

EXECUTIVE SUMMARY from 2011 QEP Proposal

Students as Scholars: Fostering a Culture of Student Scholarship Quality Enhancement Plan

George Mason University is an innovative, entrepreneurial public research institution with more than 32,000 students (22,000 undergraduates) located in the heart of Northern Virginia's technology corridor near Washington, DC. To develop the Quality Enhancement Plan (QEP) topic, "Fostering a Culture of Student Scholarship," Mason used a multi-year process led by broadly representative committees that consulted with the university community and reviewed institutional data and planning documents. Student scholarship is the process of generating and sharing knowledge or creative works, and includes undergraduate research and creative activities.

As the Mason community discussed the role of the QEP in transforming the undergraduate experience, it became clear that we had a vision in which scholarship would be pervasive across the university. The *Students as Scholars* QEP affords us the opportunity to connect our undergraduate students with the research and creative mission of the institution and our faculty. This topic will help Mason address issues around student participation in enriching academic experiences, student-faculty interaction, and academic challenge, which require strengthening as indicated by both institutional and National Survey of Student Engagement data.

Our QEP mission, goals, student learning outcomes, and program outcomes capture this vision. **The mission of our QEP is to foster a culture of student scholarship through increased participation in and celebration of scholarly activities. Student learning will be enhanced through a process of scholarly inquiry, where scholarship is valued as a core practice of the Mason student experience.** The three major goals of the *Students as Scholars* QEP are to 1) enhance the awareness and visibility of scholarship at Mason, 2) increase opportunities for scholarly inquiry, and 3) develop the infrastructure to support student scholarship.

The *Students as Scholars* QEP student learning outcomes are organized to build on increasing levels of student engagement in scholarship. Students will discover how knowledge is generated through scholarship and how they might engage in the process of scholarship; articulate scholarly questions and place concepts within a broader context; and create and communicate their own scholarship. Beyond impacting student learning, Mason expects to see improvement in a number of program outcomes as a result of implementing the QEP. These program outcomes relate to enhancing the visibility of student scholarship on campus, providing robust curricular and mentored opportunities for scholarly inquiry, increasing faculty support of these activities, and better preparing our students to meet their future career and academic goals. The student learning and program outcomes will be evaluated using both formative and summative assessment, and the QEP Leadership Council will review these results annually, adjusting QEP activities and processes as needed.

The Mason community strongly supports the *Students as Scholars* QEP. The university has budgeted resources that support each of the activities outlined in the plan. Our initiative is coordinated by the new Office of Student Scholarship, Creative Activities, and Research, which supports the development, communication, and assessment of student scholarly activities.

Our vision will be realized when Mason's *Students as Scholars* QEP is seen as a model of undergraduate scholarship. Students will enroll at Mason because of the unique opportunities to engage in active scholarship, and the university will continue to attract exemplary faculty because of our integration of scholarship and teaching. By infusing research and creative activities into the undergraduate experience, student scholarship will be a core practice and expectation at Mason.

(February 1, 2011)

QEP IMPACT REPORT

Students as Scholars: A Model of Excellence for Fostering a Culture of Student Scholarship

In 2011, Mason launched its QEP initiative with the mission to transform the university culture. This culture would be transformed through communities of faculty, students, and administrators who are committed to improving student success through increased participation in and celebration of undergraduate research and creative activities. Now in its sixth year, *Students as Scholars* has transformed the way that Mason thinks about undergraduate education. Through courses and experiential learning opportunities, 10,000 students each year learn about the processes of discovery, including how to develop scholarly questions, use appropriate research methods, engage in ethical practice, and situate scholarly work in a broader context. More than 1,000 students annually receive intensive faculty mentoring to conduct original scholarly or creative projects. Over the past five years, *Students as Scholars* has funded travel grants for over 350 students to present results of their projects at national and international conferences, and nearly 2,000 students have presented or performed at one of Mason's on-campus research symposia, conferences, or the annual Celebration of Student Scholarship. *Students as Scholars* has not only accomplished the goals of the QEP, it has become a model of excellence for undergraduate education.

A Model of Excellence

Students as Scholars has become a model of excellence in many respects. Our most exciting moment happened in 2015, when Mason was recognized as a national exemplar by receiving the Campus-wide Award for Undergraduate Research Accomplishments by The Council of Undergraduate Research (CUR). CUR commended Mason for our "achievements as a leader in undergraduate research," for providing accessible and visible undergraduate research experiences that make "a significant institutional impact," and for an "exceptional" assessment program.¹ *Students as Scholars* has been used as a model for other undergraduate research programs and in the scholarly community. Our faculty and program staff have been active members of a community of scholars, having presented at professional conferences and published extensively on the results of their work with undergraduate scholars. In 2015, our director and lead assessment scholar presented, by invitation, to the National Academy of Sciences committee on "Strengthening Research Experiences for Undergraduate STEM Students." We have provided expert consultation to other universities building undergraduate research programs across the SACSCOC region (e.g., Florida Atlantic University, Rice University) and across the country. We have shared our programs through presentations at annual meetings of SACSCOC, CUR, and the Association of American Colleges and Universities (AAC&U).

