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The Role of the Graduate School in Promoting Research at NMSU

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Graduate education is closely tied to the teaching and research mission of research institutions. Our graduate students teach undergraduate classes, manage instructional laboratories, grade papers, supervise study groups, and mentor undergraduate as well as other graduate students. Among our graduate assistants, about 50 percent are supported as part of the teaching mission of NMSU and 50 percent are supported by research grants of faculty.

Graduate students also play a critical role in the creation of knowledge. As research assistants, they increase research productivity of faculty. They assist faculty with grant writing, data collection, analysis and dissemination.

Our students also conduct their own research for non-thesis project papers, master's theses and doctoral dissertations. Our master's and doctoral students present research at regional, national and international conferences. They also publish articles in the same journals as their faculty. Graduate students present their research at conferences and many publish in peer reviewed journals under the direction of faculty. The dissemination activities of our graduate students help promote NMSU as a research university.

The purpose of this paper is to discuss the role of the Graduate School in promoting the research mission of NMSU. As a discussion paper, it is hoped that it will generate ideas on ways the Graduate School can expand its role in supporting the research mission among our graduate students.

There are several roles that the Graduate School plays in promoting research among students including:

- Supports conference presentations to disseminate the research of students
- Offer awards to reward students for research productivity
- Assists in recruiting undergraduate research experience students
- Provides funding to attract high quality graduate students to NMSU
- Offers a Preparing Future Faculty Program to help students learn about the roles and responsibilities of faculty including the role of research productivity
- Offers professional development workshops including those on joint authorship of papers
- Established a clearinghouse of information on fellowship opportunities, and campus resources

1) Dissemination of Research by students

a) Conference Travel awards

Current activity: The Graduate School offers conference travel awards for graduate students to present their research at professional conferences throughout the country and the world. Over 50 travel awards were given to graduate students this academic year. Last year, a total of 70 travel

awards were allocated. The awards pay up to \$250 with support from the dean and/or department. The students learn professional communication and networking skills. More important, our students play a vital role in promoting NMSU as a research institution.

Proposed activity: There are four sources of support for graduate students to present their work at conferences. This includes: a) funded research projects of their faculty, b) the Graduate School conference travel awards, c) the Graduate Student Council and d) the Associated Students of NMSU. Next year the Graduate School will seek ways to ensure that graduate students know of all possible sources of support for conference presentations. We will also provide workshops on how to present work at professional meetings.

b) Graduate Research and Arts Symposium

Current activities: The annual Symposium is organized and implemented by graduate students. Each year the number of presentations and exhibits increases. Over 120 graduate students participate in this event. This year the Graduate Student Council will place all papers on their web site to help students build an electronic portfolio. The Graduate School provides financial support and works with the Graduate Student Council to encourage faculty participation.

Proposed activities: We will strongly encourage students that receive conference travel awards to present their research at GRAS. We will work closely with the Associate Deans Council to obtain more faculty judges. We will also work with the Graduate Student Council to promote the Symposium across the state of New Mexico.

2. Rewarding Research Productivity

Current activities: Graduate assistants work well beyond the hours required of their position. Through the support of President Martin, two reward programs were established for graduate assistants. Merit Enhancement awards of \$4,000 and Outstanding Graduate Assistantship awards of \$1,000. The fellowship committee of the Graduate Council selects 10 graduate students for the Merit Enhancement awards and 60 students for the \$1,000 Outstanding Graduate Assistantship awards. Both awards are available for teaching and research assistants.

The Merit Enhancement awards primarily reward students that are engaged concurrently in the teaching and research mission of NMSU. Student teaching evaluations are reviewed along with research dissemination efforts including conference presentations and journal articles. The Outstanding Graduate Assistantship awards of \$1,000 also reward graduate assistants that promote the teaching and research mission of NMSU.

Proposed activities: To promote the Graduate Research and Arts Symposium, students that receive both awards will be encouraged to participate either as presenters or volunteers for GRAS.

3. Collaborative Recruitment of Students with Research Experience

We work with departments to build the application pool so that departments can select the best students. We also ensure that the campus has a diverse student body in terms of national representation, international mix and cultural and ethnic diversity.

a. Current Activities

Engage campus in discussions on recruitment: Each fall the graduate school offers a campus wide workshop on Best Practices in Recruitment where faculty members share recruitment strategies. The Graduate School shares our recruitment schedule and discusses funding that is available to help recruit students.

