

ANNUAL REPORT OF THE GRADUATE SCHOOL 2009-10

INVESTMENTS IN THE QUALITY OF GRADUATE EDUCATION:

We believe that the quality of graduate education offered by programs at WWU can be enhanced by investing in the support for students' scholarship, presentations by graduate students at professional conferences and scholarships.

1. Support for Student Research:

This academic year, in order to enhance the quality of graduate student's research for their theses, we allocated \$20,000 from the Graduate School to support graduate student thesis research. The Graduate Research and Scholarship Committee, a faculty committee, partially or fully funded 21 graduate students' research activities. The projects funded appear in the following table.

Graduate Students Receiving Research Awards

Student	Department	Thesis Title
Bjelland, J.	English	The Burden of Blood: An identity Crisis
Bronny, D.	Biology	Comparative genomics of <i>Bistorta vivipara</i>
DeBoer, C.	Geology	Magnetostratigraphy and Block Rotation of Fish Creek-Vallecito Basin, CA
Dubeau, M.	Anthropology	An Interpretation of Mammal Remains from Pacific Period Assemblages in
Forester, B.	Envir. Sciences	Using modeling & phylogeography to determine distribution of an alpine
Fort, A.	Biology	Predator interactions with the two life-cycle phases of <i>Emiliana huxleyi</i>
Gerdts, J.	Envir. Sciences	Dendrochronological reconstruction of historic salmon abundance using
Gill, I.	Envir. Sciences	Predator-Prey Dynamics of Bears and Salmon at McNeil River, Alaska
Hart, A.	Geology	The Age and Development of Laramide Synorogenic Deposits
Hiebert, T.	Envir. Sciences	Prey capture and cnida composition in <i>Anthopleura elegantissima</i>
McFadden, C.	PEHR	Effects of Inspiratory Muscle Training on Anaerobic Power in Cyclists
Miller, L.	Envir. Studies	Trans-boundary Park Governance: A Case Study of La Amistad ...
Palmer, J.	Anthropology	Analyses and Interpretations of the Cobble Tool Industry at Cherry Point
Peirce, S.	Anthropology	Bivalve-Growth-Stage as a Measure of Site Occupation Type: Application..
Richards, M.	Psychology	How male clients understand damage to the therapeutic alliance
Shaw, S.	Geology	H ₂ O contents in olivine-hosted melt inclusions from primitive magmas in ..
Silks, J.	Psychology	Beliefs and Attitudes about the Causes of Obesity
Tierney, A.	Anthropology	Wapiti, Climate, and Humans Through the Late Holocene in the ...
Todd, M.	Anthropology	An Investigation of Traditional Indigenous Reef Net Fising in the Gulf of ...
Van Hees, D.	Biology	Stress effects on oxidants in ulvoid algae and the impact of oxidants on ...
Welch, C.	Envir. Sciences	Dietary habits of the reidside shiner (<i>Richardonius Balteatus</i>) in Ross Lake

2. Support for Graduate Student Presentations at Professional Conferences:

We view the professional development of graduate students as an important component of their education. Important to that professional development is the interaction with other colleagues at national, international and regional conferences. We continued to support the travel of graduate students presenting papers in national, international and regional academic conferences. We cover the cost of the airfare up to a maximum of \$500 per student. This year we funded 25 students for a total of \$9,242. The students supported are listed in the table below:

