

An Interim evaluation of
**The Connecting Schools to
People and Places Program**
2004



Prepared for:
**New Hampshire
Project Learning Tree**
&
**Woodsville
Elementary School**

Prepared by:
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The Connecting Schools to People and Places (CS2P) program is designed as a model school improvement program, based on the environment and focused on sustained and intensive professional development.

--- excerpted from the CS2P Executive Summary

ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

Connecting Schools to People and Places Overview

The Connecting Schools to People and Places Program (CS2P) is a pilot project between Woodsville Elementary School (WES) and New Hampshire Project Learning Tree (NH PLT). The program has been designed as a model school improvement program, based on the environment and focused on sustained and intensive professional development. The goal for the CS2P project is to “provide today’s youth with the knowledge, commitment, and skills to be caring stewards of our forests and other natural resources.” CS2P program administrators support WES staff through the following strategies: offering funding for teacher release time, natural science supplies, and field trips; facilitating monthly meetings and summer planning meetings; role-modeling hikes and natural science activities; and sharing natural science and curriculum-planning expertise.



Evaluation Methods

The following table depicts the sources of data gathered during the Phase I evaluation, conducted during the Spring of 2004. Interviews focused on the effectiveness of NHPLT staff inputs, monthly meetings, and NHPLT staff school visits.

Connecting Schools to People and Places Data Sources for Interim Evaluation 2004

Instrument	Type and Number Administered
Interviews	12 Woodsville ES Teachers 1 Woodsville ES Guidance Counselor 2 Woodsville ES Principal
Document Review	<ul style="list-style-type: none"> • Project logic model • Project executive summary • Minutes for grade level monthly meetings • Minutes for Core Team meetings • Minutes for one Kit Team meeting • Minutes for School Team meetings • Minutes for Curriculum Planning meeting • Minutes for Steering Team meetings • CS2P visit logs • Curriculum templates and template format • Resources/kit inventories

Findings and Discussion

Process Strengths

It is clear that NHPLT staff have effectively instituted many planned strategies that have aided in the CS2P program's success to date. The most noteworthy and obvious benefits have resulted from grade-level monthly meetings made possible through release time funding. These meetings have resulted in a marked increase in collaboration and sharing of resources by teachers. NHPLT staff visits, summer planning time, and other curriculum resources were also reported as being beneficial.

In addition to planned strategies, the NHPLT staff utilized several unplanned approaches that were reported by interviewees as critical to the program's success. Those include: flexibility regarding program implementation and goals; a willingness to let the program evolve on its own at WES which resulted in a feeling of trust and rapport between NHPLT staff and WES faculty; and effective meeting facilitation which created a balance between wise time use and flexibility to explore tangential ideas when appropriate.

The following themes are discussed in detail in the main body of this evaluation report.

CS2P implementation strengths

- Flexibility during implementation process
- Rapport and trust established
- Effective facilitation of monthly meetings
- Providing for release time
- Role-modeling and training
- Supplying of physical resources
- Summer planning time

Pilot School Strengths

- Administrative support
- Commitment/ownership by teachers at some level
- Rapport among faculty

Process Challenges

Success reported by WES interviewees at this stage of program implementation speaks to a strong program foundation and quality leadership by NHPLT staff, and to the ability of WES faculty to take on new projects and integrate them successfully. One could also argue that another testament to a project's success is its flexibility and openness to critique and evaluation. Evidence that surfaced during evaluation interviews suggests that the main challenges of the CS2P program thus far include establishing community-school relationships and finding a source of future funding (particularly for release time for teachers' monthly meetings and for field trips).

Teacher, School-wide, and Student Outcomes

Although data gathered for this report focused on program implementation efforts, evidence also surfaced clearly showing how CS2P has impacted teachers, students, and the entire school thus far. Evaluation data gathered to date suggest increases in the following teacher practice elements: integration of natural science into the curriculum; the use of local places and school grounds; and collaboration, sharing of resources, and intentional planning among grade-level teams.

More subtle changes in teacher practice were evident as well, including seeing the outdoors as an extension of the classroom and expressing creative ways to integrate natural science into many different subjects. Also noteworthy was teacher use of place-based education terminology and a growing enthusiasm for teaching in the outdoors and planning curriculum with colleagues.

[While on a field trip to the ocean] "One little girl looked at [a teacher] wet, cold, and said, "[Teacher Name], this is the best day of my life." (school staff member)

Data show the following school-wide and student outcomes: steps are being taken to integrate natural science into art, music, library time, dance, and guidance; the program is gaining the support of some school board members and the superintendent; and students are displaying a growing excitement for learning in the outdoors and an increased awareness of their natural surroundings.

Conclusion and Implications for Practice

Phase I of this evaluation has shown evidence that the CS2P program has resulted in a sense of satisfaction and excitement among participants involved with the pilot project and is benefiting the teachers and students of WES in some substantive ways. In addition, this evaluation has yielded a number of opportunities for on-going refinement of the program. The following bullets are discussed in detail in the conclusions and implications section of this report.

- Ensuring Continued Opportunities for Curriculum Planning and Collaboration
- Finding Future Funding
- Establishing Community-School Connections
- Refining Program Logic
- Focusing CS2P Strategies for Continued Program Success and Sustainability
- Future Program Start-ups
- Future Evaluation

INTRODUCTION

PROGRAM OVERVIEW

The Connecting Schools to People and Places Program (CS2P) is a pilot project between Woodsville Elementary School and New Hampshire Project Learning Tree (NH PLT). According to the CS2P Executive Summary, the program has been designed as a model school improvement program, based on the environment and focused on sustained and intensive professional development. The goal for the CS2P project is to “provide today’s youth with the knowledge, commitment, and skills to be caring stewards of our forests and other natural resources.” Program objectives are listed below:

- Enhance and ground the teaching of core subjects through use of the PLT curriculum in and outside the classroom
- Strengthen teacher knowledge and skills to teach science through sustained training and modeling of best practices
- Increase student academic achievement by involving students in the study of their local environment and community service projects
- Build stronger connections between a school and the people and places in the community by engaging community members in delivering a high quality curriculum
- Help students and community members to develop a sense of stewardship for their local forests and other natural resources through an environment-based curriculum and service learning

The CS2P Logic Model (Appendix A) provides further description of the program.

Program participants

The implementation of the CS2P program is the result of the dedicated work many people, including the following individuals:

From New Hampshire Project Learning Tree:

Esther Cowles, Executive Director

Beth Lesure, Education Coordinator

From Woodsville Elementary School:

Lorna Renfrew, Kindergarten Teacher

Linda Smith, Kindergarten Teacher

Jane Stimson, Kindergarten Teacher

Leslie Connelly, 1st Grade Teacher

Gail Calkins, 1st Grade Teacher

Gina Giudici-Oakes, 1st Grade Teacher

Nancy Leate, 2nd Grade Teacher
Nancy Musgrave, 2nd Grade Teacher
Victoria Padovani, 2nd Grade Teacher
Rosemond Bailey, 3rd Grade Teacher
Linda Blake, 3rd Grade Teacher
Deb Brown, 3rd Grade Teacher
David James, Principal
Tom Goss, Guidance Counselor
WES Support Staff

Additionally, the high level of enthusiasm and engagement demonstrated by the local evaluation advisory team (as well as the above named program and school staff) suggests a genuine commitment to the ongoing improvement of the CS2P project.

