



IslandWood Evaluation Project: Assessment of Student Outcomes from IslandWood’s School Overnight Program

Kearney, A.R. (2009). *IslandWood Evaluation Project*. Bainbridge Island, WA: IslandWood.

Contact: Dr. Anne Kearney
Kearney Consulting
kearneyconsulting@alexanne.net

Program Profile	
Program Description:	IslandWood is an outdoor learning center near Puget Sound in Washington State. During the school year IslandWood conducts a 4-day, 3-night residential school overnight program for 4 th , 5 th , and 6 th grade students from public and private schools in the area. Using the cultural and natural environment as a context, the program integrates scientific inquiry, technology and the arts into experiential and project-based fieldwork with a focus on watersheds, ecosystems, and team building. These hands-on and inquiry-based learning experiences, which take place at both the outdoor learning center and in school classrooms, are led by Graduate students from IslandWood’s Education, Environment and Community Graduate Program. The number of visits varies among schools and specific classrooms; some groups visit up to seven times over the course of the year.
Program Goals:	To increase student understanding of: <ol style="list-style-type: none"> 1. Basic ecological concepts that may include ecosystems, habitats, adaptations, and biodiversity 2. The joys of exploration, discovery, and wonder. 3. The interconnectedness of natural and cultural communities. 4. The impact humans have on their environment. 5. The benefits of working together cooperatively.
Program Funding:	IslandWood receives charitable contributions from individuals, corporations, and foundations in the form of mailed, faxed, and online donations, gifts of stocks/securities, planned giving, in-kind donations, and corporate matching gifts. IslandWood also charges tuition for the Overnight Program.
Program Links:	http://islandwood.org/school_programs/educators/assessment/front-page1/?searchterm=Assessment%20Report
Evaluation Profile	
Evaluation Goals & Questions:	<p>Purpose: Explore and evaluate the outcomes of IslandWood’s School Overnight Program (SOP) with respect to:</p> <p><i>Personal Development</i></p> <ul style="list-style-type: none"> • Does students’ self-esteem, self-confidence, or locus-of-control increase as a result of their SOP experience? • Do students learn anything new about themselves during the SOP? • What types of experiences, in particular, may have the largest effects on personal development? For instance, what types of things do students find particularly challenging and how do these experiences affect them? <p><i>Classroom Community</i></p> <ul style="list-style-type: none"> • Does the level of teamwork/ cooperation among students increase during the SOP? • Does the SOP experience increase community and cooperation back in the classroom? <p><i>Relationship with the Environment</i></p> <ul style="list-style-type: none"> • Do students become more comfortable in nature as a result of the SOP experience?

	<ul style="list-style-type: none"> • Do students have an increased sense of environmental stewardship as a result of the SOP? • In what other ways does the SOP affect how students feel about nature? • Does the SOP increase students' awareness of pro-environment behaviors? Does it change their actual behaviors? <p><i>Environmental Knowledge</i></p> <ul style="list-style-type: none"> • Do students increase their ability to identify and apply the ABC's (Abiotic, Biotic, and Cultural factors) during their SOP experience? • How does students' conceptual knowledge regarding natural environments change during the SOP? <p><i>General Learning Attitudes and Skills</i></p> <ul style="list-style-type: none"> • How do students feel about the style of teaching in the SOP? • Does the SOP increase overall levels of student interest in learning, learning engagement, or school attachment?
<p>Evaluation Methods:</p>	<p>The evaluation was conducted by an external evaluator (Dr. Anne Kearney of Kearney Environmental LLC) along with an internal evaluator (IslandWood Research Coordinator Shelley Stromholt) with the assistance of graduate students from IslandWood's graduate program (coordinated with the University of Washington School of Education).</p> <p>The study was conducted in two phases during the fall and winter of 2007/2008. The results of the first informed the focus of the second.</p> <p>Phase One included 350 students from six schools and used a structured survey to provide a broad look at short and medium-term outcomes. Students completed surveys in the classroom at three time points: prior to the SOP, one week after the SOP, and again 6 to 8 weeks later. In addition to the survey, several assessment tools were used during the SOP at IslandWood to evaluate students' environmental knowledge at the beginning and end of their IslandWood stay. These tools (described below) included a "clicker questionnaire" to assess changes in factual knowledge, and a cognitive mapping tool to assess changes in conceptual knowledge.</p> <p>Phase Two, which included 478 students from eight schools, built on Phase One results by continuing the exploration of student learning outcomes. Specifically, Phase Two: (1) assessed the durability of knowledge changes by assessing learning before coming to IslandWood and at two time points following the SOP and (2) tested the attribution of changes to the SOP (versus other classroom experience) by using a control group. In addition to the standard survey to assess knowledge, several narrative assessment tools administered at IslandWood allowed a more in-depth look at what happens to students during their time at IslandWood, particularly with respect to personal development and team dynamics.</p> <p>The two-phase approach provided the following benefits:</p> <ol style="list-style-type: none"> 1) Retaining flexibility by allowing for subsequent studies to build from and respond to early data 2) Addressing a broader range of issues and questions than might otherwise be possible 3) Addressing issues from different perspectives and using different assessment tools 4) Limiting the assessment burden on any one group of students. <p>The evaluation used multiple qualitative and quantitative measurement tools including:</p> <ol style="list-style-type: none"> 1. Healthy Environment 3CM Cognitive Mapping Tool: An open-ended card-sorting technique used to assess knowledge structure related to a topic. <ul style="list-style-type: none"> • Assessed conceptual knowledge related to healthy environments. 2. Handheld clicker questionnaire: A multiple-choice test using a handheld electronic device during a slide presentation. <ul style="list-style-type: none"> • Assessed understanding of specific concepts used in curriculum. 3. Survey (in phase 1): A pen and paper survey consisting of short-answer questions along with questions based on 5-point Likert scale <ul style="list-style-type: none"> • Assessed attitudes toward the environment, the classroom community, themselves, learning, and school.