Students as Scholars has also become a model of excellence for the university. The initiative's early success was recognized when it was integrated into Mason's 2014-2024 strategic plan. Student engagement in undergraduate research and creative activities is now tracked through institutional and college performance metrics, thus recognizing its value and contributions to student success. Recently, *Students as Scholars* has been used as a model for the Mason Impact Initiative, a plan to increase student engagement in high impact educational experiences and ultimately, improve learning.

This report documents our success for the first five years, during which time we have accomplished our goals to 1) enhance the awareness and visibility of scholarship at Mason, 2) increase opportunities for scholarly inquiry, and 3) develop the infrastructure to support student scholarship. We will also share key insights into using the initiative to advance undergraduate education in the next five years.

¹ Ambos, E. L., & Rowlett, R. (2015, October 1). [Letter to President Ángel Cabrera]. Copy in possession of George Mason University.

ORIGINAL GOALS AND PROGRAM OUTCOMES

In the initial proposal, we identified three goals and ten principal activities to accomplish these goals. Six program outcomes supported the goals by defining our vision for what fostering a culture of student scholarship would look like at the institution. Table 1 illustrates these original goals and maps them to the program outcomes.

Table 1. Program Goals and Principal Activities, Mapped to Program Outcomes

	Program Outcomes*	Accomplished
QEP Goal #1: Enhance the awareness and visibility of scholarship at Mason		
1.1 Introduce scholarship early in the curriculum	1	✓
1.2 Create the OSCAR Fellows Program	1	✓
1.3 Establish an annual Celebration of Student Scholarship	4,5	✓
1.4 Recognize excellence in student scholarship	3,6	✓
QEP Goal #2: Increase opportunities for scholarly inquiry		
2.1 Integrate student scholarship into the curriculum through Scholarship Development Grants (SDGs)	2,3,4	✓
2.2 Expand opportunities for individualized student scholarship experiences	1,2,4,6	✓
2.3 Integrate student scholarship into Advanced Composition Course (ENGH 302)	4	✓
QEP Goal #3: Develop the infrastructure to support student scholarship		
3.1 Establish Office of Student Scholarship, Creative Activities, and Research (OSCAR)	4,5,6	✓
3.2 Provide faculty development and support	3	✓

***Program Outcomes**

1. Student scholarship is pervasive on campus.
2. Undergraduate degree programs offer opportunities for student scholarly inquiry, creative activities, and research.
3. Faculty support undergraduate students in scholarly inquiry, creative activities, and research.
4. Students participate in scholarship, creative activities, or research.
5. Students have opportunities to communicate the results of their research or creative activities.
6. Students who have participated in scholarly activities are prepared for their career goals and advanced study.

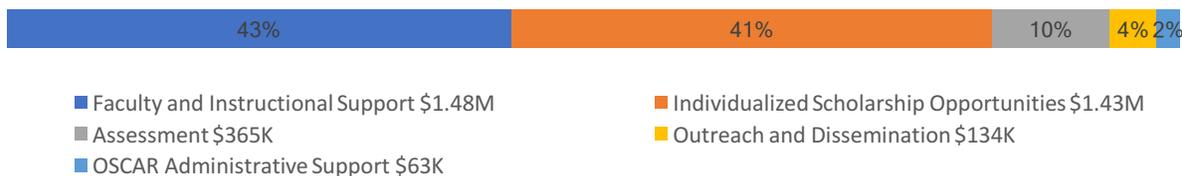
No Significant Changes to the QEP

Students as Scholars has accomplished all of our initial goals by capitalizing on the strengths of our faculty and students, and nimbly adapting to their needs and to the changing institution. As we have implemented the initiative, we have not wavered from our goals; rather, in addition to the multifaceted programs outlined in the original QEP, we have made enhancements or improvements to programming based on assessment results and our experiences of what works for the institution. Our institution is a dynamic and engaged community, in which new opportunities and partnerships are created constantly. These partnerships have shaped the ways in which we have accomplished our goals, and have often developed in ways that we could not have planned. These partnerships have resulted in some of the most rewarding and important elements of the initiative.