Members of the evaluation team include the following:

Karen Bennett, UNH Cooperative Extension
Esther Cowles, New Hampshire Project Learning Tree
Tom Goss, Woodsville Elementary School
Robert "Bo" Hoppin, Antioch New England Institute
David James, Woodsville Elementary School
Beth Lesure, New Hampshire Project Learning Tree

Roles of the various participants in the evaluation process are described in more detail in the Evaluation Overview (Appendix B).

POSITIONING OF EXTERNAL EVALUATORS

The bulk of this CS2P interim evaluation was produced by Lisa Scott while operating as both an employee and a student. For PEER Associates, Inc., the contracted evaluation firm for this report, Lisa's title was "Field Coordinator", and her job classification was "Research Associate." Her work on this project was also completed in partial fulfillment of a Masters in Environmental Education from Antioch New England Graduate School. All of her work was closely supervised by PEER Associates, Inc. employees Michael Duffin, (Evaluation Co-Director for PEER and Principal Investigator for this report), and Dr. George Tremblay (Senior Research Associate for PEER). Additionally, Amy Powers (Evaluation Co-Director for PEER) and Andrew Powers (Research Associate for PEER) provided important input at various stages of the project.

PEER Associates is committed to using a multiple-methods, utilization-focused, participatory evaluation process. It is our intention to help organizations better understand their programs and to help them improve their programs based on evidence of program functioning and outcomes. We also intend to help organizations build their own capacity to reflect on and internally evaluate programs.

The following measures were taken to mitigate the potential for researcher bias:

- All interviews were recorded and transcribed either fully or partially.
- The PEER Associates team was intentionally constructed to represent complementary positivist and constructivist epistemological biases.
- Interview guides were developed and followed, and generally accepted methods for coding interview data were employed.
- Every effort was made to maintain high standards for methodological rigor.

REVIEW OF PLACE-BASED EDUCATION

Project documentation describes the CS2P project as “place-based education.” In the relevant literature, the term place-based education is often used interchangeably with a number of other, similar terms: community-based learning, service-learning, sustainability education, project-based learning. Each of these terms refers to an explicit connection between the school and the community in which the school resides. A broader hope is to “tear down school walls” such that the community becomes integral to all facets of student learning—the school is open and inviting to the community and the community welcomes student learning to occur in many dimensions. Place-based education roots learning about abstract systems in the concrete experiences of the schoolyard and community.

In theory, when one has developed an attachment to one’s place and the skills to act upon that attachment, an individual will become a more active participant in his or her community. This is sometimes referred to as civic engagement. When levels of civic engagement and participation increase in a community, social capital--the invisible web of relationship--is said to broaden and deepen. According to Robert Putnam (2001), author of *Bowling Alone*, social capital refers to features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit. An intensification of social capital then leads, in the long run, to healthier communities, both natural and social. This construct is an essential part of the theory of change embedded in the CS2P logic model.



Existing documentation and evaluation suggests place-based programming is indeed effective (PEEC, 2003). In addition, closely related research has demonstrated that students who are engaged in real-world learning are more likely to succeed than those

who learn the same type of material from more abstract text books. Examples of these studies are given below.

A program evaluation conducted by the Harvard Graduate School of Education for the Rural Trust (1999) provides case studies of schools and communities throughout rural America that have been transformed by grounding students' education in the local community and intentionally moving away from didactic approaches to standardized schooling. The evaluation concludes that as schools and communities work together to design curricular goals and strategies, students' academic achievement improves, their interest in their community increases, teachers are more satisfied with their profession, and community members are more connected to the schools and to students.

Another study demonstrates the broad reaching positive effects of locally based curricula in over 40 schools nationwide. This 1998 study by the State Environmental Education Roundtable demonstrated that when the environment is used as an integrating context (EIC), student achievement and in-school behaviors improve (Lieberman and Hoody, 1998).

Further, many studies of the effectiveness of service-learning have been conducted, in large part by the Corporation for National Service. These studies demonstrate powerful linkages between grounding the learning experience in the local context, enhanced student participation in community matters, and increased student engagement in their academic studies. In particular, service-learning experiences have been shown to promote a "pro-social, active conception of citizenship" in students (Chi, p. vi) when implemented consistently and intensively including opportunities for analysis of and reflection on the service experience and regular opportunities for teachers and students to engage in dialogue.

A more detailed literature review of the evolution of place-based education and service-learning prepared by Sharon Plumb in her 2003 Master's Thesis can be accessed at <http://www.PEEworks.org>.

Excerpt from: The Generally Accepted Principles of Teaching and Learning and their Implications for Local Education Support Systems

- All children do not learn in the same ways or at the same pace. (Good instruction provides students instructional choices and multiple ways to engage with content to help them take ownership of their learning and demonstrate competence.)
- Learning is active. It requires effort and resilience on the part of the student as well as interaction (Good instruction promotes this interaction by maximizing opportunities for students to engage in their learning, rather than passively absorb information with teachers, texts, materials, and/or other learners.)
- Learning depends on a foundation of factual knowledge, the understanding of concepts in context, and the organization of facts and concepts so that they can be retrieved and applied.
- Learning is not limited to school. It can happen anywhere. (Good instruction incorporates children's out-of-school experiences in school with lessons that have value beyond school and is connected as much as possible to settings in the community that enhance learning for children and adults both inside and outside of school.)

**Created by School Communities that Work: A National Task Force on the Future of Urban Districts (June 2002)*

Educational strategies: schools and communities

If fostering a sense of place and teaching action skills are the first steps toward the desired change, then programmatically it is the job of projects like CS2P to find the most appropriate leverage points in a system (or community) to initiate these first steps. Implicit in the NH PLT mission is that educational intervention is an essential way to make change at the community level. Meanwhile, the prevailing environmental education literature advises that a conservation ethic and responsible behavior must begin with early, sustained exposure coupled with action strategies and behavioral practice. (Hungerford and Volk, 1990)

As such, the school system is a natural point of entry for making change in communities. And, given the outpouring of criticism of the effectiveness of the prevailing schooling system in the United States there is a clear call to propose educational strategies that more effectively meet the academic needs of learners. The promise of sustainability education and place-based education is to rise to both of these challenges: enhance community health through increased social participation, and strengthen the school system with more effective academic strategies and community buy-in.

