



## Evaluating the Effectiveness of Residential Environmental Education Programs in Fostering Positive Attitudes Toward Wildlife

Dettmann-Easler, D. and Pease, J.L. (1999) Evaluating the Effectiveness of Residential Environmental Education Programs in Fostering Positive Attitudes Toward Wildlife. *Journal of Environmental Education* 31(1): 33-39

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Program Profile	
<b>Program Description:</b>	Six residential centers that provide wildlife environmental education were evaluated. The sites differed in the type of programs offered, type of instruction provided, and duration of stay. The study focused on the ability of these residential programs to foster positive attitudes towards wildlife in fifth- and sixth-grade students, as compared to a control group who was exposed to only in-class wildlife programming. Data was collected through pre-, post- and delayed post-test surveys, as well as interviews with teachers and parents. Student attitudes were re-examined 2-3 months after the residential environmental education experience.
<b>Program Goals:</b>	Each residential center differed in their goals, from having a strong focus on wildlife, to providing an outdoor recreation experience, to environmental education focused around a subject other than wildlife (e.g. Native Americans, astronomy or energy).
<b>Program Funding:</b>	Each program derives its own funding from a variety of sources including user fees, state funds, independent foundations and the Department of Natural Resources.
<b>Program Links:</b>	Not Available
Evaluation Profile	
<b>Evaluation Goals &amp; Questions:</b>	The main evaluation question is whether residential environmental education programs are more effective at fostering positive attitudes towards wildlife than in-class wildlife experiences, and whether or not these attitudes would last up to 2-3 months after the program. While existing research demonstrates the effectiveness of individual residential environmental education programs, it has not been demonstrated that residential environmental education programs are <i>more</i> effective than other types of environmental education programs.
<b>Evaluation Methods:</b>	<p>Eleven fifth- and sixth-grade classes, comprised of 697 students, attended a program at one of six residential centers in Iowa, Wisconsin and Minnesota. Students were given a pre-test questionnaire at least 3 weeks ahead of their trip. A post-test questionnaire was then administered to students within one week of the residential program experience. A third, delayed post-test questionnaire was also given 2-3 months later. The survey was designed to gauge student attitudes towards particular animals, human needs versus those of endangered species, pesticides and wildlife, and human-animal relationships. Survey responses were determined through a 5-point Likert-style scale.</p> <p>Interviews were also conducted with students, parents and teachers. Students were asked what they had learned through their residential program experience, what activities they enjoyed, and to self-identify any attitude changes that may have taken place. Interviews with</p>

	<p>parents determined what aspects of the experience their child talked about after the program, and what, if any, behavior changes were noticed at home. Questionnaires and interviews with teachers sought to determine how they chose the activities in which students participated, and what types of pre- and post-visit activities were used in the classroom to complement the visit to the residential center.</p> <p>A control group was also included for comparison. Eleven fifth- and sixth-grade classes (totaling 666 students) were offered an in-classroom wildlife environmental education program. The same pre-test and post-test were given three to four weeks before and one week after the program, respectively. No student or parent interviews were conducted, but teachers were interviewed over the phone to determine how much environmental education their class had received.</p> <p>The residential programs evaluated were chosen on the basis of the following three criteria:</p> <ol style="list-style-type: none"> <li>1) Students had to take part in the program with their class.</li> <li>2) Classes had to spend at least one night at the facility.</li> <li>3) Environmental education programming had to take place.</li> </ol>
<b>Instruments:</b>	A partial set of evaluation instruments is available in the report.
<b>How were results used?</b>	Results from this evaluation were published in the <i>Journal of Environmental Education and Science Teacher</i> and presented at the Iowa Conservation Education Coalition (ICEC) conference for environmental educators, teachers, residential nature centers and other environmental programs to utilize at will.
<b>Evaluation Cost:</b>	Less than \$10,000
<b>Evaluation Insights:</b>	<p><b>What worked well?</b> Delayed post-surveys allowed for the evaluation of the lasting effects of residential programs. Also, having a control group to compare these results to was particularly helpful. The schools and residential centers involved were very cooperative – leading to a high response rate and sample size.</p> <p><b>What were important evaluation “lessons learned”?</b> Designing the evaluation from the onset is important for a successful outcome. Researchers need to think through all aspects of their proposed evaluation and all potential outcomes in order to structure it in a way that will allow them to gather the type of data they intend to retrieve.</p> <p><b>What could have been done differently?</b> Today there are more robust methods of statistical analysis that will greatly aid in the data analysis aspect of an evaluation. Ideally, evaluations can always have larger sample sizes – e.g. include more classes and/or more residential facilities. This evaluation also could have evaluated the responses of multiple classes at each facility. One challenge of this particular study was drawing conclusions from multiple environmental education programs, all of which had different programs, methods, and goals. There were many variables at play that could have an effect on the outcome. However, the intent of this study was to evaluate the success of residential environmental education programs in general, and therefore it was important to evaluate a range of program types in order to attribute results to the residential aspect of the program. Because most other program variables were not held constant, the study’s findings are more likely to have come from the one thing they do have in common: the overnight, residential aspect.</p>
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<b>Posted on:</b>	August 10, 2010