Substantial Financial Commitment

Mason has demonstrated its commitment to undergraduate research through considerable financial investment and personnel support. In 2011, *Students as Scholars* launched with a budget of \$500,000, and now operates with over \$750,000 annually. The institution has allocated \$3.5 million to the initiative over the first five years. These funds supported the creation of the Office of Student Scholarship, Creative Activities, and Research (OSCAR), and continue to fund *Students as Scholars* programming and OSCAR personnel. The majority of the budget pays for student projects, student travel, faculty development, curricular initiatives, assessment, and undergraduate research events (see Figure 1).

Figure 1: Summary of Resource Investment in the *Students as Scholars* QEP in First Five Fiscal Years (FY2012-2016), Program Investment = \$3,470,867



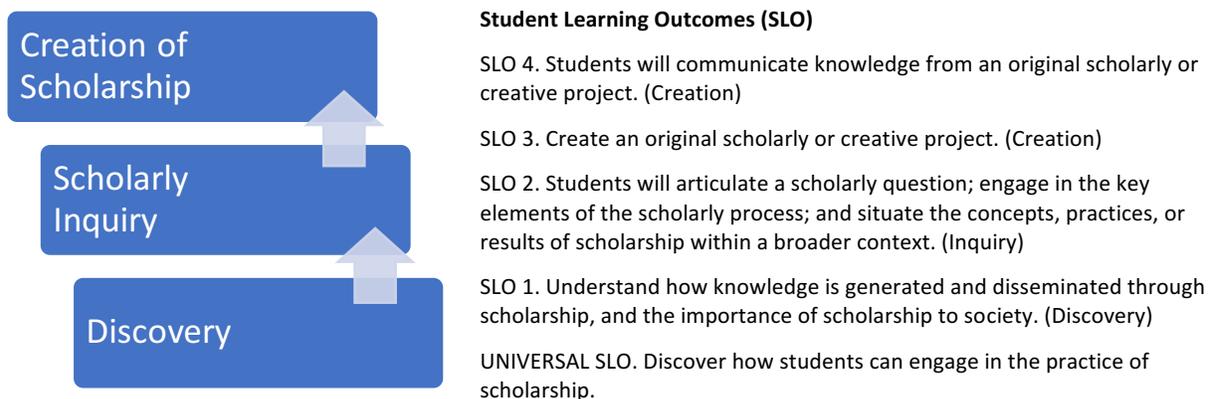
IMPACT ON THE LEARNING ENVIRONMENT

Students as Scholars has succeeded in fostering a culture of student scholarship by making a profound and lasting impact on the environment supporting student learning. We have built an infrastructure that provides institution-wide resources and recognition for student scholarship, engages faculty in curriculum development and one-on-one student mentoring, and establishes the expectations for student learning across research and creative experiences. Our culture is created through supportive learning environments both within and outside of the classroom, where both faculty and students can thrive. To measure achievement of the QEP goals and guide the continuous improvement of our programs, we created a set of interdependent program outcomes and student learning outcomes. To show the impact on the learning environment, this section will first share expectations for student learning, and then focus on achievement of the program outcomes.

Expectations for Student Learning and Assessment Strategy

Students as Scholars designed a scaffolded approach to undergraduate scholarship that moves students progressively toward increased understanding and, ultimately, toward greater independence and autonomy. This model understands that students need to develop critical inquiry skills that build their abilities to ask questions, collect and analyze information, and integrate and apply their learning to create knowledge. This starts with *Discovery* of how knowledge is created, building to the practice of *Scholarly Inquiry*, and then expanding capacity to *Create* an original or authentic scholarly project. By creating a culture of scholarship, we want all students to be exposed to *Discovery* and *Scholarly Inquiry* outcomes throughout the curriculum, and to have opportunities to choose a path to *Create* scholarship and communicate their scholarly work. See Figure 2.

Figure 2. *Students as Scholars* Scaffolded Model and Student Learning Outcomes



The QEP planning committee defined expectations for student learning through the creation of a set of five student learning outcomes (see Figure 2). These learning outcomes were further defined through a locally constructed program rubric, which expands the foundational learning outcomes into detailed sub-outcomes, and identifies target competency levels. The *Students as Scholars* rubric² provides expectations for student and course performance, and a shared vision for what undergraduates should learn and be able to do. We use the rubric to guide program development at both the institutional and degree program levels, and to measure student achievement of learning outcomes across learning experiences. The rubric also contributes to the improvement of teaching and learning through faculty development activities.

