NGLC Grant Awarded to Online Science Consortium

Boulder, Colorado — The North American Network of Science Labs Online (NANSLO) has been awarded a grant from Next Generation Learning Challenges, an initiative working to improve U.S. college readiness and completion, especially among low-income individuals, by identifying and accelerating the growth of effective education technology. The 15-month project, funded at just under $750,000 and including a consortium of institutions in the Western U.S. and Canada, aims to add a powerful new component to online science courses: students will have access to a remotely located science lab and the ability to control remote instrumentation, allowing them to perform experiments, practice scientific observation, and conduct data analysis, as students in classroom-based courses do.

NANSLO builds on the success of the Remote Web-based Science Laboratory (RWSL) developed by BCcampus, a consortium of 25 postsecondary institutions in British Columbia that will be participating in the project. NANSLO will also serve students attending Colorado Community College System (CCCS) institutions. Students enrolled in the 13 CCCS community colleges will have access to three freshman-level gatekeeper courses, with labs modeled after those developed by BCcampus: physics will be offered in spring 2012 and chemistry and biology in summer 2012. The Western Interstate Commission for Higher Education (WICHE) is the fiscal agent and coordinating partner for the grant. Other partners, in addition to BCcampus and CCCS, include the Colorado School of Mines, Montana State University Bozeman, Montana State University-Great Falls College of Technology, University of Wyoming, and Laramie County Community College. Representatives from these institutions will serve on the NANSLO advisory board and discipline panels.

“This international project has the potential to deepen student engagement in online science courses and enable more students, especially those who find it difficult to take classes on campus, to persist in science-related programs,” said Pat Shea, WICHE’s principal investigator for the grant and director of the WICHE Internet Course Exchange (WICHE ICE). The project will be led by Shea and co-principal investigators Rhonda Epper, assistant provost at CCCS, and Paul Stacey, director of communications, stakeholder, and academic relations at BCcampus.

“One of the challenges of online instruction has been how to provide the clinical and laboratory experience required in many STEM fields,” says Epper. “This project builds on an already tested model and gives CCCS institutions a way to offer their students a rich, full experience in these courses today—and the ability to share their expertise with other institutions in the future.”

Scientists have been using remotely controlled instrumentation for years: deep sea submersibles and...
the Mars Exploration Rovers are just two examples. But the application of this technology to education has lagged. By integrating the Remote Web-based Science Laboratory, which BCcampus has licensed for reuse and sharing via Creative Commons, into gatekeeper biology, physics, and chemistry courses, NANSLO will provide students with a new learning experience. “We are thrilled to enter into a consortia partnership to improve and scale BC-developed OER online science courses and associated Remote Web-based Science Lab into the U.S.,” says BCcampus’s Paul Stacey. “Working together collaboratively will enhance and sustain the development and delivery of deeply engaging online science courses while at the same time producing a best-of-breed OER that others can adopt and localize.” All courses, software, manuals, and other deliverables developed by NANSLO will be openly licensed to encourage the widespread adoption of these courses and RWSL (learn more about RWSL at http://rwsl.nic.bc.ca/about.html).

NANSLO, which was selected from a field of more than 600 preproposals and 50 finalists, also aims to improve access to and success in science courses, especially for students at risk of failing or not completing their degrees, including low-income, first-generation, and rural students, who often face barriers of time and distance, ranging from geography to work and family obligations, that may prevent them from attending classes on campus.

About WICHE & Next Generation Learning Challenges

The Western Interstate Commission for Higher Education (www.wiche.edu) and its 15 member states work collaboratively to expand educational access and excellence for all citizens of the West. By promoting innovation, cooperation, resource sharing, and sound public policy among states and institutions, WICHE strengthens higher education’s contributions to the region’s social, economic, and civic life. Our programs—Student Exchange, the WICHE Cooperative for Educational Technologies, Policy Analysis and Research, and Mental Health—are working to find answers to some of the most critical questions facing higher education today. WICHE’s 15 member states include Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

Next Generation Learning Challenges (www.nextgenlearning.org) is a multiyear, collaborative initiative focused on identifying and accelerating the growth of effective education technology that can help improve college readiness and completion in the United States, especially among low-income individuals. NGLC is focused on early-stage innovations. It invests in technology applications with emerging results that look promising but need more support to reach more students. EDUCAUSE, an organization dedicated to advancing higher education through the use of technology, leads Next Generation Learning Challenges. Organizations collaborating on the initiative include: the League for Innovation in the Community College, the International Association for K-12 Online Learning, and The Council of Chief State School Officers. Each offer deep, practical expertise in education, leadership, and innovation. The Bill & Melinda Gates Foundation and the William and Flora Hewlett Foundation helped design Next Generation Learning Challenges and fund the initiative.

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