The relationship between research and graduate education is considered of tremendous value to both faculty and students. Why are the two so mutually beneficial?

By Suzan DiBella
Photography by Geri Kodey

First, there was the freezing rain, followed by three weeks of extreme heat with intermittent high winds. Then there were encounters with an assortment of bugs, as well as myriad challenges presented by confusing maps and unreliable Jeep trails. There were sheer cliffs to scale by day and just the eerie silence of the desert at night.

And, of course, there were no showers, cell service, or bathrooms. These were just a few of the tribulations geoscience doctoral student Robyn Howley braved last summer while camping in the high desert of Western Utah to conduct her dissertation field work. Despite the discomforts and the small torments of the month-long expedition, she’s the first to say that she’d do it again in a heartbeat—all in the name of research.

“Every morning, my research assistant and I would get up, put on all our gear, and go out to the rock formations,” she says. “We would spend the days identifying rock layers, taking measurements, and collecting samples. I loved it.”

Howley’s field work was part of her dissertation research, which was designed to determine how the changing levels of ancient seas in the area contributed to rock formations. The evidence of sea life in these rock outcroppings—either in the form of fossils or traces of tiny burrows made by long-dead, minute creatures—provided her with mountains of information that she is still analyzing.

“Conducting research has been such a wonderful experience,” says Howley, who is now writing her dissertation based, in part, on her month in the desert. “The skills I acquired and the hands-on learning I gained in the field combined perfectly with my classroom preparation. Together, they enabled me to think critically and create new knowledge, which is really the point of conducting research.”

While Howley’s research experience may be a bit more adventure-filled than that of many graduate students, it is...
Enhancing Research

The skills I acquired and the hands-on learning I gained in the field combined perfectly with my classroom preparation," says Robyn Howley. "Together, they enabled me to think critically and create new knowledge, which is really the point of conducting research."

In the Graduate College, we believe that faculty mentorship is critically important to student success," Hausbeck says. "With the constructive guidance of faculty, graduate students design their research projects, collect data, and disseminate their findings at conferences and in scholarly publications. This is great experience for graduate student scholars and it benefits the university and community at the same time."

This emphasis on mentorship is a source of pride with UNLV Faculty, who consider the opportunity for student involvement in research an excellent recruitment tool to attract the best and brightest to the more than 75 master's degree and 36 doctoral/professional programs offered at UNLV, Hausbeck notes.

Graduate Assistantships and Fellowships

Faculty are also able to offer graduate students positions as graduate assistants, enabling them to earn stipends working in campus laboratories and classrooms to provide research and/or teaching support to faculty. "Graduate assistants play a critical role in the university setting," Hausbeck says. "Graduate assistants provide indispensable support to UNLV faculty, aiding with research and augmenting classroom learning. Additionally, the GAs themselves benefit from the experience. Serving in this capacity provides them with valuable professional development, enhances their learning, and helps defray the expense of graduate education."

Because graduate student value this experience, Hausbeck says, UNLV's ability to offer competitive compensation packages to graduate assistants is important to the recruitment of the most talented and qualified prospective graduate students. Graduate fellowships are likewise critical to the advancement of graduate education, Hausbeck says. "They provide the support students need to finalize their research and complete their doctoral dissertations."

"It's the dream of all researchers to be able to focus entirely on their research," says Howley, whose dissertation will help scientists learn more about patterns of hydrocarbon deposits, how to locate them, and what techniques are best used to do so. "Like most graduate students, for the past three years I've had to balance research, classes, teaching, and service activities. I was so pleased to receive support this year—it has allowed me to spend more time synthesizing data I collected in the field, critically examining results, and formulating new ideas and hypotheses. I've been able to work through the most difficult portions of my Ph.D. dissertation."

Howley, who expects to graduate in December 2008, plans to cofound a scholarly publication with her dissertation advisor, UNLV geoscience professor Ganqing Jiang, on her research. After all, she notes, one of the central goals of research is to disseminate one's findings, which builds on the collective body of knowledge in a given field of study. "As a graduate student, I feel extremely fortunate to have the opportunity to share my research with the top scientists in my discipline," Howley says. "It's very rewarding to know I can make a contribution to my field of study."

What Are Graduate Fellowships?

Graduate fellowships will play an increasingly important role at UNLV as research and graduate education continue to progress, according to Kate Hausbeck, senior associate dean of the Graduate College.

"Writing a doctoral dissertation is a full-time endeavor," Hausbeck says. "The President's Graduate Research Fellowship Program provides advanced doctoral students the financial assistance they need to complete their research and write their dissertations—pivotal requirements for earning the doctoral degree. This kind of support enables doctoral students to focus on their degrees rather than having their progress slowed or delayed due to financial pressures to pursue outside employment."

The President's Graduate Research Fellowship will allow students such as this year's recipients, Jonathan Foster and Robyn Howley, to focus solely on their research and professional development, Hausbeck notes.

"It's a mutually beneficial arrangement," she says. "When faculty conduct their research, they receive critical assistance from graduate students who are very often conducted in teams, and graduate students are vital members of the research teams. This occurs at all major research institutions the world over, and as research grows at UNLV, this activity will continue to be supported and enhanced."

She adds that graduate students, in turn, gain experience discovering how to apply classroom learning to real-world research scenarios.

"In the Graduate College, we believe that faculty mentorship is critically important to student success," Hausbeck says. "With the constructive guidance of faculty, graduate students design their research projects, collect data, and disseminate their findings at conferences and in scholarly publications. This is great experience for graduate student scholars and it benefits the university and community at the same time."

This emphasis on mentorship is a source of pride with UNLV Faculty, who consider the opportunity for student involvement in research an excellent recruitment tool to attract the best and brightest to the more than 75 master's degree and 36 doctoral/professional programs offered at UNLV, Hausbeck notes.

Faculty are also able to offer graduate students positions as graduate assistants, enabling them to earn stipends working in campus laboratories and classrooms to provide research and/or teaching support to faculty. "Graduate assistants play a critical role in the university setting," Hausbeck says. "Graduate assistants provide indispensable support to UNLV faculty, aiding with research and augmenting classroom learning. Additionally, the GAs themselves benefit from the experience. Serving in this capacity provides them with valuable professional development, enhances their learning, and helps defray the expense of graduate education."

Because graduate student value this experience, Hausbeck says, UNLV's ability to offer competitive compensation packages to graduate assistants is important to the recruitment of the most talented and qualified prospective graduate students. Graduate fellowships are likewise critical to the advancement of graduate education, Hausbeck says. "They provide the support students need to finalize their research and complete their doctoral dissertations."

"It's the dream of all researchers to be able to focus entirely on their research," says Howley, whose dissertation will help scientists learn more about patterns of hydrocarbon deposits, how to locate them, and what techniques are best used to do so. "Like most graduate students, for the past three years I've had to balance research, classes, teaching, and service activities. I was so pleased to receive support this year—it has allowed me to spend more time synthesizing data I collected in the field, critically examining results, and formulating new ideas and hypotheses. I've been able to work through the most difficult portions of my Ph.D. dissertation."

Howley, who expects to graduate in December 2008, plans to cofound a scholarly publication with her dissertation advisor, UNLV geoscience professor Ganqing Jiang, on her research. After all, she notes, one of the central goals of research is to disseminate one's findings, which builds on the collective body of knowledge in a given field of study. "As a graduate student, I feel extremely fortunate to have the opportunity to share my research with the top scientists in my discipline," Howley says. "It's very rewarding to know I can make a contribution to my field of study."