

## **Ecological Urbanism Case Study 2015**

Environmental Literacy and Place-Based Learning

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### *1. Title*

## **The Place-Based Education Evaluation Collaborative (PEEC)**

### *2. Location and Dates of Operation*

Since 2002

Northern New England, MA

### *3. Abstract and Keywords*

The Place-based Education Evaluation Collaborative (PEEC) is a group of organizations that work together to promote environmental and place-based education. PEEC was formed in 2002 to invest in the development of place-based education models of professional development and whole school improvement. It also allows for rigorous evaluation of members' individual programs to lay the groundwork for broader research into the effectiveness of these models in attaining mutual objectives. PEEC programs (and organizations) include the COSEED Project (Antioch New England Institute), the Community Mapping Program (CMP; the Orton Family Foundation, Vermont Institute of Natural Science), the Sustainable Schools Project (SSP; Shelburne Farms, Vermont Education for Sustainability Project), and A Forest for Every Classroom Project (FFEC; Shelburne Farms, National Wildlife Federation, the Conservation Study Institute, Marsh-Billings-Rockefeller National Historical Park, Green Mountain National Forest).

PEEC is undertaking a rigorous and ongoing evaluation process to gauge the effectiveness and outcomes of the place-based education model. Since forming in 2002, the Collaborative has instituted individual and cross-program evaluations of ten place-based education programs representing more than 100 schools (rural, suburban, and urban) covering twelve states. The body of evidence reflects more than 1,000 adult interviews or focus group participants; more than 250 student interviews; more than 900 educator surveys; more than 2,700 student surveys; extensive document review; and dozens of on-site observations. The findings show that place-based education fosters students' connection to place and creates vibrant partnerships between schools and communities. It boosts student achievement and improves environmental, social, and economic vitality.

Keywords: collaboration, environmental education, place-based education, professional development, program evaluation, school improvement.

#### 4. *Type of Case*

The PEEC is a non-profit organization that dedicates to the promotion and assessment of place-based educational programs in northern New England and across the States. PEEC initiates and collaborates with a series of programs and projects to assess their impact and promote effective models. These programs and projects include: The Upper Valley Region of the New Hampshire Charitable Foundation, A Forest For Every Classroom (FFEC), The Sustainable Schools Project, The CO-SEED Project, The Trail to Every Classroom (TTEC), The Litzsinger Road Ecology Center (LREC), Thompson Island Outward Bound Educational Center (TIOBEC), REAL School Gardens, The Community Mapping Project (CMaP), PEER Associates, Inc., Promise of Place. Org., and so on.

#### 5. *Mission and Goals*

Mission statement:

Place-based education has emerged from a 30-year foundation of environmental education in the United States and builds on the work of diverse community-based initiatives that include The Foxfire Fund, The Rural School and Community Trust, the Orion Society's Stories in the Land Teaching Fellowships, and the Education for Sustainability movement. It is grounded in the resources, issues, and values of the local community and focuses on using the local community as an integrating context for learning at all levels. By fostering the growth of partnerships between schools and communities, place-based education works simultaneously to boost student achievement and improve a community's environmental quality and social and economic vitality.

In early 2002, several New England foundations and educational organizations came together to form the Place-based Education Evaluation Collaborative (PEEC) with the intention of evaluating their individual programs and laying the groundwork for broader research into the effectiveness of these place-based education models in attaining mutual objectives. The members of PEEC share related program approaches, a history of shared evaluation, and a commitment to strengthening the practice, assessment and outcomes of place-based learning. PEEC seeks to:

- a help students enhance their academic performance
- a empower students to make positive contribution to their community
- a transform the school culture
- a connect schools and communities
- a encourage students to become environmental stewards

As a collaborative, PEEC has three main goals:

- 1) To serve as a learning organization for program developers and to fuel internal growth and program development for the individual organizations;
- 2) To develop, identify, and disseminate evaluation techniques, tools, and approaches that can be

applied elsewhere; and

- 3) To contribute to the research base underlying the field of place-based education and school change.

