

The Passion for Field-Based Training in Geography

The middle of the summer is an appropriate time to remind ourselves that geographers should remain committed to on-the-ground, field-based training of students. Fieldwork has long been considered central to the focus geography has on spatial patterns of biophysical and human phenomena and understanding the complex linkages and feedbacks between them. Yet, with budget constraints, insurance liability questions, and the considerable organizational effort required—on top of the ever increasing demands of research and service—pressure is being exerted on university programs and individual faculty to withdraw from field-based training of students. As individuals and as a discipline, we should resist such pressures. Fieldwork provides training and experience that simply cannot be replicated in the classroom.

Why should we take students to the field? Many of us have fond memories of field experiences that ignited our passion for geography as a career choice. This was certainly the case for my classmates and me as undergraduates at UCLA and graduate students at Oregon State University. University of Oregon Professor Andrew Marcus outlines the benefits of field-based training as follows: 1) *Inspiration*: students catch fire, change majors and decide to become geographers. 2) *Transformation*: teaching self-reliance and responsibility in a non-judgmental way. 3) *Team-building and friendship*: when it works, people develop lifelong friendships, an esprit de corps, and new collaborative endeavors. 4) *Deep learning*: students ask more challenging questions when confronted by the immensity of the world around them. 5) *Caring*: fieldwork generates some deep emotions for the world around you. John Harrington at Kansas State University adds that extended field trips allow students to see their professors as people who care about their learning. Dawn Wright, an ocean geographer at Oregon

State University, states that field-based training gives students a sense of "ownership" of primary data they can collect themselves. Moreover, MS students are more prone to give peer-reviewed publishing a go if they have been able to collect primary data.

Space is insufficient here to survey the entire range of field-based training in geography, but let us consider several models that deserve our support and participation. Many geographers are committed to field-based education for K-12 youth and adults. For instance, Andrew Marcus is deeply involved with the Yosemite National Institutes, a private non-profit organization that has served over 40,000 youth and adults annually for over thirty years through a unique variety of environmental education programs at their national park campuses in California and Washington state. The National Geographic Society Summer Teacher Institutes are wonderful means of training junior-high and high school teachers about geography. As one example, I recall the great success of wagon train expeditions on the Oregon Trail organized for Wyoming Geographic Alliance (WGA) teachers by University of Wyoming Professor Bill Gribb. The same summer, I led WGA teachers on float trips on the Snake River to allow comparisons of the river in Grand Teton National Park with unmanaged sections downstream. Surely the field-based training of teachers results in more robust geography courses in the public schools.

The Juneau Icefield Research Program (JIRP) is a superb program for field-based, cross-disciplinary training of students in earth system science in one of the most spectacular wilderness regions on Earth. Since 1946, JIRP has been led by Dr. Maynard and Joan Miller (1996 AAG

Honorees for Distinguished Teaching), building a cadre of scientists and teachers engaged in field-based environmental research. At a time when issues of global change demand credible answers from science, JIRP provides an opportunity for international scientific project collaboration along with a physically and intellectually stimulating team experience. Fritz Nelson (University of Delaware) and I count ourselves among the many geographers (and 3,500-plus total participants) who "found our legs" as field scientists through the JIRP experience. Mel Marcus (AAG President 1997) was an early and frequent participant, followed in later years by

Andrew Marcus. Twelve of my own students have been selected to participate.

While serving on the faculty of Oklahoma State University for the past six years, I was impressed by how every single course in the School of Geology at Oklahoma State University (OK State) includes at least one field trip. The capstone course for the major is a five-week long field camp. Even introductory courses with enrollments in the hundreds include all-day trips. Students are charged field trip fees commensurate with the actual cost of transportation and insurance. My colleagues and I have regularly offered optional field trips to the Rocky Mountains, Grand Canyon, and Texas coast for students over fall break, spring break and in the summer—attracting new majors and stimulating graduate students in the process. The value of undergraduate field training was brought home when an alum recently donated a twelve-passenger van to the School of Geology because of his fond memories of field trips as an undergraduate. Another satisfied and successful alum donated the land and facilities where



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internationalization plans.

