

Undergraduate Research at the University of Nebraska at Kearney: Building and Sustaining the Culture

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A full-scale institutional commitment to undergraduate research involves creating a campus culture that supports and reinforces students and faculty for their participation. The campus culture is a powerful source of motivation for both faculty and students. Goldhaber (1993) defines culture as the “pattern of beliefs and expectations shared by the organization’s members – which produce norms that shape the behavior of individuals and groups in the organization” (p. 69). There are many ways that colleges and universities can create a vibrant sense of mission and a distinctive culture that supports undergraduate research. To do so, institutions need to consider their guiding principles. What is the guiding vision for undergraduate research within the institution? How does this vision fit into the institutional mission? If undergraduate research is integral to the institutional mission and vision, then the implementation policies and programs supporting it become part of the climate and, in time, culture.

Strong student-faculty relationships have been and continue to be a focal point of the University of Nebraska at Kearney (UNK) experience. Instruction centers on personalized, individualized teaching-learning relationships between faculty and students in which “scholarly activities are understood to be intrinsic ingredients of good teaching, as they enrich the curriculum, provide individualized intellectual growth opportunities for faculty and students, prepare students for advanced and continuing study, involve them in experiential learning opportunities and exemplify the commitment to lifelong learning” (UNK Strategic Planning Committee, 2007, p. 3). The belief in hands-on-learning and the confidence that undergraduates are capable of making meaningful contributions to research are cornerstones of the culture of strong faculty-student teaching/learning relationships.

Institutional Background

UNK is a mid-sized, comprehensive, public university located in central Nebraska. It is one of

three universities in the University of Nebraska system operating under a single Board of Regents. UNK is Nebraska’s public university that is distinguished by its emphasis on undergraduate, residential education. Personalized attention for students is a hallmark of UNK’s education with 80% of first time freshmen returning for their second year. In a typical year, UNK draws students from approximately 45 states and 46 foreign countries as well as every county in Nebraska. Total enrollment approaches 6,500 students, about one-third of whom live in 10 traditional residence halls, two Greek complexes, and one apartment-style complex on campus. The University has four colleges: the College of Business and Technology, the College of Education, the College of Fine Arts and Humanities, and the College of Natural and Social Sciences. More than 170 undergraduate degree options and over 20 pre-professional programs are available. A unified general studies program provides undergraduates broad familiarity with diverse academic disciplines. UNK also enrolls approximately 1,300 graduate students in 45 graduate programs. The university has 309 full time faculty and 68 non-tenure track instructional staff. UNK is a Master’s/M institution in the Carnegie Foundation for the Advancement of Teaching classification.

The faculty at UNK has long been committed to programs that involve undergraduates in the research and creative activity process, but it has only been in the last 10 to 12 years that the university has begun to institutionalize the undergraduate research environment. In 1992, the UNK chapter Chapter of Sigma Xi listed undergraduate research projects conducted during that year. The report focused only on those research activities in which the students acted as the principal investigators and did not list projects for which the students acted as research assistants to faculty members. Undergraduate students from 4 colleges and 11 departments/programs completed approximately 126 research projects during 1992. In the last decade, the research opportunities for undergraduates on the UNK campus

have steadily increased. On-campus activities supporting undergraduate research are now common.

Although UNK has not established an office for undergraduate research, many of the undergraduate research and creativity initiatives are organized through the Office of Graduate Studies and Research and the Office of Sponsored Programs. In the fall of 2002, in response to the growing prevalence and importance of undergraduate research on campus, the administration approved the formation of the Undergraduate Research Council (URC), operated under the Office of Graduate Studies and Research. The budget for the URC is part of the UNK Research Services Council through the Office of Graduate Studies and Research. Additional financial support is available through the Student Talent Development funds, monies available through the Dean's office of each college, and specifically allocated funds from the Office of Sponsored Programs. The mission of the URC is to support and promote high-quality undergraduate research, creative activity and inquiry-based learning in all fields of study with faculty mentors. Composed of faculty and student representatives from each college, the council serves as an advisory group to the Dean of Graduate Studies and Research. It also serves as a forum for recommending and implementing activities supporting undergraduate research and creative activity.

Current Initiatives in Undergraduate Research

Although the Office of Graduate Programs and Research and the Undergraduate Research Council oversees a number of undergraduate research initiatives, it also provides resources and forums designed to provide more coordination among the many campus programs that support undergraduate research, while still maintaining the autonomy of these programs in their respective units. Below is a summary of programs supported out of the Office of Graduate Studies and Research.

URC Research Grants

These grants are intended to support student-originated and student-conducted research and creative activity. Faculty serve as mentors on these projects and are responsible for the financial components. The awards are competitively selected several times each year. Applicants may request up to \$400 may be made for operating expenses, supplies and travel.

