BARNARD ACTION EXPANDS ITS REACH

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Barnard’s award-winning Brownfield Action (BA) environmental simulation has made its way to several colleges across the U.S., including Georgia State College, Lafayette College, and Connecticut College, and is being used for both introductory courses and upper-level hydrology classes on those campuses. Now, thanks to a complete rewriting and upgrade of the computer program and its user interface as well as its re-installation on a server large enough to handle virtually unlimited use, even more educators across the U.S. can avail themselves of this innovative curriculum. The expansion, enabled by a $450,000 National Science Foundation grant, announced last February and unveiled at a mini-conference held at Barnard in mid-August, points to an even brighter future for BA.

Used for seven years as the foundation for one semester of Barnard’s Introduction to Environmental Science, BA was first developed in what is now a defunct computer language and hosted on an old Internet server with very limited capacity. In recent years, Peter Bower, Senior Lecturer in the Department of Environmental Science and creator of the simulation in collaboration with the Columbia Center for New Media Teaching and Learning (CCNMTL), had to turn away many people interested in applying the program to their courses. That’s no longer a challenge, as the new interface has been built for the use of robust servers that will allow unlimited use of the simulation; the new website serves as a portal for BA as well as an interface where users can exchange ideas and information about its application. According to Bower, this model, where interdisciplinary scientific and social information is integrated within a constructivist-learning environment, improves student learning and has the ability to transform the teaching of environmental science throughout the country.

"Like real-world environmental consultants, users of Brownfield Action must develop and apply expertise from a wide range of fields, including environmental science and engineering as well as journalism, medicine, public health, law, civics, economics, and business management," Bower said. “Students thus gain an unprecedented appreciation of the complexity, ambiguity, and risk involved in environmental site assessments." Bower foresees the program eventually being adopted and used in creative ways not just by instructors, but also by professional training programs, local governments, and community groups.

—Dimitra Kessenides