Graduate Students Receiving Travel Awards

Student	Department	Conference
Assoudeh, K.	Political Science	Midwest Political Science Association
Assoudeh, M.	Political Science	Midwest Political Science Association
Ayre, K.	Environmental Science	Society for Risk Analysis
Barber, J.	English	Rice University
Berner, L.	Environmental Science	American Association of Geographers
Berry, R.	Special Education	Council for Exceptional Children
Bronte, C.	English	Mid-Atlantic Popular Culture/ American Culture Association
Carle, C.	English	National Popular Culture and American Culture Association
Farr, C.	Educational Leadership	Hawaii International Conference on Education
Groover, N.	Anthropology	Association of Canadian Studies in the U.S
Hammond, B.	Environmental Studies	Association of American Geographers
Helms, K.	English	National Popular Culture and American Culture Association
Janus, C.	English	Southeastern Medieval Association
Jennings, L.	Psychology	American Psychological Association
Magnusson, R.	Psychology	Society for Neuroscience
Massine, J.	English	Southwest/Texas Popular Culture and American Culture Assoc.
McIntosh, M.	Chemistry	American Chemical Society
Nelson, J.	Psychology	Western Psychological Association
Newton, C.	PEHR	American College of Sports Medicine
Pfaff, D.	Chemistry	Experimental Nuclear Magnetic Resonance Conference
Pierce, S.	Anthropology	Alaska Consortium of Zooarchaeologists and Public Educators
Reiser, C.	CSD	American Speech-Language Hearing Association
Stettler, N.	Psychology	American Psychological Association
Terry, B.	English	National Popular Culture and American Culture Association
Trujillo, K.	Environmental Studies	Environmental Education Association of Oregon

3. Recruitment for Signature Programs:

The objective of this program is to enhance the ability of selected signature graduate programs [these are programs designated as such by the Provost] to be competitive in recruiting outstanding graduate students, particularly outstanding graduate students who would enhance the diversity of the student body. In 2009/10 the scholarships was accepted by 15 outstanding applicants. The total amount awarded was \$44,000. Departments have become adept at leveraging these funds and providing additional resources for the selected students in order to attract them.

4. Tuition Waiver Scholarship:

This program provides partial support to outstanding graduate students especially those who are needy. Programs Directors select the potential recipients on the bases of need and merit and make recommendations to the Dean of the Graduate School. The Dean selects recipients from among those nominated. 111 graduate students accepted this scholarship, typically awarded at \$1000 per quarter and some students receive more than one quarter support. The total amount awarded was \$114,155.

5. Scholarship Endowment:

Through endowments to the WWU Foundation, the Graduate School awarded funds to two graduate students through the Charles and June Ross Endowment Fund, the Charlton Family Graduate Research Fund and the Helen Muir Memorial Scholarship Fund.

EXAMPLES OF GRADUATE STUDENTS' ACCOMPLISHMENTS 2009 – 2010

I. Contributions to Community

- Chomiczewski, L. (Biology) gave a public lecture for the *Skagit County Beach Watchers*.
- Communication Sciences and Disorders' graduate students provide over 10,000 hours of clinical service to the community.
- Grason, E. and R. Allee (Biology), gave public lecture for the *Pacific Northwest Shell Club*.
- Grilliot, M. (Environmental Studies) is a *Marc Hershmann Marine* Fellow at the Washington State Department of Natural Resources.
- Holcom, A. (Anthropology) works for the Whatcom Dispute Resolution Center.
- Human Movement and Performance graduate students volunteer and intern in the local medical community's cardiac rehabilitation and physical therapy programs. They participate in the Adult Fitness Program and the Mature Adult Training Program offered to the community in Bellingham and Whatcom County.
- Huntington, S. (Human Movement and Performance) developed WWU employee wellness Program.
- Miller, S. (School Counseling) volunteers for the *Treehouse*, a program supporting grieving children in Mount Vernon School District.
- Robinson, J. (Biology) volunteered at Bellingham's Marine Life Center.
- Whitson, B. (Special Education) developed a math program for Whatcom Discovery (specialized program for students with serious emotional disturbances)
- Wendling, B. (Biology) serves as the president of the local chapter of *Washington Native Plant Society*.

II. Contributions to Profession

- Brock, B. (Human Movement and Performance) is a co-author of a paper published in the journal *Medicine & Science in Sports & Exercise* (2009).
- Bronny, D. (Biology) is doing collaborative research with scientists at Harvard University Herbarium.
- Bufkin, K. (Chemistry) is a co-author of a paper published in the *Journal of Physical Chemistry, B.*, (2010).