If schools are natural partners for these programs, then teachers are an appropriate beginning audience. In C2SP, school educators serve as the first level of change. It is only from this point that students might be reached. Additional audiences include community members, school administrators, and students. While some place-based education models choose to work primarily with teachers in a professional development setting, other seek to meet their goals via a “whole school” model, working at once with teachers, administrators, students and community members.

The CS2P project contains elements of both a professional development model and a whole school model. With either approach, though, best practice would indicate that for a change in teacher practice or in whole schools to occur, curriculum development needs to be personalized and context-specific. Attention is given to individual teachers, and an emphasis is placed on developing curricula that is not only place-specific but integrates well into existing practice and expectations for district, state and national standards. If teachers or schools are offered teaching strategies that fall outside of broader expectations, they are less likely to be adopted, whereas new curricula and resource offerings that mesh well with existing practice are more likely to be readily adopted.

EVALUATION METHODS

Evaluation of the CS2P program began with the data-collecting efforts of NH PLT staff at the program's inception at Woodsville Elementary School (WES) in January 2003. From the beginning, NHPLT staff systematically sought to better understand the successes and challenges of their process of program development and implementation. After an initially unsuccessful attempt to hire an outside evaluator in 2003, PEER Associates was hired in the Spring of 2004. PEER worked with NHPLT staff to create an overall evaluation plan with three main parts: the participatory development of Evaluation Overview by May 2004, an Interim (Phase I) evaluation by July 2004, and a Final (Phase II) evaluation by July 2005. This report reflects the work completed up through Phase I.

While this is primarily a formative evaluation, the report does provide evidence of positive outcomes as well as suggestions for program improvements. It is intended to be useful to NH PLT program managers and Woodsville Elementary School staff, funders and interested stakeholders, and to contribute to the field of place-based education.

EVALUATION QUESTIONS

PEER evaluators and NHPLT staff worked together to create the following evaluation questions. (See Appendix B for Evaluation Overview 2004-2005 and Appendix C for Interview Guides.)

Evaluation Questions for the CS2P Interim Evaluation 2004

Area of focus	Evaluation Questions
Input of resources by PLT staff	<ul style="list-style-type: none"> • <i>What kinds of support do NHPLT staff offer teachers to help institute the program and which do you find most helpful?</i> • <i>In the past year NHPLT staff have acquired resources such as books, classroom supplies, and school-wide supplies; facilitated monthly meetings and summer planning meetings; and scheduled guest speakers from the community. Which of these resources and forms of support have you utilized and found most helpful?</i> • <i>Are you doing anything differently as a result of the support or resources from NHPLT staff, and if so, why?</i> • <i>What 1 or 2 forms of support or resources have not yet been offered by NHPLT staff that should be?</i> • <i>Overall, how could NHPLT staff support teachers more effectively?</i>

Area of focus	Evaluation Questions
Monthly meetings	<ul style="list-style-type: none"> • <i>What is your opinion of the monthly meetings?</i> • <i>How could the structure of monthly meetings be changed to support teachers more effectively?</i> • <i>What seems to be the goal of the monthly meetings?</i> • <i>What should be the goal of the monthly meetings?</i> • <i>In what ways have the monthly meetings affected teacher practice?</i> • <i>What are your thoughts on the content training provided at monthly meetings? What additional content training could be provided that would prove useful to you? Is it more helpful to have content training or open planning time? Why?</i>
NHPLT staff school visits	<ul style="list-style-type: none"> • <i>When a NHPLT staff member comes to the school, how can she best support teachers?</i> • <i>How would you describe the availability of the NHPLT staff member when she comes to Woodsville?</i> • <i>What are your thoughts on the system used to meet with NHPLT staff when she visits the school? How could that system be improved?</i> • <i>A NHPLT staff member is at the school 2 times per month. Should she be there more?</i>
Teacher Practice	<p><i>Since the CS2P program began at WES, have you seen an increase, decrease, or no change in the following:</i></p> <ul style="list-style-type: none"> • <i>Integration of natural science</i> • <i>Use of school grounds and local places</i> • <i>Use of physical resources related to natural science</i> • <i>Involvement of community members</i>

PROCESS AND INSTRUMENTS

The evaluation utilized multiple methods. Semi-structured interviews were conducted with CS2P teachers and administrators. Classroom observations, meetings with NHPLT staff, and analysis of pre-collected data served to triangulate the interview data.

Open interviews are particularly useful in program evaluation because they are engaging interactions that help us understand both the process and the outcomes of a program, including what participants know and like about the program, how they have been affected by the program, and what they think should be different (Monroe, 2002). An interview guide was developed that was specific enough to adequately encompass the evaluation questions, but flexible enough to meet the stakeholders' level of participation in CS2P activities. All interviews were audio recorded and transcribed. (See Appendix C for interview guides.)

The following table summarizes the data collection methods and instruments used in this evaluation:

Connecting Schools to People and Places Data Sources for Interim Evaluation 2004

Instrument	Type and Number Administered
Interviews	12 Woodsville ES Teachers 1 Woodsville ES Guidance Counselor 2 Woodsville ES Principal
Document Review	<ul style="list-style-type: none"> • Project logic model • Project executive summary • Minutes for grade level monthly meetings • Minutes for Core Team meetings • Minutes for one Kit Team meeting • Minutes for School Team meetings • Minutes for Curriculum Planning meeting • Minutes for Steering Team meetings • CS2P visit logs • Curriculum templates and template format • Resources/kit inventories



ANALYSIS OF INTERVIEW DATA AND DOCUMENTS

After fieldwork was complete, pre-collected documents and transcribed interviews were coded to illuminate key emergent issues and answer the evaluation questions (Miles & Huberman, 1994). The most prevalent themes emerging from the data were analyzed and are synthesized into this report.

Specifically, the evaluators used the following protocol for analyzing the data:

- 1) wait until the vast majority of data has been collected
- 2) read through all data (making minimal notes) for the purpose of clarifying the context and getting a holistic impression of the data set
- 3) create an initial list of 5-20 themes that seem to reflect the data

Note: When more than one individual is involved in the data collection, analysis or write up, each person must go through steps 1-3.

- 4) code all data according to the theme list, while remaining very open to the emergence of new themes, sub-themes, and meta-themes, including three categories: Irrelevant, Probably Irrelevant, Need to Confer
- 5) as the remaining data is collected, code it according to the theme list
- 6) look within the data from each theme, sub-theme and meta-theme and recode as necessary to establish clarity and coherence within each level
- 7) generate an outline of the findings and discussions section of the report based upon the final theme list
- 8) write up the narrative based upon the outline, pulling in data from documents and transcripts to support as appropriate
- 9) each person involved in the above steps agree that the final analysis is consistent with their experience

Note: If Research Assistants are involved in the process, then the primary author checks their work at each step.

