# Social Learning as an Approach to Environmental Education: Lessons from a program focusing on Non-indigenous, Invasive Species.

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| Program Profile | |
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| **Program Description:** | This extension education program used social learning theory and focused on non-indigenous, invasive species (NIS) education in New York State. According to literature from the field, social learning builds collaborative and collective learning communities, where learners become experts of content instead of just users. Through the program, educators, land managers, and volunteers participated in a two-day, NIS workshop that taught participants the skills to develop NIS programs for their respective audiences. The workshop covered topics such as the economic and environmental importance of NIS, identification of the "Ten Least Wanted" NIS in New York State, examples of successful volunteer programs for monitoring NIS, alternatives to planting NIS, and NIS management on nature preserves. Participants came to the workshop as members of 16 different county teams and were led by an educator from Cornell Cooperative Extension (CCE), The Nature Conservancy or the Finger Lakes Land Trust. Each team developed plans for implementing education/management programs in their counties for local government agencies, schools, industry and non-profit groups. Following the training, each team submitted their plans and received a $200 stipend to implement their program. Teams also received an additional $200 stipend upon the submittal of their final reports in the following fall. After the workshop, Cornell staff provided free educational materials, site visits, a project listserv, insects used in biological control of NIS, and future assistance as necessary. |
| **Program Goals:** | (1) Provide training for NIS education and management programs<br>(2) Help participants build skills in program development<br>(3) Reduce NIS in New York through awareness, education, and outreach |
| **Program Funding:** | Cornell Cooperative Extension (outreach program of Cornell University) |
| **Program Links:** | http://cce.cornell.edu/Pages/Default.aspx |
| Evaluation Profile | |
| **Evaluation Goals & Questions:** | This evaluation was conducted to understand the validity of developing programs using a social learning framework. The evaluation used the following goals to examine the effectiveness of the workshop.<br>Goals:<br>(1) Describe local education and management programs designed and implemented by participants.<br>(2) Determine motivating factors, benefits, and challenges for participants in implementing their program.<br>(3) Examine networks formed by program participants.<br>(4) Identify changes among participants in the level of NIS awareness and perceived |

| | understanding of NIS biology, ecology and management. |
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| **Evaluation Methods:** | <ul><li>To determine changes in awareness and perceived understanding of NIS associated with workshop participation, pre-program (76% response rate) and post-program (66% response rate) written surveys were mailed to participants. The survey was designed using Likert-type questions and analyzed using t-tests to compare pre- and post-test mean scores.</li><li>Semi-structured, open-ended phone interviews were conducted with team leaders following completion of local programs to identify motivations, benefits and challenges involved in conducting the local programs as well as collaborations among workshop participants. Site visits and semi-structured, open-ended interviews were conducted in-person with 5 team leaders and 5 team members who produced exemplar NIS programs. These team members included three high-school youth, one 4-H leader and one professional gardener. Interviews were recorded, transcribed, and analyzed using content analysis with categorization of responses.</li><li>Final reports submitted by workshop team leaders were used to describe local programs developed and implemented.</li><li>All results were tabulated and included in the evaluation report.</li></ul> |
| **Instruments:** | Interview protocol was developed by Sun-Kyung Lee and reviewed by Marianne E. Krasny along with an expert in educational evaluation in order to evaluate the above mentioned program objectives.<br><br>Survey questions are available in the report. Other evaluation instruments are available upon request. |
| **How were results used?** | The results were used to further the understanding of social learning theory's application to non-formal environmental education programs at a local level. The researchers found this approach useful because learners benefited from collaborative communities and sharing information with one another. One important finding revealed that the NIS workshop attendees were motivated primarily by their desire to educate their clients. |
| **Evaluation Cost:** | Funded by the United States Department of Agriculture Natural Resources and Environment Management program and Cornell University Agricultural Experiment Station Hatch/Smith-Lever Research and Extension Integration Grants program.<br><br>$20,000 total cost for workshops and evaluation. |
| **Evaluation Insights:** | **What worked well?**<br>I really enjoyed working with a foreign scholar on this project. She learned a great deal from the opportunity to work with extension educators and conduct the evaluation.<br><br>**What were important evaluation lessons learned?**<br>How to conduct an evaluation of a non-traditional extension program.<br><br>**What could have been done differently?**<br>I am certain we could have done a more rigorous job had we been more familiar with quantitative research methods. |
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| **Posted on:** | August, 2010 |