- Chen, V.C. (Environmental Science) co-authored a paper to appear in the journal *Risk Analysis* (in press).
- Colnar, A.M. , (Environmental Science) co-authored a paper to appear in the journal in *Human and Ecological Risk Assessment* (in press).
- Davis, R. (biology) co-authored of a paper in *Geomicrobiol. Journal* (209).
- Gehman, A.M. (Environmental Science) co-authored a paper in the *Journal of Experimental Marine Biology and Ecology* (2010).
- Gaudette, A. and Burns, A. (Chemistry) are co-authors with others of a paper in the *Journal of Catalysis* (2010).
- Hansen, V. received a Community Rehabilitation Grant from the *Canadian Association of Speech-Language Pathology and Audiology* to study treatment of patients with Parkinson's disease.
- Jackson, M. (Human Movement and Performance) is a co-author of a paper published in the journal *Medicine & Science in Sports & Exercise* (2009).
- Kairis, P. (Environmental Science) co-authored a paper in the journal *Ecological Modeling* (2010).
- Kallis, J.L. (Environmental Science) co-authored a paper to appear in the *Journal of the American Water Resources Association*,(in press).
- Krohn, C. and B. Kepner (Secondary Education) were co-authors with T. Keiper `of a paper published in *Social Studies and the Young Learner*, Vol. 22, no. 2.
- Milonas, L. (Environmental Science) co-authored a paper in the journal *Mar. Ecol. Prog. Ser.* (2010).
- McAllister, S. (Biology) has collaborated with researchers at the University of Hawaii, Oregon Health & Sciences University, Woods Hole Oceanographic Institution and Scripps Institution of Oceanography.
- McIntosh, M. (Chemistry) is a co-author of a paper in the journal *Org. Lett.* (2010).
- Mueller, K.W. Environmental Science co-authored a paper in the *Journal of Fresh Water Ecology* (2009).
- McLaughlin, K.M. and W. Lawson (Human Movement and Performance) are co-authors with others on a paper under review by the journal *Medicine & Science in Sports & Exercise*.
- Newton, C.K., J. Dudley and K. Landis (Human Movement and Performance) are among the co-authors of a paper to be presented at the annual meeting of the *American College of Sports Medicine*.
- Rorabough, J. (Anthropology) authored a paper to appear in *Journal of Northwest Anthropology*.
- Stillo, S. (History) won the Phi Alpha Theta award for best graduate paper.
- White, J. (Environmental Studies), won the 2010 Best Graduate Student Paper at the 2010 *American Association of Geographers*.

EXAMPLES OF CAREER OUTCOMES

- Almay-Hamilton, L. (Anthropology) is teaching at Whatcom Community College.
- Anderson, J. (Psychology) is teaching at Edmonds Community College.
- Bieshueval, M. (History) received a fellowship to attend Law School.
- Broder, B. (Political Science) founded a development agency: *The Kenya Education Fund*.
- Cardinale, A. (English) is on the faculty of Clarke Community College, Oregon.
- Davis, R. (Biology) is pursuing Ph.D. at Oregon Health & Sciences University.
- Faucett, J. (Psychology) is employed at the *Northwest Clinical Research Center*.

- Friedrich, J. (English) is pursuing Ph.D. degree at U.C. Riverside.
- Garson, E. (Biology) will pursue Ph.D. degree at University of Washington starting September 2010.
- Gaudette, A. (Chemistry) is on the faculty of Skagit Valley College.
- Hammerbeck, M. (English) is on the faculty of Whatcom Community College.
- Ikeda, C.(English)(is on the faculty of the University of Washington, Tacoma.
- Kimbrough, C. and C. Mansfield (Psychology) are currently pursuing Ph.D. degrees.
- Kreft, A (Political Science) will be pursuing a Ph.D. degree at the University of St. Andrews, Scotland.
- Lahey, M. (Mental Health Counseling) works for Catholic Community Services as a School-based Mental Health Counselor.
- Landis, J. (English) will pursue a Ph.D. degree at University of Nevada, Reno.
- Mansfield, C. (Psychology) taught at North Seattle Community College.
- Miller, S. (School Counseling) is an elementary school counselor in Mount Vernon School District.
- Potter, M. (English) is on the faculty of Whatcom Community College.
- Stillo S. (History) received a fellowship for the Ph.D. program at University of Kansas.
- Troy E. (English) is pursuing a Ph.D. degree at SUNY Albany,
- Tyo, J. (English) is pursuing Ph.D. degree at SUNY Albany.
- Wade, M. (Political Science) is pursuing a Ph.D. degree at the University of Minnesota.
- Warneke, A. (English) is on the faculty of Clarke Community College, Oregon.