FINDINGS AND DISCUSSION

The most commonly reported strengths of the CS2P implementation process and pilot school are discussed in the first segment of this section, followed by a discussion of the factors cited by teachers, administrators, and NHPLT staff as the current and potential future challenges or barriers for successful program implementation. Following the analysis of the program and pilot school strengths and challenges, salient outcomes of the project are reported. Teacher outcomes are the primary focus of the discussion, but school-wide outcomes and student outcomes are also explored.

PLEASE NOTE: All quotes throughout this report from a Woodsville Elementary School staff member unless specified otherwise.

PROCESS STRENGTHS

CS2P implementation strengths

- Flexibility during implementation process
- Rapport and trust established
- Effective facilitation of monthly meetings
- Providing for release time
- Role-modeling and training
- Supplying of physical resources
- Summer planning time

Pilot School strengths

- Administrative support
- Commitment/ownership by teachers at some level
- Rapport among faculty

Flexibility during implementation

“When we started out a lot of us were really frustrated. We didn’t know what the direction was. I don’t think anyone knew. We got to a point where we felt we were being forced to do something we didn’t want to do. Now we are at a point where we just want to continue because we are enjoying it. It came from us and they gave us the resources and helped us achieve the goals we wanted.”

At the heart of a school change initiative is the ability to introduce new ideas and facilitate growth without overburdening school staff, and to prove flexible to program direction changes if the school staff is feeling overwhelmed. Most teachers interviewed commented that they initially felt overwhelmed by the CS2P initiative when it was

introduced in January 2003. Many referenced a meeting that occurred at the beginning of the initiative implementation that caused them to feel overloaded and frustrated. However, those feelings of “initiative overload” were eventually replaced by feelings of ownership and excitement for the program when NHPLT staff allowed teachers to freely voice their opinions in a meeting where administration was not present and make a decision whether they would like to continue the program. The teachers decided during that meeting to continue the program. Instead of working toward the goal of integrating natural science into the entire curriculum, however, they would instead focus on integration of natural science into the already successful literacy program.

Several teachers described their feelings regarding the process of determining the scope and focus of the project. For example:

In the beginning we were really frustrated. We had this one meeting and it was awful. And then they [NHPLT staff] told us to tell them what we really thought. They thought we were ready to back out, and we were. And we said, this is what we want. And they said, okay, this is what you’ll get.

The higher ups weren’t there, so we let it rip, and they [NHPLT staff] really listened. It was like a 360, and we really started working as a team.

We didn’t want something else to do. We just wanted to do what we were already doing better.

In every case where teachers voiced feelings of frustration at the inception of the program, it was clear that the flexibility and willingness of the NHPLT staff to change the program focus from entire curriculum integration to literacy program integration was a big turning point in how teachers received the initiative. The determination of teachers to continue the program focusing on the literacy component has led to a feeling of ownership and excitement. Now comments made regarding attitudes toward the program include:

We feel we have ownership. It is not...’Here’s what you need to do, now do it.’ It is, ‘What do you want to do? What do you need to do it? How can we help you do it?’

I think change can be frightening for some of us, but in this case it has been good.



I just think it has been great and can't say anything negative or any needs that we have other than for it to just go on like its going. That's how I feel.

When this was signed on as a new project, most teachers go, 'oh by god, another one. It doesn't matter what they promise us, it isn't going to happen.' In this particular project, all of it has happened. All the expectations were given up front. All promises kept. Everyone has a clear vision of what we want to do and what we want to get done. Teachers are feeling confidence in the fact that they are giving this the direction. It isn't just being told to them to do it.

Rapport and trust established

"For future projects, you really need to look at who your leaders are. [NHPLT staff] are nice complements to each other. They are comfortable with staff. They are nothing but helpful and appreciative."

Establishing a positive relationship with those in a school is central to a successful new school initiative. Doing so cultivates feelings of program ownership, encourages trust, and promotes a good rapport between outside program administrators and school staff. Such an approach leads, as well, to a greater likelihood of change within the school. Interview participants made clear that the NHPLT staff has gained their trust and that a good rapport has developed between themselves and the NHPLT staff. Teachers remarked that the NHPLT staff members were reliable, sensitive to teachers' needs, organized, great communicators, and quality sources of information. Teachers also remarked that NHPLT staff have successfully established a balance between providing fresh ideas and resources, while also allowing teachers to come up with ideas on their own. One teacher commented, "They are organized enough to help us out if we want to do something. And if we need to just enrich it on our own, they are there to help us with that too."

Many comments made during interviews touted the support of NHPLT staff and illustrate the rapport and trust that has been established between program administrators and school staff. In addition, many school staff, directly or indirectly, expressed that they will "miss" NHPLT staff when they are finished at the school.

I think it is a great program. It has been great having [NHPLT staff] come into our school.

They have done a phenomenal job in my opinion.

I would miss not having the contact with them because they have been an inspiration.

Effective facilitation of monthly meetings

"We have done so much more because we could get together each month and do it and plan it, and see what we have to get together before the day comes. So I think it has been wonderful."

A theme throughout the teacher interviews was that occasions in which teachers can meet to collaborate on curriculum planning are rare. The monthly meetings have provided such a forum, which has led to increased intentional planning, collaboration among grade level teachers, sharing of resources, and a feeling of camaraderie. For nearly all of the teachers interviewed, the monthly meetings were identified as a direct cause of the success the CS2P program has realized. Much of that success seems to have come from the effective facilitation of the monthly meetings by NHPLT staff. Teachers commented that the facilitation style, while extremely organized, has also provided enough flexibility to veer from the established agenda to explore tangents brought up during meetings.

Many teachers commented on NHPLT staff's organization before and during meetings and effective facilitation during meetings:

In one hour, it is amazing what we get done.

Like I said before, I think that [NHPLT staff] have been just wonderful. They are very organized. The monthly meetings really wouldn't have been as successful without them.

I think we were amazed sometimes what we could get done, but I think that was in part due to the agenda. At the end of one monthly meeting we would talk about what we were going to do at the next.

While organization was certainly an aspect of the monthly meetings that teachers appreciated, teachers also enjoyed a sense of flexibility. One teacher mentioned noted the lack of a "heavy structure". Continuing: "We pretty much work as the meeting takes place. It is not a high-structured meeting. We are able to go off on tangents and the meeting drives the meeting." Another teacher presented the same sentiment when she said, "They keep us focused. But I like that they don't over-focus. If we need to talk about something else, they don't make us feel bad for talking about something else for 10 minutes."

Most clearly, teachers simply appreciated the time to "address the curriculum regularly" and expressed that without the time provided by the monthly meetings, many curriculum changes that have been made would not have been made. One teacher remarked, "Time is the ultimate. You can drop off a cart of live zoo animals, but if we don't have time to plan, we are not going to utilize that resource."

