



Distance Education: A User-Friendly Learning Option

by Kari Gunderson

You gain knowledge, inspiration, and diverse perspectives in environmental education (EE), all without having to leave the house.

This was my first online course experience and I worried that I would miss the human contact. But the design of the course with the discussion boards was wonderful; I felt I developed a productive and supportive relationship with my 'cyber-classmates' and the instructor. I will really miss them!

- Course participant
2005 Applied EE Program Evaluation course



Imagine yourself at home in your favorite chair, dressed comfortably in sweat pants and a T-shirt while actively increasing your knowledge and understanding of environmental education. You choose when to participate in the “virtual classroom,” when to communicate with your instructor, and when to interact with your classmates from around the world. You gain knowledge, inspiration, and diverse perspectives in environmental education (EE), all without having to leave the house.

These are just a few of the advantages of distance education, a rapidly growing educational venue that environmental education (EE) has only recently begun to tap. There are compelling reasons to explore distance learning, primary among them being two courses designed specifically to fill gaps in the learning opportunities available to formal and non-formal educators. These courses—Fundamentals of Environmental Education and Applied Environmental Education Program Evaluation—are funded by the Environmental Education and Training Partnership (EETAP) and offered by the University of Wisconsin-Stevens Point (UW-SP).¹

Photo provided by Jennifer Dillard



Graduate student takes Fundamentals of EE online course.

¹EETAP is a project of the UW-SP College of Natural Resources, funded by U.S. EPA's Office of Environmental Education.



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- participant in the *Applied EE Program Evaluation* course

Five Reasons to Consider Online Courses



Evaluations from the two University of Wisconsin-Stevens Point online EE courses yield five persuasive reasons to explore distance learning in general and these courses specifically.

1. Online instruction knows no geographic boundaries.

Online courses link students from all over the world. Students share ideas in a culturally diverse setting with people from different social, economic, and experiential backgrounds. Since its inception in 2002, the Fundamentals of Environmental Education online course has included participants from 46 states, six countries (Canada, England, Mexico, Pakistan, Peru, Philippines), Puerto Rico, Saipan/North Mariana Islands, and Washington DC. Thirty-seven states, four countries (Argentina, Canada, Mexico/Baja California, and Vietnam), Puerto Rico, and Saipan/North Mariana Islands have been represented in the *Applied Environmental Education Program Evaluation* course since 2004.

A spring 2005 participant in the *Applied EE Program Evaluation* course said, "I really enjoyed the interaction and feedback from people from all parts of the world. I enjoyed interacting on an international level with a large group of environmental educators and the instructor. It really expands your network!"

2. Distance learning is convenient.

According to a fall 2005 *Fundamentals of EE* course participant, "Convenience is at the top of the list." Although assignments usually have submission deadlines, online courses are primarily independent of time and place, so students can access instruction at their convenience, no matter where they live or travel. Being near a college campus is no longer a requirement.

3. Online courses promote contemplative and reflective learning opportunities.

With online learning, students have time to reflect before responding. This forum of communication can eliminate the barriers that inhibit some individuals from expressing themselves in face-to-face settings. A student in the fall 2003 Fundamentals of EE course commented, "You

need to set aside quiet space and time where there are no phones ringing or interruptions. You need to concentrate and think about the readings before participating in the discussion board. The assignments made me really think about the processes laid out in educational theories and how they apply to EE.”

4. Online courses can provide individualized attention and a depth of interaction from instructors and students not achievable in a large classroom environment.

“I felt that the discussion board was a highlight of the course and provided an excellent opportunity to learn from my fellow students. It also helped make the course more personal. The teacher’s detailed comments [on] assignments were invaluable and also helped to make the course more personal,” said a spring 2005 student in the *Fundamentals of EE* course.

5. The online format reduces preconceived notions based on students’ age, gender, race, background, or level of experience.

Through online discussion, students receive and give valuable feedback to each other and learn from people with a broad array of professional backgrounds and experience with less judgment than might be found in a face-to-face situation. A student in the fall 2004 *Fundamentals of EE* course said, “I like the anonymity of being able to comment on peoples’ ideas without incurring the in-class wrath if no one agrees with your view. I like knowing that even though we’re separated by thousands of miles that we still have shared and similar experiences as instructors in the field of EE.”