GRADUATE SCHOOL APPLICATIONS

For the 2009-10 academic year, the number of applications totaled 1012 compared to 1,073 applications in the preceding year (a decline of 6%). Of this number 563 (56%) were admitted and 417 (74%) of those admitted chose to enroll, a decline of 61, or 12% in new student enrollment from the preceding year. It should be noted that, especially in some of the sciences and other thesis programs, applicants are required to name faculty advisers as part of the preliminary application process. Because of faculty workload, some qualified prospective applicants do not complete the application process because they are unable to obtain the support of faculty who could provide research support. On the other hand, students who apply to the post-masters programs in education are generally always admitted because they meet state requirements for seeking principal or superintendent certification.

APPLICATIONS, ADMISSIONS AND ENROLLMENT FOR AY 2009/10

Program	Applications	Admits	Enrolled	Admit rate	Yield
MA-Anthropology	15	11	7	73%	64%
MS-Biology	14	6	3	43%	50%
MED-Continuing & College Ed	26	21	20	81%	95%
MS-Chemistry	11	7	6	64%	86%
MED-School Counselor	26	6	6	23%	100%
MS-Computer Science	14	7	4	50%	57%
MS-Computer Science (Accelerated BS/MS)	2	2	2	100%	100%
MED-Ed Admin (Main)	9	6	6	67%	100%
MED-Ed Admin (Off Campus)	5	2	2	40%	100%
MA-English (Creative Writing)	34	17	11	50%	65%

MA-English (English Studies)	41	16	11	39%	69%
MED-Environmental Education	12	10	5	83%	50%
MED-Environmental Ed (Res)	20	18	11	90%	61%
MS-Environmental Science	34	10	8	29%	80%
MS-Geography	21	12	8	57%	67%
MS-Geology	34	18	3	53%	17%
MA-History(Archives & Records Mgt)	15	10	5	67%	50%
MA-History	21	15	8	71%	53%
MS-Human Movement & Performance (Exercise Science)	9	7	2	78%	29%
MS-Human Movement & Performance (Sport Psychology)	10	5	4	50%	80%
MS-Mathematics	24	19	8	79%	42%
MS-Math (Accelerated BS/MS)	2	2	2	100%	100%
MBA-Business Administration (Accelerated)	41	33	27	80%	82%
MBA-Business Administration Off Campus)	10	9	7	90%	78%
MBA-Business Admin (Full-Time)	67	26	20	39%	77%
MS-Biology (Marine & Estuarine Science)	16	6	5	38%	83%
MS-Environmental Science (Marine & Estuarine Science)	18	3	3	17%	100%
MS-Mental Health Counseling	48	8	6	17%	75%
MIT-Secondary w/Cert	14	12	12	86%	100%
MIT-Secondary w/Cert	65	49	41	75%	84%
MPAC-Professional Accounting	24	19	12	79%	63%
MMUS-Music	9	7	6	78%	86%
MS-Psychology (Experimental)	29	12	6	41%	50%
PM-Administrator Pro Cert	1	1	1	100%	100%
PM-Archives & Record Mgmt Cert	4	4	1	100%	25%
PM-Community & College Teaching	2	1	1	50%	100%
PM-ED Admin. Superintendent Cert(Everett)	19	17	18	89%	106%
PM-Principals Init Cert(Bremerton)	5	5	5	100%	100%
PM-Principal's Initial Cert	14	14	13	100%	93%
PM-Principals Initial Certificate (Sea)	19	19	16	100%	84%
MA-Political Science	11	10	7	91%	70%
MA-Political Science(Env St)	11	6	4	55%	67%
MA-Rehabilitation Counseling	29	21	18	72%	86%
MED-Student Affairs Admin	41	22	15	54%	68%
MED-Nat Science /Science Education	3	3	3	100%	100%
MA-CSD (Speech-Lang Pathology)	92	29	22	32%	76%
TOTAL	991	563	412	57%	73%

DIVERSITY

Graduate student populations by college, and the percentages by gender and non-Caucasians are shown in the Table below. These data show that over the past two years the percentage of women students had remained stable at 59% and a decrease in the percentage of non-Caucasian students from 39% to 24%. Overall, there has been nearly a 3% decline in the average number of enrolled graduate students from average enrollment in 2008-09. This decline is mostly due to a decline in enrollment in the College of Sciences and Technology from 96 to 79, a decline of 8.2%. The MBA/MPA programs, on the other hand, have grown from 64 to 96, a 50% growth over the two year period.