The strong majority of teachers explicitly noted that they are pleased with the existing structure of the monthly meetings. A minority commented that perhaps the meetings did not have to be as long as they have been in the past. That minority agreed, however, that the meetings were invaluable. When asked about content training provided during the meetings, most teachers agreed that the benefits of planning time outweigh those of content training. However, two teachers expressed that planning time and content training were of equal importance.



Providing for release time

“The whole point of release time is for teachers to plan together. It is certainly shown to be an advantage.”

Funding from the CS2P project paid for substitute teachers during monthly meetings, which allowed for grade level teachers to meet together during school hours once per month. This allowance is known as “release time”. Release time and the monthly meetings that took place during that time were much appreciated by WES staff. In fact, every staff member interviewed expressed this sentiment and shared the notion that without the monthly meetings, which were made possible through the release time, much of the success teachers and the CS2P have realized would never have come to fruition.

Role-modeling and training

“For teachers, [CS2P] has provided an opportunity for training.”

Effective teaching can take on many forms when facilitated by different educators. When observed, these varied approaches can lead to professional development. This sort of role-modeling and indirect training has taken place for WES teachers through observing the techniques of NHPLT staff in their capacity as educators and hike leaders. One WES staff member commented, “All the comments I have heard after [NHPLT staff] has modeled a lesson are positive. Teachers get a lot out of it and think of ways to embellish it. Teachers have appreciated it.” Likewise, teachers agreed that CS2P’s role-modeling of activities and hikes, in addition to an expertise of the natural world were very helpful.

I don't think she [NHPLT staff] could support us better. She goes on nature walks with us and points out things to us on our walks that I wouldn't know about trees and things like that. I don't think I could ask any more from her.

Absolutely. When we were looking for tracks, I can look at a little card, but to get out there and actually find them and identify them is another story, so that was really helpful.

Other staff mentioned that seeing activities such as paper-making in action has been extremely helpful. Regarding that activity, one teacher commented, "To actually see the materials and see the screen. It was really easy." Other teachers mentioned that simply referring to various PLT activities caused them to explore the PLT book and find activities that they would not have otherwise. Finally, some teachers commented that they never would have gone on hikes if NHPLT staff would not have been with them.

Supplying of physical resources

"The wealth of the things that they have ordered for us this year springs to mind. That we are able to go into the supply room where they are kept and are able to use them fairly quickly."



Throughout the pilot project, NHPLT staff have supplied resources to the school that have proven extremely helpful to teachers. Specific supplies that were mentioned include: non-fiction books, microscopes, puzzles, and other hands-on activities. Teachers often remarked on the utility of the kits that CS2P helped compile. One teacher commented, "They have the kits all set up for us to use with our class, and the things that are in there are useful. It's not just that they are set there and 'you can use these if you need them.' It's what we wanted in them."

Other comments illustrating benefits of the physical resources include:

It has been great, especially in Kindergarten, because you just need so many books. They go through them really quickly so I really liked that.

As far as materials, so many great things have come into the school, and I feel like I have taken advantage of those things in the classroom. Just knowing that the tubs are down the hall and running down if I have an insect project, bringing things up from those boxes. Looking at other grade level boxes, seeing what they have.

In addition to supplying resources for the school and each grade level, interviewees also expressed gratitude that those resources have now been inventoried, and are thus easily accessible. Also, teachers remarked that sharing of resources has increased since the inception of the CS2P program, as a result of increased collaboration and intentional planning during the monthly meetings and the summer institute.

Summer planning time

“The summer work we did making the templates, I was in on that. I don’t know how important it was for other people, but just sitting down and going through materials...That was a big difference from my first year, just knowing what everyone had.”

The design of the CS2P program allowed for teachers to come together during the summer of 2003 and plan for the following year. As a result of that planning time, the following tasks were completed:

- Kits of natural science resources were assembled, including grade-specific kits, school-wide kits, and general support kits
- Curriculum templates were produced for each grade level

Although not all of the interviewees mentioned the summer planning time as one of the most important inputs of the CS2P program, those who did were very pleased with the success and products that came as a result of the summer meetings. It should be noted that only some faculty members were involved in the summer planning meetings, which could in part explain why only a few mentioned them.

Administrative support

“Without the grant we wouldn’t be this far, plain and simple. Without [NHPLT staff], and the leadership they have given, the kids would not have had the exposure. I am very happy and proud that they picked us. The kids are really taking this seriously.”

One factor that increases the potential for sustainability of the CS2P program at WES is the support of the administration. It is clear that the administration is in support of the project. Comments made during interviews include:

For teachers it has provided an opportunity for training. For the school it has given us a focus on the environment that probably wasn’t here before. For the community it has brought up an awareness of contributions that children of this age can make to improve our environment. For the school board and superintendent’s office it has finally given it the attention it needs. So far it has helped everyone who is connected with the school. (school administrator)

They have handled us well and we are a diverse group. Let’s just keep working together. Their strength is collaboration and talking things out. (school administrator)

Commitment/ownership by teachers

"I think because they [teachers] feel they own it, that makes a big difference in how they approach it, instead of, this is a have-to job, or, I will do it to impress somebody."

For any school initiative to be successful, program administrators must gather the support of the teachers within that school. It is clear that all WES teachers support and are committed to the project at some level, although those levels vary substantially. Most concerns that began with the inception of the project were put to rest when teachers were able to choose if they would continue with the initiative and chose to do so, focusing on integration of natural science into the literacy program. Teachers commented that they now feel they have ownership of the program and that the variety of resources that have been provided by NHPLT staff have been clearly driven by teachers' voiced needs.

It is also apparent however, that some teachers are more excited about the program than others, though in cases of resistance, it appears that only certain aspects of the program are being resisted. According to one WES staff member, "We still have a few individuals we need to get excited about it, and I am not surprised. It is being used in the classroom more than last year, the first official year. I think teachers at first did not see how it was something blended into what they already do instead of something else piled on...It has to be blended into what they already do." Overall, the strong majority of teachers supports the program, sees it as a success, and expressed excitement to see it continue.



Rapport among faculty

"I love it...to take that time every month to get together and discuss what we want to do and how we can integrate it better through the grades just getting us all together in the grade levels."

The rapport that already exists among an experienced group of faculty members is a strength on which to capitalize. In nearly every case, grade level teachers appeared to enjoy and benefit from collaboration with one another within grade level teams, and were interested in seeing this type of collaboration continue. Many teachers made comments that monthly meetings and increased collaboration helped with feelings of isolation that had existed previously. Because teachers "loop" it seems that a continuation of such formal collaboration meetings would be important for continued rapport among grade level teams.

PROCESS CHALLENGES

The success and satisfaction reported by WES interviewees at this stage in the implementation of the CS2P program at WES speaks to the program's strong foundation and quality leadership by NHPLT staff. It also speaks to the ability of WES faculty to take on new projects and integrate them successfully. One could also argue that another testament to a project's success is its flexibility and openness to critique and evaluation. Particularly during the initial phases of a project, seeking feedback on challenges and barriers to success is critical. This section presents two areas for potential improvement of CS2P program implementation.

