

1-1-2002

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Recommended Citation

Borer, Catherine; Newman, Peter; Ginger, Clare; Shane, John; and Watzin, Mary (2002) "Teaching to learn and learning to teach : a case study of multilevel, interdisciplinary education in natural resources," *Natural Resources and Environmental Issues*: Vol. 9, Article 51. Available at: <http://digitalcommons.usu.edu/nrei/vol9/iss1/51>

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TEACHING TO LEARN AND LEARNING TO TEACH: A CASE STUDY OF MULTILEVEL, INTERDISCIPLINARY EDUCATION IN NATURAL RESOURCES

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ABSTRACT: The University of Vermont's School of Natural Resources (SNR) has linked undergraduate and graduate education through a recent update of a sophomore-level class in SNR's core curriculum: "Environmental Problem Analysis" (NR105). As a result of a series of collaborative workshops, NR105 now includes explicit links to two other courses: "Ecology, Ecosystems and Environment" (NR103) and "Social Processes and the Environment" (NR104), and students must take these three courses concurrently. NR105, a multidisciplinary, integrative course, is taught collaboratively by two SNR Ph.D. students (an ecologist and a social scientist), and fulfills their graduate teaching requirement. Through direct course development and oversight, regular meetings with faculty members who teach the concurrent courses, and participation as members of the core faculty development group, this model places Ph.D. students into a "faculty apprentice" role. The three-course sequence thus combines integrative, cross-disciplinary education with a multilevel approach to education. At both undergraduate and graduate levels, it also includes an explicit focus on group work and interdisciplinary team collaborations.

Current work is designed to sustain and build upon the recent curricular revision; we are developing and implementing an interdisciplinary, conceptually linked Web site for the three-course program. Although still in progress, the homepage of this Web site is available at <snr.uvm.edu/core>. The individual class Web sites for the sophomore-level courses utilize a common format, and include links to Web-based resources that are not course-specific. These resources can be used, not only by currently enrolled undergraduates, but also by course instructors. Future work may include further Website development to utilize a common format and resources for all courses in SNR's core curriculum.

This project has linked three concurrent sophomore-level classes in the undergraduate core curriculum in SNR. It has linked undergraduate learning of integration across disciplines, with an enhanced understanding of integration for the Ph.D. student instructors of this course. It has introduced group skills to the undergraduates, and deepened interdisciplinary collaboration skills in the Ph.D. student instructors. The project is also increasing the use of technology within SNR's core curriculum, and encouraging a smooth transition to subsequent Ph.D. student instructors of NR105 through peer mentorship. It is also being used as a possible model for further curricular reform within SNR and elsewhere at the University of Vermont.