshops to mitigate many questions about Kronos and Payroll and prepared students to proactively deal with common Kronos issues to ensure timely payments. We also optimized our payroll paperwork instructions so students could identify which hiring paperwork and processes were most relevant to their personal circumstances. For Summer URAP, international students without a social security number were not eligible to apply, as obtaining a social security number legally required for working was not feasible with COVID19 circumstances.

In alignment with other OUR programs, this award is adjudicated by a faculty review committee of 16+ members with representation across schools. Combined, the committee provided over 500 reviews during the decision making processes this year. Since the committee evaluates faculty/student matches on applications from faculty not running a job search, they recommended OUR provide additional oversight to faculty running job searches to ensure that final student selection was in alignment with program funding priorities. OUR now confirms eligibility of each student selected, regardless of whether they applied as a pre-selected student or via job search.

For this year, we will run a modified version of Academic Year URAP, as described previously. Faculty will be able to hire two students for the full cost. The max value of the grant will be reduced to $1,500, which equals the average amount actually paid to students over past years. A $500 thank you will be given to all participating faculty. The program will continue to serve its three core areas.

CONFERENCE TRAVEL GRANT PROGRAM (CTG):

The Conference Travel Grant program provides 50% of expenses (up to $500) for students selected to present at an academic conference or similar event. This year we partnered with Financial Aid, who now provide additional funding for those students in need. It is a significant equity step for Northwestern, providing potentially the full cost of attendance for students in their field of study. We have worked out communication pipelines between our program and Financial Aid to ensure students are made aware of the additional resources.
INDIVIDUAL PROGRAM REVIEW:

COVID significantly impacted this program, as many conferences take place in the spring and summer and all were cancelled. If a student’s event was canceled after the grant was paid, we worked with them on their expenses. If they were already incurred (whether the conference happened or not), we simply closed out the grant, but if they had not spent the money, they were asked to return it. In the end, we funded 58 students for a total of $35,325, and 41 were able to present at their event.

Since the spring, most conferences are now switching to online formats, which often does involve registration expenses. Therefore, we expect to fully run this program in 2020-21, although we do not expect a return to previous levels.

CIRCUMNAVIGATORS TRAVEL-STUDY GRANT PROGRAM:

Given in conjunction with the external Circumnavigators Club Foundation, this grant provides one student a year the opportunity to travel around the world during the summer after their junior year. Candidates are vetted by a Northwestern review committee that selects three finalists; these finalists are interviewed by members of the Circumnavigators Club, who selects the winner. After years of declining applications, we had a surge this year to the fourth highest total in the program’s history. Jennah Thompson-Vasquez did additional outreach to juniors that yielded great dividends. This year’s winner was Amanda Davis, whose project is to explore what is known as the Information and Communication Technology (ICT) Gender Equality Paradox, where the lower the gender equality is in a given country, the more women are graduating with advanced degrees in computer science and related subjects. She was scheduled to meet with academic and business leaders and women’s tech cooperatives in Morocco, the UK, France, Qatar, Estonia, and Singapore to explore this topic. However, the trip had to be canceled due to COVID travel restrictions. Peter worked the Circumnavigator’s Club to provide her with the opportunity to potentially do the trip in the summer of 2021 while keeping the competition for a new scholar as well. Given that travel next summer remains an unknown (and will likely remain unknown for a significant amount of time), we plan to run this fall’s competition to find a new scholar.

UNDERGRADUATE LANGUAGE GRANT PROGRAM (ULG):

The Undergraduate Language Grant provides students up to $5,000 (75% of expenses) to intensively study a language for >6 weeks; awarded students successfully demonstrate how language acquisition is essential to their future academic and career goals, why language study needs to happen during the grant period (and not during other times during their undergraduate career), and why their language program selection best fits their needs. The ULG program maintained similar numbers of applicants compared to the previous year, with a total of 55 applications. This program has budget for 10-12 ULG awards of $5,000 each; NUQ provides funding for an additional 4 NUQ students. This year we partnered with Buffett to fund one additional grant, awarded through the Keyman Modern Turkish Studies Program. In all, we were able to award 19 grants.