Over 400 geographers representing all institutional types and major research subfields completed the survey. A detailed analysis of the survey by Michael Solem and Waverly Ray is now available on the AAG website. The report, *Gauging Disciplinary Support for Internationalization: A Survey of Geographers*, interprets the diversity of factors affecting the motivations of geography faculty to internationalize research and pedagogy. Among the report's findings:

- Nearly 25% of the faculty sample reported having at least one experience with an international collaboration focused on teaching or course development, whereas 57.3% participated in an international collaborative research project. These individuals were motivated by the belief that internationalization creates opportunities for professional and educational enrichment. They also perceived themselves to be highly capable and engaged with international

professional networks.

- Departments and institutions also play a role in the internationalization process, perhaps most importantly by committing resources to create a supportive work environment. Indeed, the faculty in our sample cited a wide range of administrative policies that helped them achieve their internationalization goals. Among the most valued policies were those designed to expand funding for international education and professional development programs, reward faculty for international collaborative work, and implement student and faculty exchange programs.
- Though overall support for global learning outcomes was high, this support varies considerably when examined through the lens of gender, research subfield, institutional context, and other variables. Human geographers, women, non-native English speakers, and liberal arts faculty were more inclined to support global learning outcomes, especially those outcomes with a strong

affective-trait or values component.

The survey findings will guide the development of an action plan that articulates how faculty, departments, and the AAG can work locally and together to enhance internationalization within the discipline. We are also drawing on related research with the AAG's Online Center for Global Geography Education project to develop educational resources that support global learning in different geographical subfields. Additional input is being sought from an international advisory committee of geographers, the AAG Council, and AAG members. As this process unfolds, the AAG will continue to support internationalization through its annual meetings, publications, specialty groups, travel grants, and collaborative relationships with international organizations.

For additional information about the AAG's internationalization initiatives, please contact Michael Solem (msolem@aag.org).

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the field camp is located. Geography faculty at OK State have offered a summer NSF Research Experience for Undergraduates (NSF-REU) program that links field-based soil and water data collection with GIS analyses. This type of training builds on a true strength of student training in geography. We should continue to heed the call by former AAG President, Reg Gollidge, to develop virtual field trips for physically challenged students.

A few university geography programs conduct multi-week long field camps. McMaster University offers a thriving third-year field camp that is compulsory for all BS students in earth and environmental sciences—sixty-four students this year! Professor Carolyn Eyles reports the camp spends one week working on field skills (GPS, streamflow monitoring, etc.) in the Hamilton area, then moves to Whitefish Falls for field mapping. McMaster also runs a fourth-year field camp in conjunction with the University of Toronto at a different site each year: Costa Rica, the Rocky Mountains, and Arizona. These camps allow students to work and interact

with their counterparts from another institution, helping them to realize their own strengths and weaknesses as they conduct group work.

A long-standing field program in cultural-historical geography, with legions of loyal alumni, has been led by Richard Nostrand, recently retired as David Ross Boyd Professor of Geography at the University of Oklahoma. Dick has returned with students time and again to El Cerrito, in the upper Pecos Valley of New Mexico, to trace social organization (family feuds and settlement struggles) and to document how land shaped life for eight generations over 180 years in this small, isolated Hispanic village. In the summer of 2005, Dick is returning with students to rebuild the historic schoolhouse—imparting another lesson to students: *remember to give something back*.

My colleagues and I have surveyed alumni and employers of our graduates as part of student learning outcomes assessment. Field skills were as highly valued as we suspected. Before we tie ourselves to our desktop computers, let us

remember the value of the field experience for our current and future students. Consistent with recommendations in the National Research Council (1997) volume, *Rediscovering Geography: New Relevance for Science and Society*, we strengthen geographic institutions when we rediscover the traditional strengths of geography, including fieldwork. Departmental budgets and faculty reward structures in universities should be altered to recognize the importance of field-based training for students, not the least of which are retention and development. Let us renew our commitment to field-based training of geography students in individual courses, during semester breaks, and in summer institutes and camps. Those of us who are committed to field training of students do it because we have a deep passion for it and have seen the benefits of skillful, energetic and earnest learning outside of the classroom.

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