All assessment strategies and tools (faculty course portfolios, faculty surveys, interviews and focus groups, and a longitudinal student survey) are created with guidance from the rubric. Student learning outcomes are assessed using direct and indirect measures, as appropriate. Faculty use program-specific rubrics to evaluate student products (e.g. written work, posters, presentations) in their own programs, as we believe that only disciplinary experts can effectively evaluate the quality of scholarship in their fields. Indirect measures include the locally-developed OSCAR Student Survey; institutional surveys of students, faculty, and department chairs; and student interviews. Self-reporting asks students to reflect on their learning, and analysis of these data are used to understand differences between groups, as well as changes for students over time. Survey data are also used to triangulate direct assessment and qualitative studies.

Achievement of Program Outcomes

Through substantial faculty and administrative involvement and institutional support, we have built a robust program that is growing in size, complexity, and approach to student-faculty partnerships. *Students as Scholars* was designed to involve students and faculty from all disciplines and backgrounds. Three principal activities provide the overarching structure for achievement of these outcomes:

Establish Office of Student Scholarship, Creative Activities, and Research (OSCAR). OSCAR opened in January 2012 in the central Johnson Center, and is home to *Students as Scholars*. OSCAR transforms the undergraduate experience by connecting students to the research and creative mission of the university, and to our faculty. OSCAR's website provides information for students, faculty, and the community on how to get involved with research, including existing RS courses, research and funding opportunities, and venues to present or publish student work. OSCAR sponsors the annual Celebration of Student Scholarship and the student excellence and mentoring excellence awards, administers the Undergraduate Student Travel Fund (USTF), and oversees the OSCAR Fellows program. The OSCAR website (oscar.gmu.edu) receives over 149,000 visits annually, and the blog is read by 15,000 people each year.

Integrate student scholarship into the curriculum. *Students as Scholars* assists faculty by helping them incorporate research and creative activities into their curriculum through grants and faculty development efforts. The signature activity is the Scholarship Development Grant (SDG). The SDG provides faculty development workshops, one-on-one consultations, and funding to create or redesign Research and Scholarship Intensive (RS) courses. In the SDG, faculty develop scaffolded learning experiences and Discovery or Scholarly Inquiry courses, or develop interdisciplinary or co-curricular research projects. We also partner with the English composition program, UNIV 100 seminar (Introduction to Mason), and the Honors College to provide early experiences in multiple places throughout the curriculum.

Expand opportunities for individualized student scholarship experiences. When the QEP began, we knew that individualized and small group mentored experiences had the opportunity to make the most impact

² George Mason University Students as Scholars Initiative. (2016). *Students as Scholars program rubric (Revised September 2016)*. Retrieved from <https://ira.gmu.edu/student-as-scholars/outcomes-rubrics/>

on student learning, but we had not conceived of the possibilities to expand beyond the existing Undergraduate Apprenticeship Program that served about 40 students per year. Through innovative use of resources, we have built and expanded programs to promote greater access for all, and especially, low-income and minority students. These programs include the Undergraduate Research Scholars Program (URSP), Federal Work-Study Research Assistant (OSCAR RA) Program, and involvement in the 4-VA Collaborative (described further in Program Outcome 4).

Program Outcome 1: Student scholarship is pervasive on campus.

OSCAR has developed extensive, successful partnerships with academic and student affairs offices, the Libraries, and campus organizations to foster positive attitudes toward student scholarship, promote early exposure to research and creative activities, and provide access to opportunities. Academic programs teach students about research and creative work through Discovery, Scholarly Inquiry, and RS courses. Between spring 2013 and spring 2016, 12,152 unique students had taken at least one of 102 distinct OSCAR courses offered across 35 of 51 academic departments with undergraduate degree programs. Another 6,352 students took one or more OSCAR courses, for a total enrollment of 18,504 (see Table 2).

Table 2. *Students as Scholars* Course Enrollment, Spring 2013 through Spring 2016

Courses	Distinct Courses	Departments Participating	Total # Students Participating
Discovery (RD)	30	14	6,379
Scholarly Inquiry (RI)	45	27	8,395
Research and Scholarship Intensive (RS)	27	33	3,730
TOTAL	102	35*	18,504