However, given significant challenges of COVID19, many students were not able to pursue language opportunities as initially proposed. While 4 students ultimately declined the award, all students were given the opportunity to find an alternative online immersive language program (and OUR forwarded options recommended by GLO). 5 students chose this option and provided updated budgets for their new programs. If students were not rising seniors, they were given the opportunity to defer to next year, given the strong correlation between international travel and immersive language
INDIVIDUAL PROGRAM REVIEW:

study, and because many of these programs are only offered during the summer. 10 students chose this option. OUR will ask for a brief update prior to administering funding to ensure that students are still dedicated to language study, and to account for potential program changes; if in person options are not available for Summer 2021, students will not be allowed to convert/defer their grants a second time.

While the small program size does skew demographic data comparatively, the ULG program had the greatest diversity of all OUR programs for demographic representation, and 7 awardees were considered high financial need (score index of a 4 or 5).

UNDERGRADUATE RESEARCH AND ARTS EXPOSITION (Expo):

The goals of the Undergraduate Research and Arts Exposition are three-fold: 1) To provide students with the opportunity to share their work with a broader audience. Presenters are not limited to those students funded by OUR; instead, we encourage all students to apply and present. We offer online resources to help them prepare abstracts and for poster making. 2) To offer students feedback on their research from expert faculty and the general public; we want students to experience the reflection and collaboration that can happen through presenting work at conferences. 3) To give students dedicated feedback on their presentation skills. Too often we focus entirely on the content of presentations; students need to learn that how you communicate is as important as the content itself. We aim to provide specific feedback in that regard. We run presentation workshops for all presenters (mandatory for all students selected to give an oral presentation). These workshops seek to help them become better communicators of their knowledge, especially learning the skills of how to communicate with people outside of their field of study.

In April, we determined that we were not going to be able to hold the physical event in Norris as we had done in previous years. Megan led the work of finding and vetting an online vendor for our event, and she selected ForageOne’s Symposium platform. The platform, offered for free on a trial basis, provided a venue for us to host posters, oral presentations, and the Creative Arts Festival as we had in the past. More than 3,000 people (including prospective students) watched oral, poster, and creative arts presentations from 92 students for a total of 437 viewing hours. Students and faculty alike engaged in intellectual conversation on the research with over 950 comments/responses; the top 10 most viewed presentations each had 125+ views. 3 faculty were recruited to judge each presentation, including experts from the students’ field and non-experts, cumulatively totaling 75 supporting faculty. We also welcomed participants and audience members with a keynote speech given by President Shapiro.

Again this year we partnered with the Sigma Xi Society to give awards for the Best Overall Poster (Sophia Liu, “Exploring the effects of phonetic overlap and background noise on incremental processing in children”) and Best Overall Oral Presentation (Julia Dierksheide, “Exploring the Detection of Missing Tissue in Planarian Regeneration”). The awards were determined by a rubric provided to faculty judges, and these awards were recognized at the Honors Day ceremony during commencement. First place at the Creative Arts Festival, as adjudicated by a professional jury, was awarded to Mahito Henderson for his mixed-media entry, “A Cat Called Kush: Harmony & Dialogue”.

Many University units were interested in the platform used for the Expo, so Megan met with a number of offices/departments to help them see if this service would work for their needs.
The success of the event has changed our long-term thinking about the Expo. The digital format allowed more NU-Q students to participate that would normally be possible, where expensive travel costs limited opportunities. In addition, the digital platform allowed for increased attendance from students’ family and friends; whereas Expo attendance is normally counted in the hundreds, this year we had thousands of visitors. Therefore, moving forward, we plan to hold both in-person and digital versions of the event, and we will consult with the OUR Advisory Council on planning for how to do so effectively.
“[My grant] has made my future plans significantly more attainable.”