## 6. *Context: Origins, Organization, and Operation*

Core members of the Place-based Education Evaluation Collaborative (PEEC) include:

- a The Sustainable Schools Project (SSP)
- a The CO-SEED Project
- a The Community Mapping Project (CMP)
- a A Forest For Every Classroom (FFEC)
- a The Trail to Every Classroom (TTEC)
- a The Upper Valley Region of the New Hampshire Charitable Foundation
- a The Litzinger Road Ecology Center (LREC)
- a Thompson Island Outward Bound Educational Center (TIOBEC)
- a REAL School Gardens
- a PEER Associates, Inc.
- a Promist of Place. Org.
- a Antioch New England Institute of Antioch New England Graduate School
- a Conservation Study Institute of the National Park Service
- a Green Mountain-Finger Lakes National Forest
- a Marsh Billings Rockefeller National Historic Park
- a National Wildlife Federation
- a The Orton Family Foundation
- a Shelburne Farms
- a Upper Valley Community Foundation
- a Vermont Institute of Natural Science

## 7. *Programs*

This Collaborative builds upon preceding efforts on place-based education from diverse foundations and initiatives across the country, including the Foxfire Fund, the Annenberg Rural Challenge, the Stories in the Land Teaching Fellowships, and Education for Sustainability.

PEEC's Work is Consistent with National Findings. Initially, PEEC brings together education programs working in northern New England – including non-governmental agencies, government agencies, a graduate school, and a granting foundation. PEEC wants to further examine the confluence of ideas between "place-based" and "education for sustainability". The Collaborative wants to advance the practice of these methods and document their outcomes.

PEEC also is interested in testing the following theories of change:

- a Students who are engaged in active, real world learning are more successful than those who

learn the same material in more abstract ways.

- a Participation in positive and personally meaningful community change projects at a young age builds a sense of self-efficacy and leads to longer-term stewardship behavior.
- a Increased connection to place results in increased civic engagement and greater "social capital."

### Program History

The Upper Valley Community Foundation is the fiscal agent and umbrella organization for PEEC. The work of PEEC is partially supported by funding from UVCF's Wellborn Ecology Fund, a special endowment devoted to supporting environmental and ecology education in the Upper Valley region of New Hampshire and Vermont. The knowledge and information developed through PEEC will be shared with Wellborn grantees and other organizations providing place-based and ecology education throughout the Upper Valley and beyond. Each of the four partners has an extended history of collaboration with schools that are engaged in groundbreaking work through place-based education. The following vignettes illustrate one content area from each program.

#### **A. CO-SEED**

Project CO-SEED of Antioch New England Graduate School works collaboratively with a dozen schools, six environmental learning centers and a diverse array of rural and urban New England communities. CO-SEED aspires to creating a synergistic relationship between school improvement, community development and the preservation of environmental quality. This requires extensive collaborative engagement of town officials, teachers, administrators, scientists, community officials and environmental educators. CO-SEED facilitators from Antioch New England Institute secure funding for a partnership between a local environmental learning center and the school, which brings the skills and energy of a half-time educator to the school. Coordinated by a local organizing committee, the ELC staff person works with faculty and community members to implement projects that boost student academic achievement while serving targeted school and community needs. Ongoing professional development supports the faculty and key community leaders throughout the process. The work of CO-SEED has been evaluated for several years by Harvard University faculty and RMC Research Corporation.

#### **B. A Forest for Every Classroom**

A Forest for Every Classroom is a unique collaboration between nonprofit organizations and governmental agencies with the shared vision of students learning from and caring for public lands. During the past two years, Shelburne Farms, Marsh-Billings-Rockefeller National Historic Park, the Green Mountain National Forest, the National Wildlife Federation and the Conservation Study Institute have developed and implemented a year-long professional development model that uses forest lands to engage students in learning about natural resources and ecological systems in the place where they live. Participating teachers receive exceptional support to develop locally-based curricula rich in natural and cultural explorations that address

concepts of forest ecology, land management and stewardship.

### **C. The Community Mapping Program**

A partnership of The Orton Family Foundation and the Vermont Institute of Natural Science, the Community Mapping Program supports students, educators, and community groups in a process of local inquiry. Middle and high school students work with community groups, conduct fieldwork, and use tools including Geographic Information Systems (GIS) and Global Positioning Systems (GPS) to explore their communities and address specific local needs. It connects educators and students with community groups to work on local inquiry projects. The work is needed by the community group to promote the sustainability of the community and it animates the curricular learning of the students. The gallery at the program website features descriptions of community mapping projects from across the disciplines, richly linking field-based inquiry, school-community collaboration, learning for sustainability and tools like global positioning systems, geographic information systems.