Summer Student Research Program (SSRP)

The SSRP is a program designed to develop collaborative research projects between students and faculty. Participating students work one-on-one with a faculty member to develop and implement original research and creative projects. Activities are designed to provide a broad understanding of scholarship across disciplines. Activities include a research methods seminar, weekly meetings, field trips, a fall symposium to present papers, and presentations at the National Conference for Undergraduate Research. Students are paid \$3,000 for participation of 20 hours per week. Faculty receive stipends of \$1,800 for mentoring one student and \$2,700 for mentoring two students.

Student Travel for Research Presentations

Funds are available to assist undergraduate student presentations at scholarly meetings. The Office of Graduate Studies and Research funds a maximum of \$300 with documentation that the project has been accepted and the student is presenting. Students may obtain an additional \$300 from the Student Talent Funds available through the Senior Vice Chancellor for Academic Affairs Office. Other funding may be available through the department or through the dean's office in each college. We expect students supported through this program to participate in the UNK Student Research Day (SRD) held during the spring semester.

UNK Student Research Day

The SRD was initiated in 1999 and gives students the opportunity to present the results of collaborative research and creative activity conducted with faculty members. The purpose of SRD is to highlight and celebrate student research and give recognition to the faculty who provide the opportunity for this research. The day includes a poster session, oral presentations, musical performances and an art exhibition. We present awards for outstanding research and creative activity in several categories.

Undergraduate Research Journal and Other Publishing Opportunities

Each year the UNK Undergraduate Research Council publishes the *Undergraduate Research Journal*. Any manuscript written by an UNK undergraduate student is eligible. Each department can select up to four manuscripts for submission to

the URC. The URC and other faculty and students serve as the editorial board. Approximately 20 articles are accepted for publication. The *Carillon* is the official literary journal for Sigma Tau Delta (English Honor Society) and is supported by the Office of Graduate Studies and Research. Any UNK student who has a creative work may submit to this journal for review. The *Carillon* features the writings of both undergraduate and graduate students.

Undergraduate Research Mentoring Awards

The Faculty Awards for Mentoring of Undergraduate Research are career awards to any faculty member who is making a significant impact by supporting and mentoring undergraduate students in research and creative activities. The awards are intended to recognize demonstrated excellence in mentoring undergraduate researchers, to encourage mentoring relationships with undergraduate students, and to convey the campus' high regard for such contributions made by the faculty of the academic and research community. We give four awards each year, one for each of the four colleges. Nominations are reviewed by a committee in each college. Faculty members chosen to receive the awards demonstrate a commitment to undergraduate research through specific examples such as peer-reviewed publications involving undergraduates; student presentations, showings, or performances; and evidence for the continuing success of mentored students in the research endeavor.

Future Considerations

Although UNK has made great progress in establishing and building a culture of undergraduate research, we recognize that there is more we can do in order to strengthen and sustain that culture. We have targeted three main areas for priority attention. The campus should consider establishing an Office of Undergraduate Research in to direct students to existing opportunities, advertise and promote established programs, and assist in the development of new opportunities for research. Although there are numerous research avenues available to students, there is no program that pairs lower level undergraduates (i.e., freshmen and sophomores) with faculty mentors over a long period of time (e.g., a research apprentice program or research fellows program). Along with the establishment of a research apprentice or fellow program, the university needs to consider options for funding both students and faculty for participating in such a program. The third priority is to develop more effective assessment

procedures to track more effectively the impact on student learning. Although this information is often gathered at the departmental level, we need a system that provides more complete information from across the university.

As UNK continues to bring undergraduate research into the mainstream of the academic culture, it will need to address a broad range of issues in addition to the three priorities above. We need to reward faculty who engage in mentoring of undergraduate research. Although additional pay might be an incentive or reward to some individuals, it is also important that we recognize their work through the promotion/tenure process and/or other meaningful forms of recognition. We need to provide incentives and resources to support departments as they develop undergraduate research opportunities. Many of the undergraduate research experiences are directed by individual faculty. Resources could be designated to support initiatives at the departmental or college level. In addition, undergraduates should have the opportunity to participate in interdisciplinary research and initiatives should be established that promote interdepartmental research opportunities. Finally, UNK needs to develop a more effective method for tracking participation in undergraduate research. Campus-wide tracking of participation will allow us to document progress and more completely assess the impact of research opportunities on student learning.

UNK continues to grapple with issues surrounding the creation of a "culture" of undergraduate research. Most of the barriers are financial, particularly as budget cuts in recent years have impacted the development of new initiatives and programs. The belief that participation in research is an integral part of the undergraduate learning experience continues to be a positive, driving force in the creation of new opportunities. More importantly, the administration views undergraduate research as a catalyst for creating new teaching and learning environments for both students and faculty.

References

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