The Office of Undergraduate Research has grown to encompass more than the specific core programs that we administer (and the advising connected to them). There are a number of additional initiatives that now take up an increasing amount of time for the staff. However, all of these initiatives remain directly connected to the core mission of OUR. This next section will offer brief summaries of these other initiatives.

**Beckman Scholars Program:**

In 2016, the Beckman Foundation awarded Northwestern with the Beckman Scholars Program. The program provides funding and support for students that we believe show advanced research and leadership potential. The Principle Investigators for the grant are Dr. Chad Mirkin (WCAS, McCormick, and Feinberg) and Dr. Peter Civetta (OUR). We are in the process of closing out the three year award, finishing the funded time of our last two scholars Sean Hu (Chad Mirkin) and Erik Bidstrup (Mike Jewett) in the summer of 2020. Working with Development, we have just submitted an application for a new three year term.

**Research Workshops:**

In winter quarter, we offer two field-specific quarter-long workshop series to support students potentially interested in applying for Summer URGs. The Science Research Workshops, led by Evangeline Su, focuses on STEM fields. This year’s SRW class enrolled a record-breaking 62 (increase of 16 from 2019) of which 49 students completed the program (an increase of 10). Unlike previous years, 97% of students enrolled were first years (up from 72% last year). Considering that in WQ 2016 there were 9 students, this is quite a difference. 63% of the class was from Weinberg, 34% from McCormick, and 3% from SESP. The registrar’s data yields: 23% of the enrollees are first gen, 50% are need index 3-5, 28% of the enrollees are Pell grant recipients. In a separate poll, 47% self-identify as a member of an underrepresented group in STEM. The most popular major in SRW was undeclared in Weinberg (48%), but the program also drew a substantial number of students in biology/neuroscience (8%), chemical engineering (8%), and biomedical engineering (6%). This year’s 58% success rate with the SURG and the record-breaking number of applicants (31 total, up 14 from last year) from SRW to the SURG program is particularly significant as most of the 62 SRW 2020 students were undecided major first years -- typically a difficult group to get started in research much less to get them to write an independent research grant proposal and requires more interaction than regular advising. Those 31 SRW students made up 26% of the 119 first years who applied from all fields NSE, SSJ, AHS to this year’s SURG program.

The Arts, Humanities, and Social Science Research Workshops (AHSS) were led by Peter Civetta with significant support from 4 undergraduate peer mentors: Kimani Isaac, Titobi Williams, Caroline Hsu, and Annamarie Jedziniak. They provide a crucial link between the challenges involved in developing your own independent project for the first time and the real life student experience. All 4 peer mentors had been through the application process themselves, so they provided significant insight to the students involved. This year had 15 students register; 80% of them were first/second year students. While some were interested in the workshops to help them prepare for other programs or activities, a number of them were interested in Summer URGs, and they succeeded well beyond the general population. Of the 11 who applied for a Summer URG, 8 were funded (73%). Given that these students
were generally young and without a sense of a project (or how to create one) at the start of the workshops, these results indicate the program’s effectiveness.

We plan on running these programs again in winter 2021; however, we are anticipating having to hold them remotely via Zoom. We will try to implement some in-person components if it is safe to do so.

Global and Research Opportunities Database:

In 2015, a joint project between NUIT (Academic and Research Technologies), the Office of the Provost, and the Office of Undergraduate Research produced the Global and Research Opportunities database (http://globalresearchopportunities.northwestern.edu/), a comprehensive searchable database of opportunities to get involved in research and global experiences for students, faculty, and administrators. Peter is the only administrator of the site, which has been revisioned with a focus on undergraduate students. As mentioned earlier in this report, we believe this database has increased potential as a comprehensive resource for undergraduate opportunities of all types. We hope to expand the database by adding listings from student affairs, residential communities, etc. in order to make the site a one-stop location for a large range of undergraduate initiatives across the University. After this work is completed, the site will likely need to be renamed/rebranded, but OUR is committed to maintaining and administering it moving forward.