	<p>4. On-site narrative assessment tools: field assessments involving short-answer, open-ended questions embedded in a narrative form (e.g. pre-formed letter home or diary entry format).</p> <ul style="list-style-type: none"> • Assessed changes in cooperative teamwork and personal development. • Identified program activities students found most challenging and thought-provoking. <p>The evaluation used a quasi-experimental, delayed-treatment design. The quasi-experimental design meant the evaluation used control groups that were not randomly assigned. The delayed-treatment design meant that classes attending the program after the treatment groups were used as control groups. This ensured that they were similar to the treatment groups in their interest in Environmental Education (e.g. self-selecting to attend IslandWood).</p>
Instruments:	A complete set of instruments is available in the evaluation report.
How were results used?	<p>Results were used for both internal and external reports. Internal results were used specifically to inform the education team, the board, and the graduate team, and thus make changes to the curriculum and logic model. External reports were in the form of conference presentations and journal articles. Data was also shared with school districts and parents, as well as with colleagues at other organizations that do similar work.</p> <p>Results from the evaluation were also used extensively by IslandWood in grant writing to funders. In addition, an advisory board was formed to address issues of assessment and evaluation in nonformal programs.</p>
Evaluation Cost:	<p>Funding was provided by the Paul G. Allen Family Foundation with a grant totaling \$175,000. The grant included overhead, all supervisory staff costs, the Study Coordinator position, administrative assistance, the consultant fees, and graduate student work involving coding and data entry.</p> <p>In-kind contributions included additional graduate student time, teacher and student time, and IslandWood office resources.</p>
Evaluation Insights:	<p>What worked well? <i>Effective Evaluation Administration</i></p> <ul style="list-style-type: none"> • Having a dedicated member of the staff working on the evaluation project (Research Coordinator Shelley Stromholt) was crucial to ensuring the success of the large and complicated nature of the evaluation. • The outside evaluator (Anne Kearney) brought a level of expertise to the evaluation experience that IslandWood needed and highly benefited from. • Open lines of communication between program staff and the outside evaluators (e.g. feedback on the process) was also important. <p><i>Multiple, Embedded Assessment Tools</i></p> <ul style="list-style-type: none"> • The assessment tools worked very well—they were easily integrated into the program and even contributed to teaching goals (they helped assess the students and the program at the same time, while also helping the students strengthen their knowledge). • The tools used were extensively tested (“piloted”) before being used for the IslandWood evaluation, which was a critical part of the success of the evaluation. Testing the tools also allowed them to be adjusted for the target audience at IslandWood. • Using multiple methods worked well, as each gave different insights. This gave a more complete picture of the program and its effects on the students. <p><i>Multiple Phases</i></p> <ul style="list-style-type: none"> • The two-phased approach allowed the evaluation to be implemented at a good pace (i.e. not all done at once). • The initial phase informed improvements implemented during the second phase. For example, the focus of the narrative tool was adapted to have a stronger emphasis on issues related to team building that had not been covered as well by the survey. • The multi-phased approach led to deeper learning about the program, as it gave information in various contexts. <p>What were important evaluation “lessons learned”? This project would not have been as successful without a research coordinator on staff. She</p>

	<p>kept the evaluation work on track, used her extensive understanding of the IslandWood program to help inform the evaluation, and served as a communicator between program staff and the outside evaluator. Without someone playing such a central role, the evaluation would have been forced to be much smaller in scope.</p> <p>Input from staff, schools, teachers, and students was an essential component of the evaluation. Conversations about objectives, processes, and tools helped gain cooperation, support, and understanding from the staff—allowing the evaluation to run smoothly and for the results to be meaningful and useful for the entire IslandWood staff.</p> <p>It was also important that the elementary school students knew what they were participating in, why it was being done, and how it would help the program. This encouraged them to take more ownership of the process and thus cooperate more enthusiastically. Relationships with the teachers and schools allowed access to many students, which made the study possible.</p> <p>The evaluators found it useful to separate content knowledge from conceptual knowledge. Content knowledge (facts about the environment, etc.) was tested with the Clicker Questionnaire, while conceptual knowledge (how students think about the environment) was tested with the 3CM, which gave the evaluators substantial information about the way students were learning the material.</p> <p>The size of the grant used to carry out this evaluation does not reflect the size of this evaluation—a great deal of in-kind support was also needed. This evaluation could not have been completed without the internal support IslandWood provided (a staff Research Coordinator, office supplies/machinery, Graduate Student researchers, teachers, etc.) who were “all a great group of people” according to Kearney.</p> <p>What could have been done differently? Instead of a large, complex study, this evaluation could have been broken into a few smaller studies. To reduce its complexity further, perhaps the study (or each of a few smaller studies) could have focused more on particular outcomes rather than many outcomes all at once.</p> <p>The evaluators see the value for more—and more varied—methods. The more angles from which to analyze a program, the more complete the picture that is revealed. However, they also noted the substantial size and complexity of the study — at some point more assessment methods would make the evaluation too complicated.</p>
Profile information provided by:	Evaluator (Dr. Anne Kearney) Research Coordinator for IslandWood (Shelley Stromholt)
Profile prepared by:	Ann Kelley, Graduate Student, University of Michigan Thomas O’Dowd, Graduate Student, University of Michigan
Posted on:	August, 2010