GRADUATE STUDENT ENROLLMENT: Average Fall 2009, Winter 2010 and Spring 2010

	Enrollment	Male%	Female%	Non-Caucasian %
CBE	96	61%	39%	27%
WCE	323	37%	63%	26%
CFPA	10	57%	43%	17%
CHSS	202	33%	67%	21%
HUXLEY	62	29%	72%	16%
CST	79	65%	35%	27%
Totals	772	41%	59%	24%

DEGREES AWARDED

Of the 332 degrees awarded, 59% were awarded to women. This percentage is in line with master's degrees awarded nationwide and continues the trend here at WWU for the past several years.

NUMBER OF MASTER'S DEGREES AWARDED July 1, 2009 through June 30, 2010

College	MA	MS	MED	MIT	MBA	MPAC	MMUS	Totals	% Female
CBE					41	11		52	33%
CFPA							5	5	20%
WCE	13		62	51				126	67%
HUXLEY		12	11					23	83%
CST		34	7					41	44%
CHSS	64	15	6					85	67%
Totals	77	61	86	51	41	11	5	332	59%

GRADUATE PROGRAM REVIEWS

The Graduate Council reviews graduate programs on a five-year cycle. Program review guidelines follow those of the Council of Graduate Schools (CGS). The review process includes

collecting data on enrollments, degrees awarded, application numbers, and other appropriate quantitative information over the previous five or more years. Members of the review committee interview faculty, program students, alumni, the program director and the college dean. The report which includes discussion of responses to and changes made as a result of the prior review as well as recommendations for further improvements is submitted to the Council. The report, following approval by the Council, the ACC and the Faculty Senate, is also sent by the graduate dean to the program chair and the college dean. The college dean is responsible for monitoring action on approved recommendations.

In 2009/10 the Graduate Council reviewed the following programs:

- **Speech-Language Pathology:** The program was found to be exceptionally strong, and the new facilities, equipment and space have further strengthened the program. The challenges found were: sufficient funding for graduate students, the need for additional clinical educators, and the need for additional faculty so that program faculty can take professional leaves to maintain their currency. The review recommended that the college consider adding a clinical educator position in *dysphagia*, increasing the administrative support for the clinic and the continuation of the development of the Audiology Doctorate.
- **Human Movement and Performance:** The review pointed out program strength: the involvement of faculty and their support of students, the quality of the students recruited and the opportunities for application. Areas in which there are concerns include: the facilities which were reported as inadequate in the prior review and remain increasingly so; the inadequate support for graduate students – limiting the ability to recruit the best students; and the limited access to courses (while improved since the last review is still limited especially the required course KIN 506). The recommendations include encouraging the University to place a higher priority on the renovation of Carver Gymnasium and increasing the frequency of offering the required courses.
- **Biology:** This is a very strong program. The review found that substantial progress has been made since the 2005 program review. Notable improvements were made in: timely movement of students through the program; offering a more diverse set of graduate courses; flow of information to faculty and students; the workload of the program coordinator; and increased uniformity in the expectations for theses. Recommendations include: continue to develop additional graduate courses; consider scheduling to allow TAs to fulfill their duties while having access to the courses they need.

In addition two programs:

- **Anthropology**, and
- **Environmental Education**

were reviewed, however, there was insufficient time for the Council to discuss the reviews. The Graduate Council will consider the reports on these in the fall quarter.

INITIATIVES:

1. **Exit Survey of Graduates:**

In the summer of 2009, the Graduate School conducted its first-ever exit survey of graduating masters degree recipients. The survey is designed to elicit information on

program satisfaction, the frequency and scope of academic interaction on and off campus, barriers to success, and plans for the future. The survey was well received, netting a 67.1 % response rate. 82.3% of students said they were satisfied or very satisfied with the overall quality of their program and 84.7% say they are satisfied or very satisfied with the level of academic challenge. Additionally, 74.5% of students said they would probably or definitely choose Western if given the chance to start their graduate career again. Also, 77.7% indicated they would probably or definitely recommend someone to Western who was considering their program.