Recruitment efforts at graduate and career fairs: The Graduate School attends graduate and career fairs and conferences at institutions where we have a history of receiving applications from. We target the states of Texas, Colorado, Arizona, and California. The conferences allow us to recruit students across the United States. In academic year 2007 – 2008, we attended 40 fairs and conferences.

Research conferences with high student participation: To recruit nationwide, we attend select undergraduate research conferences and national meetings. The list of conferences is provided below. These conferences generate applications from students that are engaged in undergraduate research experience programs. The intent is to attract students with research experience to our doctoral degree programs including our underrepresented training grant programs.

- Society for the Advancement of Chicanos and Native Americans in Science
- McNair national and regional conferences
- Annual Biomedical Research Conference for Minority Students
- California Diversity Forum and graduate fair
- American Indian Science and Society of Engineering
- Hispanic Engineering conferences

Mailing lists: We send departments names of students and send emails to over 7,000 names of students from two key mailing lists: the National McNair program and the Western Student Exchange Program which consists of students with a GPA of 3.0 and over from over 20 western universities. We are investigating the use of the GRE Locator service at the request of faculty.

Workshops and receptions for NMSU undergraduates: We engaged in outreach efforts among undergraduates at NMSU since 40 percent of our graduate students are NMSU alumni. We offer undergraduate workshops during the academic year on how to apply to graduate school, how to finance graduate studies and provide information on the transition from undergraduate to graduate school.

Last spring the Graduate School invited the National Science Foundation to come and speak about graduate fellowships available through their office. Over 60 students and faculty attended the workshop. This spring we introduced a Graduate School Information day (ASK US) to provide information about our programs. Close to 200 registered for this event and most were undergraduates of NMSU.

b. Proposed activities

We are reducing the number of outreach efforts as we introduce web based social networking tools such as myspace.com, facebook.com and meet-up.com. The Graduate School will also focus more on relationship building with potential and admitted students. We will employ the Hobson's communication tool to contact potential applicants every 3 to 4 weeks. We have

developed a communication plan that includes both letters and emails.

4. Funds and Benefit Package to Recruit Students

Graduate students apply to several universities. They select an institution that offers the best academic program and financial support either as fellowships, teaching or research assistantships. Students are also looking at other benefits from institutions such as health insurance and tuition waivers. NMSU competes among some of the top universities in the country for graduate students. Below I discuss some of the resources that we have to attract students to NMSU. Raising resources for graduate students is an incremental process.

a. Transportation awards for admitted students

To help departments recruit their top applicants, the Graduate School offers transportation awards to bring admitted students to visit the campus. The Graduate School pays for air fare only, up to \$350.00. Up to 20 admitted students are supported by this award. The departments provide housing. The student has a chance to meet faculty and students to determine if NMSU is the best fit for them. The money is available to all programs, master's only and doctoral degree programs.

Proposed activity: The Graduate School is exploring ways to increase funding for this activity. Most students that visit NMSU decide to enroll.

b. Tuition Fellowships (60 awards)

The Graduate School awards tuition fellowships at the end of the spring semester to help departments recruit their top students for the fall semester. Master's degree students receive up to 2 years of support. Doctoral degree students receive up to three years of support. These awards are for students receiving 10 hour and 20 hour graduate assistantships. The tuition fellowships do not include fees. They are limited to entering first year students that have been awarded a graduate assistantship. Criteria for selection include academic merit and other positive attributes of the graduate assistant (diversity, experience, skills, academic merit and other unique attributes the student will bring to the program).

The Fellowship Committee of the Graduate Council selects students for these awards. Most of the students nominated for these awards are doctoral degree students. Most of the students will engage in research either as research assistants or as individual researchers.

Proposed activities: We need to encourage more departments to nominate their students for these fellowships. We also need to search for ways to increase the funding for this program.

c. Graduate Assistantships to Promote Diversity

Academic excellence requires a diverse student body. NMSU has three programs to promote diversity: a) the New Mexico Higher Education Department Fellowships, b) the McNair Graduate Assistantship, and c) the Diversity Graduate Assistantship. Both the McNair and Diversity awards are a one year merit award that requires departments to provide a second year graduate assistantship. The NM Higher Education Department Fellowships are also merit based

and require a department match each year of a 10 hour a week graduate assistantship. These awards are for women and underrepresented students.

McNair fellows come from one of over 200 McNair programs nationwide. Undergraduate research experience is one of the requirements of this program. This is an excellent program to increase the number of undergraduate students with prior research experience.