Who’s Taking Online Courses?

The audience for online or distance learning is as varied as the course options. Participants in the UW-SP courses have included educators, resource management specialists, and program directors among others.

Laurel Anders is an Aquatic Resources Program Specialist with the Pennsylvania Fish & Boat Commission’s Bureau of Boating & Education

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Photo provided by Laurel Anders



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Photo provided by Jessica Huxmann



Online student Jessica Huxmann developed an evaluation plan for this puppet festival as part of her EE course work.

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- April Rust

Program. As a student in the *Applied EE Program Evaluation* course, she evaluated the Youth Bass Anglers Conservation School program. The program targets youth between the ages of 14 and 17 who learn from professionals regarding fish biology, fisheries management, habitat improvement, fishing skills and techniques, boating safety, fisheries and conservation careers and tournament angling. Anders said, "I moved from 'a blank slate' to [knowing] how a program should be organized [so] the agenda meets the objectives. The *Applied EE Program Evaluation* course gives you what you need to know."

Jessica Huxmann coordinates a puppet festival in Reedsburg, Wisconsin. Her supervisor requested an evaluation of the program to help secure future funding sources. As a graduate student in environmental education at the University of Wisconsin, her advisor recommended the *Applied Environmental Education Program Evaluation* online course. Huxmann said, "The end result was to have something to take back to evaluate the festival. I got feedback from other students and the instructor. I am excited to use the evaluation results when I apply for future grants. The background information will serve me throughout my career."

Project WET coordinator for the Minnesota Department of Natural Resources April Rust said the knowledge gained in research and evaluation will help her promote Project WET. "I gained practical application in designing evaluation tools like surveys, interview questions and focus groups," said Rust.

Course Options

F *Fundamentals of EE* provides foundational knowledge of environmental education and assists students with incorporating quality EE into their instruction. Participants discuss the history, definition, goals, and instructional method of EE. The course is appropriate for both classroom teachers and non-formal educators who work with students and/or teachers.

Applied EE Program Evaluation is designed to help environmental educators and natural resource professionals evaluate their education

programs. Students design evaluation tools such as questionnaires, observation forms, and interview and focus group guides for a specific education program or research study.

Participants can obtain three undergraduate or graduate credits from the University of Wisconsin-Stevens Point or take courses as a non-credit workshop. All participants are eligible for the in-state tuition rate. Scholarships for course participation are offered to state and local level EE leaders serving in roles such as state EE association board members, state coordinators or facilitators for programs such as Project WET, Project WILD, and Project Learning Tree. The courses are popular and fill quickly.

Project Learning Tree Goes Online

The only way to obtain Project Learning Tree curriculum materials is by attending a PLT workshop. For educators in geographically isolated places like rural Alaska, this can be difficult. Distance learning opens the door to people who don't otherwise have the opportunity to participate in a workshop.

PLT has facilitated online training workshops in Alaska since 2002. Online workshops are combined with Project WILD and offered over a six-week period for one academic credit. Sandi Sturm, the online learning designer who offers the courses, says, "The hands-on experiences that are often touted as missing in an online course are actually being conducted with [students'] local audiences." Students are required to go into their local communities to teach PLT activities as part of the course. They work on assignments each week on their own, then interact with the instructor and with each other. They also meet for five teleconferences over the six weeks.

Ross Tulloch, a science teacher for grades 7-12 in Metlakatla, Alaska, is an advocate for online learning. He said, "I like the self-paced nature of the online PLT courses and the use of multi-media on the course website. I was able to apply directly what I learned about fire ecology to my students. I could work on course assignments at midnight, at school, at home, or while traveling to and from work on the ferry." Online courses are a great resource for remote school districts in Alaska. "When you factor in travel costs and costs for credits, it is far more cost effective to provide professional development through online courses," said Tulloch.



Photo provided by Jessica Huxmann

Online student Jessica Huxmann developed an evaluation plan for this puppet festival as part of her EE course work.