2. Study of Attrition, Completion and Time-to-Degree

We constructed data and completed an empirical study of attrition, the completion rates and the time to degree for the Masters degrees for four cohorts of students. We examined the effects of program characteristics such as the field of study, thesis or internship requirement and whether the program is offered in a lock step format, and demographic characteristics of the students such as gender race and residency on the degree completion rate and on the time it takes to complete the degree. This is a pioneering work in the U.S., and was presented at the Summer Meeting of the Council of Graduate Schools (July 2009) and also at an invitation-only workshop organized by the National Science Foundation and the Council of Graduate Schools (May 2010).

3. Digital Thesis

In the fall of 2009, the Graduate School in coordination with the University Library, moved to a digital thesis model: a hard bound copy of the thesis is filed with the Library but the circulation copy becomes electronic. The benefits of such a move include greater availability of the research to the academic community, increases in student exposure to employers and/or further education, ease of access, and reduction in paper use, library space required, and cost. The Graduate School held a series of informational presentations to help students, faculty, and advisors understand the digital conversion and the motivations for moving in such a direction. By winter term, 2010, all Western Theses were filed electronically.

4. Non-Enrollee Survey:

In the spring of 2010, the Graduate School conducted the first survey of students offered admission but declined. The survey is designed to determine what led prospective students to choose another university, in order to plan for future admission cycles. Results of the survey varied widely by program. While the overall sample size was not large (48), the two most frequent reasons for students choosing other universities are: better funding offers and WWU was not their top choice. This survey will be conducted on a quarterly basis.

5. Study of the Role of Graduate Education at WWU

As a follow up on the President's initiatives, the Provost directed the Dean of the Graduate School to lead an examination of the role of graduate programs at Western. A committee was convened to seek input from the campus community on the role of graduate education at Western. The Committee worked diligently through the winter and spring quarters of 2009, soliciting input from all Deans, Graduate program Directors, faculty and graduate students, and produced a [White Paper on the Role of Graduate Education at WWU](#) . The Provost followed up with a [Plan for implementing the recommendations](#) of the White Paper.

The progress to date in implementation of the plan includes:

- The Graduate Strategic Advisory Committee has been established and has met a number of times this quarter. The Committee is co-chaired by Professor Roger Anderson and Professor Susan Mancuso.
- The Dean of the Graduate School is currently exploring the creation of the pathways to residency.
- The budget for FY 2010/11 added \$250,000 to create additional TA positions.
- The Higher Education Coordinating Board has authorized planning for a new professional science master's degree in Environmental Sciences.
- During the process of developing a budget for the next biennium proposals for new graduate programs were presented. These include a professional doctorate degree in audiology, additional professional science masters and a program to prepare future faculty for the community colleges.

We intend to implement the other recommendations as resources allow.

6. Professional Science Masters in Environmental Sciences

In cooperation with the Huxley College of the Environment, College of Business and Economics, and Extended Education and Summer Programs, we developed a proposal for a new Professional Science Master's degree in Environmental Science with concentrations in Environmental Science as well as Environmental Planning and Policy. This degree will provide students with the set of scientific and technical skills typically required of environmental science professionals, as well as the essential business skills that are highly valued by employers in industry, government, and nonprofits. A Notice of Intent was submitted to the HECB.

7. Preparing Science Faculty for the Community Colleges

We prepared a proposal for funding by the National Science Foundation. The goal of the project is to develop a new model for the preparation of future science faculty for the Community Colleges. This is accomplished by integrating (a) the strong disciplinary preparation required for earning a Master's degree in the sciences including the requirement of a thesis or project; (b) the pedagogy of science education and assessment of science learning and the pedagogy of adult learning; (c) the design, development and effective use of E-learning; and (d) the use of cyber-enabled laboratory instrumentation. Students participating in the program will also complete internships, teaching science courses in a community college under the mentorship of community college science faculty members. The proposal received strong support from the Community Colleges. The project was not funded, but NSF program directors suggested other venues for funding. The proposed model was presented at the Annual Meeting of the *Council of Graduate Schools* and at the Annual Meeting of the *Western Association of Graduate Schools*.