

A PILOT Evaluation of *Ferry Beach Ecology School's SELU Program* 2009 - 2010

EXECUTIVE SUMMARY

Science and Ecology: Live and Unplugged! (SELU) is a collaborative effort between the Ferry Beach Ecology School (FBES) and Maine School Administrative District #60 (SAD #60). The primary purpose of FBES is to give young people an opportunity to explore the ecosystems that surround them, thus instilling a sense of stewardship for the Earth. The SELU program aims to help students bring a greater understanding of science back to the classroom and be better equipped to make well-informed



environmental decisions. The distinguishing feature of the SELU design is offering lessons in a planned sequence over several years of a student's elementary school career. This pilot evaluation developed evaluation measures and a long-term plan for quantifying the effects of the SELU program on students' academic performance and environmental stewardship. This evaluation also explored early trends and patterns in evaluation data.

Summary of Key Evaluation Findings

From this stage of the evaluation, **there was some preliminary evidence that the SELU program was beginning to accomplish its goals of increasing student comfort in nature, environmental literacy and stewardship, academic engagement, and to some extent personal development.** Students reported that they learned new information and tried new experiences in SELU. Since this was a pilot evaluation, there were some challenges with collecting data consistently, resulting in a lack of confidence in the student survey results. In the next few years, more intensive and rigorous use of the evaluation toolkit developed in this first year will test these emergent patterns in student outcomes. The long-term evaluation plan also specifies methods for investigating outcomes in domains of educators, schools, and families.

Specific findings included:

- In focus groups, students attributed their increased comfort in nature to more experiences in nature with SELU, or to having a better understanding of nature due to the program.
- Most students were able to list at least one way that they would change to help nature or the environment, when asked the question in a focus group. The most common examples of environmental stewardship included: recycling, composting, and conserving water.
- Educators reported, in surveys, that SELU helped students achieve "somewhat" to "a lot" greater mastery of science standards.

"I didn't really care about nature before [SELU] and now I care more."

— 3rd Grade SELU Student

"I am more comfortable in the woods because I know the animals, trees, and ecosystem."

— 5th Grade SELU Student

Evaluation Methods

In the 2009 – 2010 academic year, external evaluators from PEER Associates, Inc. guided a pilot evaluation of the SELU program. FBES staff administered (or guided school staff in administering) the majority of the evaluation measures, including: 3 student focus groups and 1 educator focus group; 7 educator surveys; 172 student surveys; and 14 matched pairs of

“The [SELU] program continues to meet and exceed my expectations. The program design allows children of all abilities to be successful.”
– 5th grade SELU Teacher

pre- and post-concept maps¹ of a relevant content area. The outcomes evaluated in this pilot focused on SELU program impact on students’: Environmental knowledge; Application of environmental knowledge; Environmental stewardship; Comfort outdoors/connection to nature; Academic engagement and achievement; and Personal development (i.e. cooperation, leadership, self-esteem, etc.).

Recommendations

Most of the feedback educators offered about the SELU program was positive and affirming. Educators also offered a few suggestions for improvement, including:

- ✓ Increase the number of field trips to Ferry Beach.
- ✓ Allow for even more tactile, hand-on experience.
- ✓ Increase the ratio of naturalists to students.
- ✓ Provide additional resources to school teachers.



Evaluator recommendations, based on evaluation data and process, include:

- ✓ Clarify and explicitly lay out evaluation measures and timeline to the teachers.
- ✓ Collect more qualitative data in subsequent years of evaluation.
- ✓ Attempt to find a “control” group for next year to strengthen evaluation findings.



“The learning is not lost on the students. [SELU staff] manage to be entertaining, and teach content knowledge at the same time.”
– 2nd grade SELU Teacher

This report was authored by PEER Associates, Inc. For more information about PEER Associates, see www.PEERassociates.net. Michael Duffin or Amy Powers can be contacted at michael@PEERassociates.net or amy@PEERassociates.net.

¹ Concept maps are a visual representation of understanding of a concept. Having students complete these maps before and after they learn a concept allows for the opportunity to see what they have learned in between.