Peer Mentor Program:

The primary Research Peer Mentor program serves to support Summer URG winners, since many URG winners will be conducting full-time research for the first time, and Summer URGs are not affiliated with the infrastructure of independent study coursework. ~20 peer mentors are recruited from former URG grant winners; each peer mentor is paired with 8-13 mentees conducting research in similar fields. As noted above, OUR has other Peer Mentor programs affiliated with the winter quarter research workshop series. Since the Peer Mentor program refocused on best practices in undergraduate research and skill development in 1-on-1 mentoring relationships, Peer Mentors now receive training on Self-Efficacy, Active Listening, Communication Styles and Microaggressions in addition to the previous content of Common Challenges in Research, OUR Programs, and On-Campus Resources. This year, we broke the training into 3 more manageable Zoom sessions and leveraged breakout rooms during training. Peer Mentors connect at least 3 times with each mentee and provide one-on-one support as agreed upon in a communication contract. In order to best provide this support, the cohorts are divided by methodology/field such that mentees cluster by common interest and the Peer Mentor has adjacent experience.

We adapted the mandatory URG Skill Workshop to an online format with intentional conversation around common challenges in research and brainstorming how to best problem solve. Peer mentors facilitated small group discussions on these topics at 3 URG skill workshops. All 200+ URG winners attended these workshops.

We are also met with other campus units to understand best practices around Peer Mentor expectations and responsibilities versus compensation. For example, Peer Mentors/Ambassadors affiliated with both Northwestern Career Advancement and Academic Support & Learning Advancement
receive modest compensation; therefore, we were able to implement a $100 honorarium to start to close this gap.

**Research Community Building:**

OUR is providing a narrower selection of programming tailored to student interest. Specifically we will offer workshops on Citation Management Software, Next Steps in Research, Research to Resume, and Presenting Research. We continued to utilize the newsletter format to a compiled list of undergraduate researchers at Northwestern, regardless of their funding source (does not have to be tied to OUR funding) and our ListServ. The initial newsletters was opened by 1200+ students and 65 students RSVP’d for one or more workshops. The newsletter also highlights offerings from other campus units (ie Office of Fellowships, programming offered through the Synthetic Biology REU Program). Our first workshop, All About Applying to STEM Graduate Programs (partnered with IBiS Associate Director Deborah Klos-Dehring) had 39 participants.

**CAURS (Chicago Area Undergraduate Research Symposium):**

CAURS was created 16 years ago by a Northwestern student, Chandler Robinson, who wanted to provide opportunities for students at area schools to get together, share their work, get feedback from faculty across all of the schools, and gain presentation experience. Six schools sponsor the event: University of Chicago, Loyola, DePaul, Illinois Institute of Technology, Roosevelt, and Northwestern. Peter Civetta serves as the faculty sponsor of the event, and its finances run through OUR administrator, Bryce O'Tierney. This year’s event had to be canceled, but the directors wanted to offer something to the students. Peter connected them with the leaders of the Northwestern Undergraduate Research Journal, who subsequently published a special issue for CAURS presenters: [https://thenurj.com/caurs/](https://thenurj.com/caurs/). Plans are already underway to either host an in-person event at the Illinois Institute of Technology or an online event hosted through ForagerOne’s Symposium.

**TEDx Northwestern:**

Eight years ago, a group of students successfully brought the TEDx conference to campus with support from a faculty sponsor. After two successful years, the faculty member left the University, and Peter Civetta became the faculty sponsor. This year’s event was canceled due to COVID, but the current directors are already at work on next year’s event.

**Office Communications/Branding:**

We are currently in the process of moving our current website from a Drupal infrastructure (no longer supported) to a WordPress template through the Media & Technology Innovation group. We will use this opportunity to revisit and refine all site content. Since we do not anticipate much use for traditional flyering this year, new administrator Tori Saxum is revisioning outreach materials as clickable PDFs for better reach and functionality, particularly with our popular trifold brochure that captures all of our programs.