Proposed activity: The Graduate School needs to encourage all departments to nominate students for all three awards. We also need to increase funding.

d. Research Cluster Graduate Assistantship Program

The Graduate School established the Research Cluster Assistantships to support up to 20 students that are assigned to help faculty within the research clusters. The program was designed to help departments recruit outstanding students with prior research experience. A secondary objective was to develop a junior scholars program where these students would engage in small workshops on research and ethics, oral and written communication skills, and present their work among their peers in the clusters. It was hoped that the junior scholars program would expand as funded research grew among the clusters and more faculty members hired research assistants. An advisory board of 13 was involved in the establishment and selection process of the students.

Proposed activity: The Research Cluster Assistantships have been transferred to the Office of the Vice President for Research. The Graduate School including the Graduate Council will explore ways to engage those students in workshops on campus related to research. We will also invite those students to participate in the Graduate Research and Arts Symposium.

e. Health Insurance for Graduate Assistants

The Graduate School in collaboration with the Student Health Center and Human Resources, offers health insurance to all graduate assistants that work at least 10 hours a week and are paid through the NMSU payroll office. This benefit program assists NMSU in attracting students to NMSU. At present, the student covers 30 percent of the costs or \$291 over a 9 month period and NMSU pays the remaining 70 percent.

5. Preparing Future Faculty Program

Over the next decade we can expect to see a massive wave of retirements among faculty and senior administrators in higher education. A number of Graduate Schools across the United States have put programs in place to recruit the next generation of university and college faculty. Most of these programs are called “Preparing Future Faculty” (please see the following web site on national programs promoted by the Council of Graduate Schools: <http://www.preparing-faculty.org>)

The Graduate School launched the Preparing Future Faculty Program to encourage students to become faculty members. About 18 to 20 students and faculty mentors are involved in this program which provided a 10 hour graduate assistantship to students. Students are expected to attend workshops organized by the Teaching Academy and the Graduate School. The workshops organized by the Graduate School complement those of the Teaching Academy. The Teaching Academy focuses on the teaching roles of faculty. *The Graduate School focuses on the responsible conduct of research along with roles and multiple responsibilities of faculty.* The

Fellowship Committee of the Graduate Council selected the students along with representatives from the Associate Dean's Council and the College of Engineering. Research productivity and dissemination is stressed to help students build their resume to obtain faculty positions.

Proposed activities: The Graduate School will continue the Preparing Future Faculty and redesign the program based on the evaluations of faculty and students. We will rely on the faculty to serve on an advisory board to help coordinate efforts between the Graduate School and the Teaching Academy.

6. Professional development programs and workshops

Current activities: The Graduate School offers a series of workshops for graduate students. Workshops focus on skill development (time management, working in study groups, changing advisors), ethics and research, financing graduate school, negotiating authorship, and the roles and responsibilities of faculty as part of our Preparing Future Faculty series.

We also offer a graduate assistant orientation each fall where in addition to discussing effective teaching strategies, we also focus on the responsible conduct of research. This includes issues of plagiarism, ethics and research, the requirements of the Institutional Review Board, and safety issues.

7. Clearinghouse of Fellowships for Graduate Students

We have a fellowship web site to assist students in finding external funding. We also offer several workshops a year where we discuss alternative ways to finance graduate studies. Dean Lacey has been a reviewer for the National Science Foundation, and the Ford Foundation. Insights on what reviewers look for in an application are discussed. We constantly update our fellowship web site to assist students in obtaining fellowships.

8. Activities that indirectly impact research

Improving the admissions process: The admissions process is paperless. We are posting applications for departments on a secure server. At present we have a 5 to 7 day turn-around time in getting applications to departments. Next year we will change the admissions process and allow departments to see all applications. In addition, departments will be the first to make admissions decisions. This process should allow us to get completed applications to departments within 2 to 3 days. (Graduate Student Services processes admissions and they implemented the suggested change to the process).

New Degree Programs: During the past two years, 6 new degree proposals have been submitted to the campus for review. We are pleased to say that 2 new doctoral degrees have been approved at the state level. New degree programs include the Ph.D. in Nursing, and the Professional Doctor of Economics. Other degree proposals under review include: a) a Master's of Science in Bioinformatics, b) a Professional Master's degree of Financial Mathematics, c) a Master's and Ph.D. degree in Aerospace Engineering, and d) a Ph.D. of Social Work. The doctoral degree programs will add to the research agenda of the campus.

We leave you with two questions:

- How can we expand programs to encourage undergraduate research programs across campus? These programs produce some of our best graduate students.
- How can we expand efforts to educate our students about the responsible conduct of research?