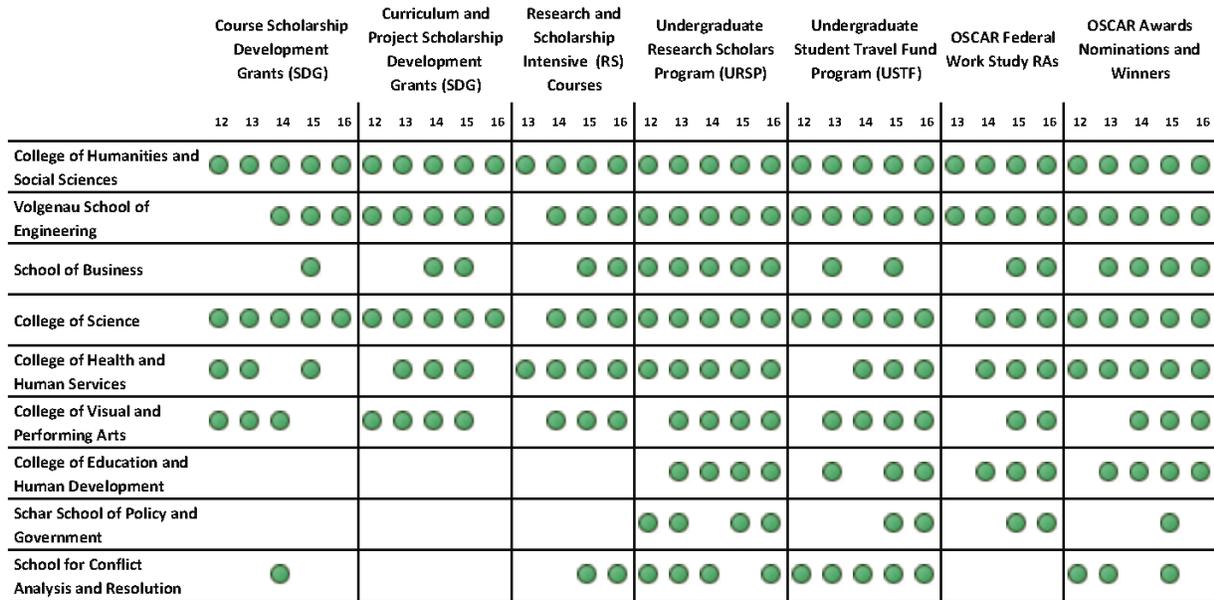
*Total represents the count of unique departments, and thus, does not sum the counts for the other courses

Since the beginning, *Students as Scholars* has partnered with the composition program to focus on Advanced Composition (ENGH 302), a required course for Mason students. This ongoing partnership has resulted in a curriculum redesign to promote discipline-based thinking and writing at the inquiry level, and funds ongoing faculty development and assessment. Faculty have adapted their pedagogy to focus on text-based learning appropriate to advanced reading and writing in the disciplines. Taught in this way, ENGH 302 improves student preparation for over 6,000 students each year to engage in research in their courses and beyond. Additionally, 800 new students each year are introduced to OSCAR by an OSCAR Fellow in their UNIV 100 or 300 seminars, and more than 400 first-year Honors students engage in their first inquiry-based research project, and are introduced to research through invited faculty lectures.

Program Outcome 2: Undergraduate degree programs offer opportunities for student scholarly inquiry, creative activities, and research.

Undergraduate degree programs across the institution have engaged with *Students as Scholars* in multiple ways, and their involvement has grown with each year. Figure 3 summarizes school and college engagement from AY12 through AY16, showing increasing involvement over the years. The five colleges with the highest undergraduate enrollment (listed 1-5 in Figure 3) have had the most extensive involvement, their faculty having transformed courses and curriculum in their degree programs, mentored students through the URSP and OSCAR RA programs, and helped their students present their work at academic and professional conferences with the Undergraduate Student Travel Fund. Units that principally serve graduate students (Education and Human Development, Schar School, and Conflict Analysis and Resolution) are engaging with undergraduates primarily through individually mentored experiences; these faculty are often involved with multidisciplinary research projects, thus expanding opportunities for students to do projects outside of their majors.

Figure 3. Engagement with *Students as Scholars* Key Activities by College or School AY2011-16, by Academic Year, Showing Broad Participation Across the Institution



Notes: Course SDGs and Curriculum SDGS are counted by departments with active grant activity during that academic year. RS Courses are counted by number of courses taught that academic year. RS courses were approved starting in AY12. OSCAR Research Assistantships were piloted in AY13, and launched in AY14. URSP, USTF, and OSCAR RAs are counted by student major. Awards are the number of students and faculty nominated and/or awarded by either home department or major.

The cornerstone of OSCAR’s curriculum development efforts has been the SDG. Through the SDG, faculty have created intentional spaces in their courses for learning about disciplinary knowledge and scholarly methods. This collaborative work has resulted in the creation or enhancement of at least 102 Discovery, Scholarly Inquiry, or Research and Scholarship Intensive (RS) courses across 35 departments. More than 265 individual faculty members have taught these new or enhanced courses. Faculty have developed and currently teach RS courses in 33 of 51 departments with undergraduate degree programs. Students earn an RS designation on their transcript for successfully identifying a project, carrying out a significant portion of the project, and presenting the results to an external audience. In addition to the RS courses in the disciplines, all students have access UNIV 491, RS: Individual Scholarly Experience. UNIV 491 is used by faculty to offer special team research projects, or for students who do not have access to an RS course in their major. As a major resource, OSCAR’s successful partnership with the University Libraries provides subject matter librarians in *Students as Scholars* courses. Librarians support information literacy through in-class teaching and one-on-one consultations with student researchers. In the past three years, 17 librarians have taught 108 sessions in 34 Inquiry and RS courses.