Facilitating community-school connections

The original design of the CS2P pilot project included the goal of establishing community-school connections. While some efforts have been made successfully in this area, it is one that NHPLT staff and WES staff agree needs to be worked on. A level of interest for involving community is present among staff. However, the following barriers were suggested as to why community-school connections have not been facilitated to the degree they could have been:

- Potentially, WES staff have come to rely on NHPLT staff too heavily as outside resources because they are easily accessible at this point. The recommendation was made to begin looking outside NHPLT staff to start forming connections.
- Scheduling is a difficult and time-consuming task, especially when both WES staff and the community members with whom they are trying to connect are busy.
- Many teachers are not local and thus are unfamiliar with potential local connections.

Suggestions made during interviews include:

- Preparing a local resource guide and disseminating it to all of the teachers.
- Utilizing the knowledge and connections of teachers who are local to the area.
- Focusing on the facilitation of community-school connections next fall.

In addition, it was noted by several teachers that they would like to integrate the "specials" into monthly meeting planning, in an effort to extend the community of individuals involved in the CS2P project within the school. Teachers specifically mentioned integrating more effectively the guidance counselor, literacy block helpers, the librarian, and the special educators. Data acquired by NHPLT staff suggests that the music, dance, and art teachers have already been integrating their work with natural science to some degree, despite not having been formally involved in the monthly planning meetings.



Potential future funding constraint

One funding constraint that came up during interviews pertained to field trips. One school staff member commented in reference to the nearby Kinder Forest:

We have a little chunk of woods out back. We have a bigger chunk of woods that is a \$60 trip away. It is part of our community, but every time we put a key in the bus, it is \$60. There is something up there for every grade level so it would be great to use that particular spot, but the cost of getting everyone there and back is far beyond what our means are.

Several interviewees mentioned the idea of approaching local businesses for such funding, which could be a project of focus next fall.

Perhaps even more important than funding for field trips, though, is the implicit threat of the disappearance of monthly meetings when grant funding for release time ends. Across interviews, teachers stressed that the one thing necessary to sustain the CS2P program at WES is continued time for planning at each grade level. If this planning time is going to continue in the form of release time, it will be necessary to acquire funds to pay substitute teachers. It was suggested that if release times were not an option through another funding source, that perhaps in-service days could be used as PLT planning time. Most, if not all, teachers agreed that there is simply not time in the day to meet and collaborate without distraction, which is why the release times have been so successful. The following are several teachers' responses to the question, "What will it take for CS2P to be sustainable at WES?:"

The monthly meetings. We really need that time or else we won't see each other to plan.

The only way it will work is if it is a grade-level time. If you try to do it school-wide release time, they always sneak other things in because the whole staff is together so they say, oh, we will take this time to talk about what is happening in the district.

It would be advise to our superintendent and our principal... to provide us with the time. We would love to keep these as annual projects. We have had such success. And it looked like a lot of hard work going into it, but the kids just loved it, and we saw the learning that took place and saw how wonderful it was. But on some of our staff development days, instead of listening to an education attorney, or something that we have heard a million times, it would be nice for them to give us time to work in a group. And I think we could continue with that as long as we have the time.

TEACHER OUTCOMES

An analysis of the data collected during interviews, as well as data collected by CS2P previous to this evaluator's role began, shows clear evidence that teacher practice has changed in many ways as a result of the CS2P project and NHPLT staff support. The following section describes four ways in which teachers report CS2P impacts on the Woodsville Elementary School curriculum. The section also describes reports of increased collaboration and intentional planning among grade levels.

Curriculum changes: Increased integration of natural science into the literacy program

"The whole focus has been bringing science into the literacy program. We have been able to do a lot of extensions, but it is tied into science and has made the whole program more interdisciplinary and it makes you more aware you can put science anywhere."

All the teachers agreed that there has been an evident increase of natural science in the curriculum. In the beginning of the CS2P implementation at WES, teachers decided that the best way to integrate natural science into the curriculum was through the already successful literacy program. It is clear from the teachers' point of view that their efforts have been successful in that realm. Some comments made regarding the increase of natural science into the curriculum include:

We are doing a lot with Project Learning Tree and nature education. It was something we all wanted to do, but again, it was just a time constraint. By the time you teach this, that, and the other thing, there wasn't a lot of time. But this made us focus and helped us integrate better than we were doing, which we always think we are doing, but having these theme days made a lot of difference. I think that is true through the whole school. I think everyone is doing a whole lot more than ever.

We never did a first grade science theme in all my 16 years teaching. This year we have, and it is through PLT.



Teachers also reported that using the supplies that CS2P has provided has made the integration of science into the curriculum more fun. In addition, some teachers noted, unprompted, that they feel like they are covering more ground in less time. A teacher remarked, “It is nice because you are able to say, ‘I know my kids have covered that, that and that’ because you just fit the science in during the day.”

A sampling of natural science integration activities across grade levels includes:

- Nature walks
- Facilitation of PLT activities to complement lessons
- Nature-based theme days
- Use of non-fiction science books in the literacy program
- Writing assignments on nature or science topics
- Use of natural science hands-on activities

Curriculum changes: Increased use of resources relating to natural science

“We try to use the kits as much as possible when we implement the unit. The PLT book offers so many activities. I am definitely doing more outdoor activities. Bark rubbings. Leaf booklets.”

It is evident that the supplies provided by the program, the organization of kits, and the inventorying of those items and already existing resources has been very useful to teachers. All teachers commented that they have utilized the resources, and many noted that the physical resources provided by the CS2P program fund would rank in their top three of resource inputs by NHPLT staff. Many resources provided were described as helpful, but the non-fiction books, microscopes, puzzles, and other hands-on activities were mentioned consistently throughout all of the interviews. One teacher commented, “The extra things provided from PLT have been like gravy. You haven’t had to decide, should I get these level readers or are my blackboards really worn out. It’s like, I can have both.”

Finally, many teachers commented that they felt all the physical resources provided by the CS2P funds were equally important because their acquisition was driven by teachers’ needs. One teacher remarked, “It has really been driven by our needs, what they’ve done, so everything has been equally important in my book.”

Curriculum changes: Increased use of school grounds and local places as extensions of the classroom

"I don't think I would have taken the children out without [NHPLT staff] until I knew what I was doing out of the school grounds. My children really loved it. They really do notice things they wouldn't have if we hadn't done that. I think it has made a huge difference."

Across the board, teachers reported an increase of using the school grounds and local places. Specifically mentioned were Aldrich Woods and the Kinder Forest. It was apparent through interviews that most teachers have begun to see Aldrich Woods as an extension of the classroom.