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History of Distance Education

Distance education is not a new concept. Dating back to the early 1700s, advertisements first appeared for courses offered by mail through correspondence study. Distance learning took advantage of rapidly advancing technologies, incorporating radio, television, and audio and video recording. During the 1960s and 1970s distance learning expanded to address people who live in geographically isolated areas. Other reasons for the popularity include escalating costs of traditional residential education, interest in informal and nontraditional education, a more mobile population, the growth of career-oriented activities, and the need for learning new skills. In the late 1980s teacher shortages in areas of science, math and foreign languages, along with state mandates to rural schools, produced an even greater need for distance education opportunities. Today, distance education has moved toward computer-based interactions, using the Internet and the World Wide Web. Modern communication technologies now link educational institutions to homes and work sites around the world.

Ed Hays, retired teacher-turned naturalist in Haines, Alaska, views the PLT online courses as an opportunity to receive credits to renew his teaching credential and expand his knowledge to work as a professional nature guide for his new business, *The Alaska-Japan Connection*. This summer he will offer immersion English courses for Japanese students with an emphasis on the ecology of Alaska. Hays said, “The online courses, *Alaska Wildlife* and *Fire in Alaska*, make you appreciate where you live. I learned so much about wildlife and nature.”

According to Barb Pitman, PLT’s national director of operations, and Al Stenstrup, PLT director of curriculum, online PLT training workshops are also offered in several states besides Alaska. The Greater Virginia area, for instance, offers a course entitled *PLT in the City*. The online courses offer flexibility for non-formal educators to fit the training into their work schedule while reducing travel costs (airfare, hotel, meals, substitute teachers). Several state PLT coordinators have participated in an online workshop to better prepare to offer their own online courses in individual states. Stenstrup states, “While a majority of PLT workshops are offered face-to-face, the online course is a great option to help meet the needs of some educators.”

The Link to EE Certification



As the first step in establishing a nation-wide certification program, the North American Association for Environmental Education (NAAEE) with support from EETAP is currently helping three states establish specific competencies and develop programs leading to certification for environmental educators. Online EE professional development courses can contribute to this professional certification effort by providing some of the training needed to meet certification requirements. UW-SP has developed a rubric that indicates the extent to which the *Fundamentals of EE* and *Applied EE Program Evaluation* online courses align with state EE certification programs.

Utah and Kentucky have advanced models for state environmental education certification with rigorous requirements. Environmental educators come from a wide variety of backgrounds with broad, diverse perspectives. Utah Society for Environmental Education Executive Director Jennifer Visitacion explains, “The courses can provide common ground regarding what all environmental educators should know about planning, implementing, and evaluating an EE program.” Jane Eller, executive director of the Kentucky Environmental Education Council, views the online EE professional development courses as a tool to help certify professionals in Kentucky.

The Sky's the Limit



With the rapid growth in distance learning, there is nearly unlimited potential to augment environmental education learning opportunities. Susan Toth, who teaches the Fundamentals of EE course, would like to see a more in-depth, advanced follow up to the course. Another course she recommends for development is Trends and Issues in EE. Rick Wilke, who conceptualized the online EE professional development courses and is currently an instructor for the *Fundamentals of EE* course, says, “We need first to examine existing courses to see if we can do an even better job of meeting the professional development needs of educators seeking EE certification. We need to determine where there are voids and address them either by modifying the existing courses or developing new ones.” New courses could address areas like cultural diversity, capacity building and leadership development in EE.

Janice Easton and Lyn Fleming who currently teach two sections of *Applied EE Program Evaluation* would like to see an advanced evaluation course with more attention to logic models and evaluation plans, designing evaluation tools, data analysis, and the reporting and display of evaluation data.

Utah's Jennifer Visitacion believes an online course should “help educators correlate state and national education standards with existing environmental education curricula.” She recommends “a course on EE literacy within the context of professional responsibilities for an environmental educator.”

Barb Pitman sees the potential to offer specialized and more advanced workshops on topics like wildland fire, land use, regional issues and Geographic Information Systems/Global Positioning Systems application to *Places Where We Live*, a technology-based PLT course.