Program Outcome 3: Faculty support undergraduate students in scholarly inquiry, creative activities, and research.

Faculty are central to the success of *Students as Scholars*. Building upon an already robust practice of faculty development, *Students as Scholars* engages faculty in supportive learning communities to promote inquiry-based teaching and mentoring across the disciplines. In just four years, 300 faculty members from nearly every undergraduate-serving academic department have worked with *Students as Scholars* through faculty development workshops, learning communities, individual consultations, or special projects.

In general, Mason faculty have expressed positive attitudes about undergraduate scholarship, believing that the QEP has made a significant impact on the institution, and has enhanced student learning.³ Nearly 300 faculty have served as URSP mentors and 122 have hired OSCAR RAs, many returning to work with new students each semester. Faculty tend to be highly regarded as mentors. URSP students report that their mentors encourage them to communicate their thoughts and ask questions (80%), provide support to help them progress in their project (85%), provide them with constructive feedback (83%), emphasize strong research and work ethics (78%), and treat them with respect (91%).⁴

Program Outcome 4: Students participate in scholarship, creative activities, or research.

Students are engaging in authentic research and creative work in growing numbers as academic programs continue to develop RS courses and independent research experiences, and as more faculty members mentor students in classes, as OSCAR Research Assistants, and as URSP Scholars (see Table 3).

Table 3. OSCAR Intensive Student Participation

Activity	AY12	AY13	AY14	AY15	AY16	AY12-AY16
SaS Intensive Participants (URSP, RS, USTF, 4-VA)	1	701	983	1,035	963	3,532
RS course enrollment	1	643	867	892	925	3,009
Graduating seniors who completed RS or URSP	NA	5.9% (289/4,920)	14% (685/4,883)	17.4% (858/4,927)	18.1% (921/5,086)	16.5% (2,464/14,896)
URSP Participants	NA	87	115	121	99	422
4-VA Research Grants	NA	NA	NA	9	9	18
OSCAR FWS RAs	NA	NA	39	77	119	214

*Participants are unique counts for each academic year (AY); AY12-16 represents unique counts of all first-time participants

OSCAR’s signature individualized experience, the Undergraduate Research Scholars Program (URSP) is a competitive academic year and summer program that supports approximately 160 student-mentor teams per year. The summer program requires 40 hours of work per week over 9 weeks, while the academic year program requires 12 hours per week. Students and mentors receive stipends, and the summer URSP includes a specific budget for supplies. OSCAR provides a multi-disciplinary seminar that includes professional development activities.

Although not originally envisioned, OSCAR’s creative collaboration with the Office of Financial Aid established research assistantships through the Federal Work-Study program starting in 2013. Work-study students become OSCAR Research Assistants (RAs) who are paired with faculty mentors to work on faculty research. The program has expanded opportunities for students to be involved with scholarship, to learn scholarly methods in their field, and to keep them engaged on campus. A total of 214 students have participated in this program, with many returning to work with their faculty mentors for multiple semesters. A point of pride is how we have provided access to underrepresented students through this program, which has provided mentored research experience to a greater number of women (72% of RAs are female, vs. 51% Mason enrollment), and racial and ethnic minority students (58% of RAs are students of color, vs. 49% at Mason). The program has quickly become a national model for other universities to leverage their student aid dollars to provide educational experiences for low-income students.⁵

³ Office of Institutional Research and Assessment. (2016). Faculty survey on undergraduate student scholarship. George Mason University.

⁴ Based on 304 URSP respondents to the OSCAR Student Survey, spring 2013 to spring 2016.

⁵ Nazaire, D. W., & Usher, B. M. (2015). Leveraging federal work-study to support undergraduate research. *CUR Quarterly*, 36(2), 9-17.

As a more recent collaboration, OSCAR provides support to students and faculty through the 4-VA program, a collaborative among George Mason University, James Madison University, University of Virginia, Virginia Tech, and Old Dominion University. Since our initial involvement in summer 2014, OSCAR has funded 18 Mason students to do research as part of the 4-VA Collaborative. Involvement with 4-VA has expanded opportunities for STEM students and faculty to work on projects across the Commonwealth, where there are more resources or expertise in targeted areas of inquiry.