A surprising outcome resulting from questions about the school grounds and local places was how little Aldrich Woods was used in the past. Several teachers commented on having never used the woods outside the school and being unfamiliar with what was back there. The following quotes illustrate that finding, as well as a general excitement for using the outdoors as an extension of the classroom:

I didn't even realize what was around the school. I have been here for sixteen years. No one ever showed me. You heard about it. There is a trail that goes all the way to the river.

Next week we are going to go down closer to the river and do some observation and take out the backpacks the kids made. Getting them off the playground and seeing different things, things they probably don't tune into at home is really nice.

I don't think I would have taken the children out without [NHPLT staff] until I knew what I was doing out of the school grounds. My children really loved it. They really do notice things they wouldn't have if we hadn't done that. I think it has made a huge difference.

Several concerns arose for interviewees regarding the use of local places. One teacher expressed that she was much more enthused about utilizing Aldrich Woods than the Kinder Forest because it is easier logistically. Teachers don't need to pass out permission slips because Aldrich Woods is considered an extension of the classroom, bathrooms are nearby, and busses are not necessary. She also commented,

"When we went out back and just did the woods out back and in the winter we looked for tracks. And I didn't really think we'd find much, but I was really surprised at how much we did find. And I think that was really good. It was really educational for the kids and that was good for me. But I don't think we need to drive to North Haverill to Kinder Forest every time we want to do something. I think most of what we want can be done close by."

Other teachers expressed excitement for using both areas. This was tempered, however, by concerns pertaining to funding trips to Kinder Forest and other nearby local places. One staff person remarked that it costs \$60 “every time we put a key in a bus.”

Another concern brought up was that students might get bored with using the school grounds in every grade level, K-3, as opposed to changing locations and venturing out away from the school grounds in different grade levels.

Finally, one administrator reported a desire to be more organized in the use of the local places and school grounds, to integrate the river into the curriculum more, and to explore the possibility of facilitating lessons outdoors instead of in the classroom more regularly, even if those lessons aren’t directly connected with the outdoors. In other words, truly utilizing the outdoors as a classroom setting.

Curriculum changes: Use of PLT staff as a resource

“It has been great having Beth and Esther come into our school.”

This section begins with a discussion of school visits by NHPLT staff and ends with reports regarding those staff as a resource at monthly meetings.

The CS2P pilot project was structured so that each week a NHPLT staff member visits the school and is available to teachers. A sign-up list was used to “reserve” the NHPLT staff member’s time. All teachers reported that this system worked well, although some teachers commented that during some weeks, the NHPLT staff member was already booked up when they attempted to sign up.

Every grade level reported utilizing the skills and expertise of the NHPLT staff when she came to the school, most often by asking her to lead hikes, facilitate activities, and be present on theme days. One of the real benefits of these interactions was the power of role-modeling. Teachers were able to see activities and hikes in action, which proved useful. Some teachers commented that they never would have taken their kids out for a hike or facilitated certain activities if the NHPLT staff would not have been present.



One interviewee stated a possible unforeseen consequence resulting from teachers' excitement for school visits and the easy accessibility of the NHPLT staff member. The interviewee suggested that NHPLT staff might be becoming somewhat of a "crutch" for teachers, dissuading them from establishing connections outside the school. In other words, teachers may be looking to retain the NHPLT staff member as an outside resource rather than working to connect with other community members for the same benefits, or develop a basic level of expertise on their own. Since the NHPLT staff will no longer be accessible as an in-house resource once the program funding ends, and because connections with community members may be more sustainable, it may be prudent to begin focusing efforts on connecting with community members rather than relying so heavily on the NHPLT staff as an external resource.

One recommendation offered regarding the NHPLT staff leading hikes and facilitating activities for classes, was to be explicit concerning clarification of NHPLT staff versus teacher roles, so that it is clear who is in charge of managing the group and disciplining students, and who is in charge of simply role-modeling activities and new skills.

Another suggestion/request was that NHPLT staff members come to the school more often if their schedules allow. Teachers expressed enthusiasm for the benefits that school visits bring to the students and themselves, and stated that they would like to see the number of visits continue as they have been, or increase, if possible.

Increased collaboration and intentional planning among grade levels

"We've done a lot more this year than we ever have [before], I think because we have had the time to plan together. That's a big part of having those monthly meetings because we have no other time to collaborate. And so we've put together some programs. And I think it has been wonderful. I really do."

It was widely reported that this program has promoted a substantial increase in the level of collaboration within every grade level. Interviews revealed that this collaboration has led to extensive sharing of resources, a feeling of camaraderie among staff, and an increased ability to make curriculum changes, increase natural science in the curriculum, and plan for theme days and field trips. Equally clear through interviewees' statements was that in nearly every instance, this increased collaboration has come as a result of the monthly meetings:

It has been a lot more organized. And we have had time to evaluate things, how we can do them differently another year, so the planning is something that is so important and it is something that has really been lacking at our school. And I really don't think we would have had the success we've had without the meetings.

We are sharing resources better, and we have also been connected to each other better through these monthly meetings. It is really the one time as a team that we can really sit down and share ideas instead of just on the fly in the hall. So that has been a huge part of it.

We would have never had that tracking day if not for the time to plan it, get it together, and just get ideas out. We don't have time to do that. Time together is so important, or else you are just doing it individually by yourself at night.

I like them because it gives us time as a grade level team to meet because there isn't other time. We have had years where they say we will have time to meet on Wednesdays but life happens, and you might meet twice during the whole year. And we knew what we were discussing too, so we didn't just chit chat.

The whole point of release time is for teachers to plan together. It is certainly shown to be an advantage.

The ideas reflected in the above comments were present in every interview to some degree. Planning time and collaboration were consistently identified as a huge benefit to the teachers and their classes, as a direct result of the release time offered to teachers to attend monthly meetings.

SCHOOL-WIDE OUTCOMES

“One thing I have found interesting is that an awareness has happened school-wide. There are people like our art teacher. She does things with a PLT focus. So it isn’t just the classrooms. It is everyone.”

Although the CS2P program is only technically in its second year of operation, school-wide changes have begun to take hold at WES. Teachers described an increasing integration of natural science into the “specials” during interviews, and a recent school board meeting resulted in evidence suggesting that there is also support for the CS2P program on the board.

Integration of natural science into “specials” (i.e. dance, art, guidance, etc.)

During interviews, teachers reported a growing excitement among the “specials” teachers for integrating natural science into areas such as art, music, guidance, and library time. According to the pre-collected data, the art teacher and librarian have already taken steps to incorporate natural science into their time with students by planning projects such as making plaster casts of animal tracks in art class and watching videos of animals in winter during library time. During June of 2003, the dancer in residence created a dance performance entitled “Energy and Society: An exploration of the Earth and its processes through dance,” in which the dances reflected energy topics within the songs. For example, the 3rd graders danced to “It is the Energy” and wearing sunglasses, while one of the 1st grade groups danced to “Photosynthesis” and carried twigs and leaves during their dance.