Bill Andrews, National Director for Project WILD, said, “In 2004 state Project WILD coordinators participated in a training workshop about online learning that was well received.” Some states that have already invested funds into technology are further along than others. Andrews says, “We are still studying the pros and cons of this technology, while also being sensitive to the highest priorities we hear from the state Project WILD coordinators. We will meet the needs of Project WILD coordinators who have an interest in receiving training on distance education learning by offering networking [for coordinators] with providers who offer these opportunities.”

The courses can provide common ground regarding what all environmental educators should know about planning, implementing, and evaluating an EE program.

- Jennifer Visitacion

The potential for new online courses is virtually limitless, and the available online EE professional development courses offer great rewards and benefits. Professional advantages, from establishing networks to meeting certification requirements, are many, and the convenience can't be beat.

Are you ready to become a cyberspace classmate? Whether you live in Eek, Alaska, or Roanoke, Virginia, you can be a distance learner.

After this article went to press, we were saddened to learn that Barb Pitman of Project Learning Tree had passed away after a brief illness. She was a dear friend and steadfast colleague. We will miss her.

If you want to learn more about distance education relevant to EE...

Gal, Kim. Online Courses in Environmental Science.
http://people.ucsc.edu/~kgal/cmpe3_www/

Global Distance Education. The Australian Correspondence Schools.
<http://www.acs.edu.au/environment/>

Illinois Online Network. .
<http://www.ion.uillinois.edu/>

National Environmental Education and Training Foundation.
Environmental Education: Resources at a Glance. Washington, DC: National Environmental Education and Training Foundation, 2002.

University of Winnipeg, Canada. U of W – Online Tele/Online Courses.
<http://www.uwinnipeg.ca/vu/>

University of Wisconsin-Stevens Point, Online EE Professional Development Courses
http://www.eetap.org/html/online_ee_courses.php
Includes registration information, course syllabi, and information about EETAP scholarships

Web-based Education Commission. 2000. *The Power of the Internet for Learning: Moving from Promise to Practice*.
<http://www.hpcnet.org/webcommission>

Wilcox, Sarah E. *Summative Evaluations and Resulting Revisions of an Online Course Entitled "Fundamentals of Environmental*

Education.” Master’s Thesis, College of Natural Resources, University of Wisconsin-Stevens Point, August 2004.

Wilderness Management Distance Education Program (WMDEP) offers accredited university courses for a comprehensive study of wilderness management. WMDEP is a valuable tool for understanding the wilderness resource and the issues surrounding its management- includes topics from philosophy and ecology to recreation and planning.
<http://wmdep.wilderness.net/>

Williams, M.L., Paprock, K., and B. Covington. 1999. *Distance Learning: The Essential Guide*. Thousand Oaks, CA: Sage Publications, Inc.

WorldWideLearn. Online Directory of Education: Online environmental education. Online courses, certificates and education resources in ecology, sustainability, ecotourism, coastal studies, watershed science, wilderness management, and environmental issues
<http://www.worldwidelearn.com/online-courses/environment-course.htm>

Online EE Professional Development Research

Although distance education has rapidly gained international interest and participation, there is little research to document the effectiveness of online learning. In her 2004 master’s thesis, *Summative Evaluations and Resulting Revisions of an Online Course entitled ‘Fundamentals of Environmental Education,’* Sarah Wilcox found that many pre-service and in-service teachers and non-formal educators lack access to professional development in environmental education. She determined many environmental educators need intensive in-service training in environmental education. Wilcox also found, “There are very few colleges and universities that offer a major, minor, concentration, specialization, or even a course in environmental education.” Yet the primary reason K-12 teachers are not teaching EE is because they are not trained to incorporate EE into their classroom. Non-formal educators also need training in EE program delivery. Wilcox said, “Often non-formal educators enter the field of EE with a strong science background but without having had the opportunity to learn about teaching and learning.” The Environmental Education and Training Partnership (EETAP) recognized these needs by supporting development of two EE professional development online courses.

Course participants complete an online evaluation. Wilcox analyzed 153 evaluations from the 2002-2004 Fundamentals of Environmental Education course. She noted, “One hundred percent of the online learners agreed that they increased their knowledge of EE as a result of taking the course. One-hundred percent of the students who completed the course in the spring and summer of 2004 agreed that the course better prepared them to provide quality EE instruction and 97% agreed that the course helped them become more effective educators.”