In terms of impact, we are starting to see movement in the desired direction. Seniors taking the NSSE in 2015 were more likely than their 2009 counterparts to report that they had worked with a faculty member on activities other than coursework (1.74 vs. 1.65, respectively, on a 4-point scale), and were more likely to have worked on a culminating senior experience (38% in 2015, vs. 26% in 2009).⁶ More than 18% of seniors who graduated in AY16 had completed an RS course or done the URSP, now at approximately 1,000 students per year.

An important focus for program improvement is how well we serve transfer students. Mason enrolls a large percentage of transfer students, primarily from the local community college system. These students enter Mason at a disadvantage in terms of their exposure to research opportunities, as well as having less time at the institution to connect with faculty mentors and complete a project. Transfer students are less likely than native students to have done a scholarly project by graduation (17% vs. 21%, respectively), and are significantly less likely to be familiar with *Students as Scholars*—only 26% reported familiarity at graduation versus 39% of native students.⁷

Program Outcome 5: Students have opportunities to communicate the results of their research or creative activities.

With the initiation of the Undergraduate Student Travel Fund (USTF) and the institution-wide Celebration of Scholarship, now at least 700 students each year are presenting or performing their research or creative works in public and professional settings. Of the 1,831 graduating seniors who responded to the survey in AY2016, 29% (up from 19% in year 1) reported that they had presented their scholarly or creative work outside of class.⁸ Between fall 2012 and spring 2016, more than 665 students had presented at the university-wide Celebration of Student Scholarship, and 350 had traveled on the USTF to present the results of their work at a scholarly meeting. Hundreds of students each year present across campus at college and department research exhibitions, senior design shows, and senior performances. OSCAR also funds at least 40 students each year to travel together to present at the peer-reviewed National Conference on Undergraduate Research.

Program Outcome 6: Students who have participated in scholarly activities are prepared for their career goals and advanced study.

A five-year average of 80% of all graduating seniors have reported that courses in their major contributed to their competence in conducting research. An analysis of survey data showed that graduating seniors in AY16 who had done scholarly projects were more likely to believe that they will do well using the knowledge and skills learned at Mason (78% vs. 71% of seniors who had not done a scholarly project), and more likely to believe that they are better prepared for work or post-baccalaureate study.⁹

⁶ National Survey of Student Engagement. (2015, 2009). Survey results. [Data file]. Retrieved from <https://ira.gmu.edu/>

⁷ Office of Institutional Assessment. (2015). Selected Results on Scholarly and Creative Activities. *Graduating Senior Survey*. George Mason University.

⁸ Office of Institutional Assessment. (2012-2016). Selected Results on Scholarly and Creative Activities. *Graduating Senior Survey*. George Mason University.

⁹ Office of Institutional Assessment. (2010-2016). Selected Results on Scholarly and Creative Activities. *Graduating Senior Survey*. George Mason University.

Mason has witnessed a decline in the number of students who report having been accepted as a full-time or part-time degree-seeking student in graduate or professional school at graduation, from a 7-year average of 250 (about 14%) students per year down to 198 (12.5%) in AY16.¹⁰ However, students who have completed a URSP or RS course are more likely to be heading to graduate school following graduation (20.6% in AY16). The OSCAR Student Survey furthers illuminates the differential impact of these experiences on students' desire to attend graduate school. Students who participated in the URSP were much more likely to indicate their goal of attending graduate school (65%) compared to 35% of students who had taken an RS course.

Impact on Student Learning

Program-level assessment of student learning is conducted each year using the *Students as Scholars* rubric, with a focus on the OSCAR RAs, URSP, and students enrolled in ENGH 302 and RS courses. On all five of the student learning outcomes, students show growth as they engage in more intensive scholarly experiences. As expected, on Discovery outcomes, OSCAR RAs are significantly more likely to be rated “emerging” (20%) or “proficient” (44%) than the typically more advanced URSP students, who are more likely to be rated “proficient” (34%) or “advanced” (49%).¹¹ Student work in ENGH 302 is consistently rated as “novice” (50%) or “emerging” (29%) on Discovery outcomes.¹² For Scholarly Inquiry outcomes, RS students, URSP scholars, and OSCAR RAs are all likely to be rated at the level of “proficient” or “advanced,” but URSP students are more likely to be rated “advanced.” ENGH 302 student work is generally rated as “novice” (39%) and “emerging” (44%).