### **D. The Sustainable Schools Project**

The Sustainable Schools Project (SSP) of Shelburne Farms and VT Education for Sustainability is an innovative whole school model for school improvement and place-based learning. SSP was developed following Vermont's adoption of two state standards, *Understanding Place* and *Sustainability*. The SSP emerged from a teacher professional development series that engaged teachers from more than 30 schools. The project helps schools use sustainability as the "integrating context" for curriculum, community partnerships and campus ecology. They define sustainability as "improving the quality of life for all – economically, socially, environmentally – for current and future generations." The model is based on a set of facilitation tools – a process – that supports a vision that comes directly from the school, parents, and the community. It is based on coaching and consulting with school faculty, facilitating whole group decision-making, and creating a common dialogue and identifying shared goals and methods. Overall the SSP aims to increase students' learning and civic engagement specifically focusing on creating a sense of place, feeling like one can make a difference, and understanding the interconnectedness of the world.

### *8. Assessment*

An external evaluation team conducted a cross-program study, analyzing the effects of 4 place-based education programs on teachers, students, schools, and communities.

#### **Details of this evaluation:**

To help achieve its goals, the collaborative contracted a program-evaluation team to conduct individual program evaluations with four collaborating programs as well as to analyze program processes and outcomes across programs.

Two of the programs, CO-SEED and the Sustainable Schools Project (SSP), are whole school

improvement models, whereas the other two programs, the Community Mapping Program (CMP) and A Forest for Every Classroom (FFEC), are professional development programs that focus on audiences of individual teachers or groups of teachers. The goals of the four programs vary somewhat, but some common themes include enhanced community and school connections, increased understanding of and connection to the local place, increased understanding of ecological concepts, enhanced stewardship behavior, increased academic performance in students, improvement of the local environment, improvement of schoolyard habitat and its use as a teaching space, and increased civic participation.

The evaluations of the four programs attempt to understand whether and how the models provide opportunities for educators, students, schools, and communities to change their practices in the short, intermediate and long term.

The following attempts to distill common outcomes shared by two or more of the programs: Greatest Strengths across the PEEC Programs:

The use of community partners provides teachers and students with diverse viewpoints, access to resources, facilities, and financial support as well as a broader base of skills and knowledge.

1) High quality program staff: Staff from the four programs demonstrated strong skills in process facilitation, teaching, child development, curriculum planning and meeting management, as well as more tangible skills such as mapping with geographic positioning systems, gardening, naturalist skills, computer use, and forestry practices.

2) The sustained intervention provided by these programs' summer institutes increases the likelihood that program effects will be sustained beyond the initial involvement of the sponsoring organization

3) The programs' summer institutes, as part of an ongoing, sustained relationship, were highly valued as important pieces in generating teacher confidence and buy-in to the program.

The Challenges across the Programs:

1) The most consistent external constraint cited by the school-based participants (primarily educators) was that of a lack of time to devote to curricular change in the midst of multiple curricular pressures.

2) An internal challenge that became apparent during the evaluation process was the level of attention to helping teachers acquire curriculum planning skills.

Changes in Teacher Practice:

- a use of local places and resources
- a interdisciplinary teaching
- a collaboration with other teachers
- a teacher leadership and personal growth
- a stronger curriculum planning skills
- a greater use of service learning in the curriculum

Short-term outcomes:

- a Connections are forged and partnerships are formed between the school and the community
- a Student learning occurs out in the community or teachers use the community in their teaching
- a Teachers understand that the program is related to state educational standards and serves as a tool for teaching, not an add-on curriculum
- a Students are more engaged in learning through service or teachers encourage service learning
- a Schoolyard/school sustainability improves

Intermediate outcomes:

- a Students gain the knowledge, motivation and/or skills for stewardship/citizenship behavior
- a Teachers and/or schools implement or adopt place-based education beyond the initial program intervention
- a Social capital increases in the community

Long-term outcomes:

- a Civic society is strengthened; communities have enhanced sustainability, vitality, and/or civic participation
- a Schools engage in systematic improvement efforts
- a Students develop a greater attachment to place

The Need for On-going PEEC Research:

In some senses PEEC is both a microcosm of the larger place-based education initiative and a mirror of the individual place-based projects it promotes. At their various levels of scale, each of these entities promotes greater collaboration, a greater attention to interdisciplinary work, and an attention to the strength inherent in diversifying one's base of support. Examining the PEEC programs together builds the credibility of each of these programs as well as offering broader-based knowledge to the field.

The first year of collaboratively evaluating PEEC's programs has revealed several conclusions:

- a The four programs are clearly strong vehicles for enhancing education. In particular, all four programs demonstrate commendable success at promoting teacher practice change.
- a With some variability, teacher practice is affected in consistent ways by these place-based education programs.
- a By highlighting outcomes salient to all four programs, we begin to suggest the power of place-based education as a broader educational approach.
- a By highlighting process strengths, challenges and opportunities, the four programs have the opportunity to learn both from their own efforts and from those of other programs. Quite consistently, recommendations specific to one or two programs have powerful implications for all four.