Students in RS courses and the URSP are measured on the Creation of Scholarship rubric. Overall, both groups have consistently rated “proficient” or higher on these outcomes, although URSP students perform significantly higher than RS students on all measures. While Mason strives to provide all students with opportunities to communicate the results of their scholarship, we expect that URSP and RS students will present their work publicly to meet the learning outcomes for those experiences. Students communicate their work visually, orally, and/or in writing, as appropriate for their discipline and the project itself. URSP students clearly excel in the presentation of their work, demonstrating skills at the “proficient” or “advanced” levels (89% average). RS students typically demonstrate skills at a lower level than URSP overall, but more than two-thirds are consistently rated “proficient” or higher.

Unanticipated Outcomes

The ultimate key to the success of *Students as Scholars* has been the collaborative work amongst faculty, administrators, and students. As the programs were implemented, the Mason community saw the possibilities and made the initiative their own. We could not have predicted the enthusiasm and commitment of the University Libraries, who transformed their instructional curriculum and services to support the Inquiry and RS courses. The Libraries institutionalized their commitment by integrating support for undergraduate research through the leadership position for the Gateway Teaching & Learning Services. The OSCAR RA program, while not conceived in the QEP proposal, has been a tremendous resource for improving access to research opportunities. The modest research funding provided through OSCAR has created opportunities for faculty who do not have access to other such resources, especially for faculty in the humanities and social sciences for whom the RAs, URSP students, and small stipends have allowed them to advance their scholarship. Additionally, because agencies such as the National Science Foundation often require undergraduate research, the QEP has contributed to building institutional capacity for faculty to be competitive for major funding agency support.

¹⁰ Office of Institutional Assessment. (2012-2016). Selected Results. *Career Plans Survey*. George Mason University.

¹¹ Independent samples Mann-Whitney U test: URSP respondents (n=505), FWS respondents (n=115), $p < .01$.

¹² Ratings based on sample of 390 essays from spring 2012 through fall 2015

REFLECTIONS ON THE QEP—WHAT WE HAVE LEARNED

We launched the *Students as Scholars* QEP with the intention of changing the culture of George Mason University. At the time, Mason had a handful of faculty supporting student researchers in pockets around the university and a small undergraduate research program, supported by the Provost and administered out of the Honors College. While there were pockets of great work, there were no institution-wide programs or commitment to providing access to all students. Since 2011, our student population has grown, the emphasis on research has continued to grow, and we have been designated as a Carnegie “very high” research university. The expectations for faculty research productivity had been raised in 2011, but the student experience had not been enriched by this expansion of scholarly work. As President (now *emeritus*) Merten said of the QEP, it was the “right place at the right time” to embrace undergraduate scholarship.

We have been successful. We have met or exceeded our goals, despite significant institutional challenges. In the past six years, we have brought in a new president, new provost, and new deans in nearly every school and college. Mason has suffered from a significant decline in state funding, yearly tuition increases, and very little increase in generally low faculty salaries. In this time, we went through a visioning process to create a set of institutional values and a new strategic plan. The growing respect for the *Students as Scholars* initiative is evidenced in the 2013 Mason Graduate, which envisions Mason students as engaged citizens, *well-rounded scholars*, and prepared to act. Being included as a priority in institutional planning has helped us reach our goal of fostering a culture of student scholarship.

Planning the QEP, establishing OSCAR and the associated programs, and sustaining and building the initiative over the past five years has been a continuous learning experience. Our greatest strength has been that the QEP has been faculty and student-led and supported, and when we have faced challenges, we have turned to our Leadership Council and committees for guidance. One of our most important issues was the need for flexibility to adjust programs and policies based on our assessment data and in concert with our goals. We have found that students are eager, and they seek flexible, often interdisciplinary, opportunities. Faculty, for the most part, have been eager to participate, although their experience with undergraduate researchers varies from finding students helpful to their research agenda to being a barrier to their own accelerated progress. Additionally, faculty are being asked to do more with less, and even if every faculty member mentored a student, it would fall far short of the number of students who benefit; therefore, the curricular components of the QEP have had the most impact across the university.

One of the most important challenges we have faced is sustaining *Students as Scholars* at the intensity of the first five years. For instance, our initial faculty development programs were linear models that assumed that the same professor would be involved from initial conceptualization of a course, through course design, launching the course, and then using assessment data to improve the design. In reality, faculty turnover, use of contingent faculty, and diverse departmental cultures have meant that different professors may be involved in each of those steps, teaching us that we need to focus on creating relationships with chairs, working with teams of faculty, and providing continuous faculty development.

The *Students as Scholars* QEP has become the model for a transformational education initiative at Mason and across the nation. Moving forward, we will be building on a strong *Students as Scholars* program and we will continue to expand opportunities for students to become active participants in applying their scholarship in a variety of ways that draw on our strengths as an institution, our unique position in the Washington DC region, and the interests of our students and faculty as Mason aspires to be the best university *for* the world.