All four programs are received very positively and are highly valued by a range of stakeholders, from teachers to students to administrators to community individuals and organizations.

- a Patterns in the data gathered this year for the individual program evaluations suggest that there were positive outcomes emerging for all of the intended audiences, beyond teachers: students, schools, organizations and communities.
- a There are ample opportunities for growth and refinement within the program models, with some challenges being internal and others external to the programs.
- a It is worth examining how program offerings might be enhanced not only by refining themselves but by merging the key strengths offered by both the professional development and school improvement models.
- a This year's research revealed that there are multiple fruitful roads to follow to continue to examine the processes that contribute to successful programs and the outcomes being sought.
- a Two particular areas emerged as potentially useful to pursue as widespread evidence of the usefulness and effectiveness of place-based education: the importance of community-based learning for special-needs students and the impact of place-based education on student motivation toward learning and engagement in school.

PEEC Objectives for the next step

PEEC is now looking to build and enrich this process of shared learning for the needs of the region and the wider educational community. The Collaborative is currently focused on two goals:

A. Build on a process of continuous and shared evaluation and learning by expanding the comprehensive evaluative work initiated by the PEEC partners.

To enhance the current evaluation efforts, FEEC would:

- 1) Expand the current qualitative evaluation efforts and initiate quantitative assessment of achievement measures in all of the schools involved in the partner projects.
- 2) Reflectively rework the logic models, program goals and methods to incorporate critical new learning into their assessment design.
- 3) Formally publish the already existing evaluation documents of CO-SEED and PEEC.

B. Create a network of place-based education professionals, websites and instructional materials with a focus on assessment and evaluation, representing this learning to the wider education community.

To expand this role:

- 1) Participants from partner organizations will collaborate in providing seminars and workshops



throughout New England.

2) The PEEC website, which links the partner organizations, will be enhanced to support curricular and evaluative materials on place-based education.

3) The Green Schools Grants program of the Center for Environmental Education at Antioch New England Institute will provide small grants to schools trying to incorporate place-based pedagogy and assessment methodologies into their practice.

9. PEEC partners and evaluators will participate in related national conferences and dialogues seeking to examine and strengthen place-based educational practices.

### *10. Lessons for Philadelphia*

1) Effective start-up approaches

- a Clearly define the program's goals and theory of change
- a Provide educators or sites with a checklist of the skills, resources, and so on
- a Document success early on
- a Communicate about and engage participants in defining the role of program evaluation upfront and provide incentives for ongoing participant contribution to the process.

2) Create teacher, administrator, and community buy-in

- a Offer high-quality, "high-touch" (e.g., respect, communication, comfort, support, rapport) professional development opportunities,
- a Provide tangible resources such as funding, publications, examples of curricula, and project models that teachers can begin using immediately
- a Provide training in tangible skills
- a Offer skill-building in curriculum development
- a Involve alumni or emeritus participants
- a Provide help "on the ground"

3) Partnerships and collaboration

- a Encourage (or require) teachers to participate in teams
- a Provide help in locating community partners
- a Develop recognition of community partners, volunteers, and parents
- a Help build capacity of community partners

4) Communication: The key to lasting partnerships

- a Facilitate networking between schools, teachers, volunteers, administrators, and program staff
- a Link past and present sites, and past and present program participants

5) Other recommendations

- a Involve teachers, administrators, and community members in program evaluation from the

start

- a Lead teachers in learning new assessment techniques for community-based, place-based, service-learning curriculum
- a Plan for diffusion of program concepts beyond directly targeted audience

**References:**

Amy L. Powers. (2004). An Evaluation of Four Place-Based Education Programs, *The Journal of Environmental Education*, 35:4, 17-32, DOI: 10.3200/JOEE.35.4.17-32.

Michael K. Stone and Center for Ecoliteracy.(2009). *Smart by Nature: Schooling for Sustainability* (Healdsburg, CA: Watershed Media, 2009), pp. 3-15, 122-127.

PEEC, The Place-Based Education Evaluation Collaborative. <http://www.peecworks.org/index>.

Place-based Education Evaluation Collaborative. 2010. *The Benefits of Place-based Education: A Report from the Place-based Education Evaluation Collaborative (Second Edition)*. Retrieved from <http://tinyurl.com/PEECBrochure>.