Although teachers did report that integration into the “specials” is on the rise, most also suggested that teachers of such subjects, as well as literacy block helpers, should be more formally utilized during the natural science integration planning process. Several interviewees suggested that special educators, the guidance counselor, the “specials” teachers, and literacy block helpers be formally incorporated into the monthly meetings.

Support from school board

My kids are always looking for tracks in our backyard now and trying to identify them. It is because of this project, and I think it is great. (school board member)

Excerpted quotes from notes taken by a NHPLT staff member during a meeting of the school board on May 17, 2004, reflect support of the CS2P program:

This project instills an interest in science that will serve students and teachers well as they move into upper grades. (superintendent)

One of my concerns is how much time kids spend indoors today. When I was a kid, I was always in the woods. We were outside a lot during school too. I like that this project is getting kids outdoors. (school board member)

Is there discussion about extending this project to the middle school? I would hate for us to lose the momentum that we are building. (school board member)



STUDENT OUTCOMES

"This year more than others I have more kids come up to me and tell about experiences with science and bringing in specimens that are tied into what they are doing with science. It is not work. They are learning a lot."

Interview data reflecting teachers' and administration's perceptions of the impact of the CS2P project on students, suggest the following benefits.

Excitement about use of outdoors as an extension of the classroom

[While on a field trip to the ocean] "One little girl looked at [a teacher] wet, cold, and said, "[Teacher Name], this is the best day of my life."

Across interviews, teachers and administrators reported a growing excitement from students for using the outdoors as an extension of the classroom. Students have expressed anticipation for theme days, hikes, visits from NHPLT staff, and simply experiencing the outdoors. One school administrator reported more students than ever approaching him to tell him about things they are learning in class regarding natural science. Teachers recounted anecdotes of students on field trips making comments such as, "I have to pick up this sea urchin! I just have to!", or regarding sea starts that

students had been studying in the classroom and then observed on a trip to the ocean, “Is this the real thing!” Teachers also reported students making follow-up comments such as “when are we going back on a hike!”

The pre-collected data also supported this claim. According to that data, one teacher observed students showing parents how to walk like animals, presumably after a lesson they had learned during the school day. Teachers also reported children coming back after weekend breaks to recount stories about animal signs they had seen at their homes. Overall, all interviewees conveyed a sense of satisfaction regarding their students’ level of excitement for learning in the outdoors. Some mentioned additional benefits of such an arrangement, such as changes in routine, students experience of multiple teaching styles, and the benefits of visiting with students in other classes. Regarding student excitement learning in the outdoors, one teacher commented, “It is delightful to see.” Another teacher stated that her students were becoming “stewards of the environment.”

Increased awareness of natural surroundings

“When they write about what they see, and the illustration! That is when you see it come alive... when you can touch it and smell it.”

In addition to a growing excitement for the outdoors as an extension of the classroom, teachers also reported an increased awareness for their natural surroundings among students. The integration of more non-fiction books into the literacy program and the use of hikes as a tool for learning were suggested as potential reasons for this growing awareness. Teachers reported:

Through the help of PLT, having access to more resources, our literacy program has more titles in it having to do with natural science, which they wouldn’t have had prior [to CS2P]. Integrating the science into our literacy program is on the threshold of exciting things happening. It is because of that that kids’ awareness has grown. It isn’t just being involved in a science activity. It is making more sense to them coming from different directions.

They really loved the tracks for instance, and different things [NHPLT staff] have taught them to notice. Just general observation type things.

Just from the ocean unit, one of my children went to the pond and started looking closely, and some of the snails and things, so they are really starting to notice things they wouldn’t have before.



First graders get wet studying the ocean on a field trip to Odiorne Point.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

Despite the “interim” and primarily formative nature of this evaluation, it is difficult to set aside the strong sense of satisfaction and excitement among participants in the CS2P project. The CS2P pilot project is clearly benefiting the teachers and students of Woodsville Elementary School in some substantive ways. We did identify a number of opportunities for on-going refinement of the program as well, and these are discussed in further detail below. The following conclusions and implications for practice are intended to help NHPLT staff refine the project as it continues to grow and expand its reach. They are based on aggregated input from participants and the evaluation team’s analysis of the total program.

Ensuring Continued Opportunities for Curriculum Planning and Collaboration

As evidenced by every teacher interview, the continuation of allotted planning time in the form of monthly meetings or a suitable alternative seems critical for continued program success. Teachers have made clear their opinion that there is simply no time available during the school day to come together and collaborate without distraction if release time is not provided. If funding for continued release time is not an option, consider arranging time in some other format that allows grade level teams to come together, without distraction, to discuss curriculum and share resources. Teachers stated a preference for grade-level team meetings versus whole-school meetings.

Finding Future Funding

School administrators are already seeking funding for release time and have begun thinking about funding for field trips through community organizations and families. Future funding solicitation should be a focus of fall 2004. Potentially, efforts to solicit such funding from community members and families could be combined with efforts to establish sustainable community partnerships with the school.

Establishing Community-School Connections

A program challenge thus far has been effectively establishing community-school connections. Tapping into community volunteers through a more planned system may prove beneficial to meeting this goal. Interviewees suggested exploring potential community connections with local teachers, contacting those community individuals to assess their willingness to volunteer, and following up that contact by producing a manual of “community volunteers,” that could be disseminated to teachers.

Another interviewee suggested forming a group of individuals willing to focus on establishing community connections by meeting regularly to devise strategies towards that goal. Other ideas include:

- Asking parents to fill out a form every year indicating particular skills they would be willing to share with students or teachers.
- Encouraging volunteerism by aligning with the town to recognize and honor district volunteers annually, thereby showing that their contributions are valued not only by the school but also by the broader community.
- Assisting WES in preparing a manual for parent and community volunteers orienting them to the school, and to their roles and responsibilities. A more integrated system for volunteer management could be developed to assist teachers with making calls to community volunteers and managing their time so that the logistics are not an added burden for teachers. Experienced volunteers could assist in training or recruiting future volunteers.

Refining Program Logic

The existing CS2P logic model was extremely helpful for structuring and implementing the evaluation process through Phase I. Since the program at WES is intended to be a pilot that may be replicated at other schools, NH PLT staff and other CS2P stakeholders could potentially benefit from refining the logic model even further based upon this interim report in general and the following discussion in particular.

Inputs/Resources

The resource that teachers consistently ranked as most important was the monthly meetings for shared planning and collaboration. This program element is not, however, explicitly represented on the current draft of the CS2P logic model.

Other supports offered by NHPLT staff, that teachers reported as particularly useful, include physical resources provided by program funding, organization of those resources, school visits by NHPLT staff, and, finally, summer planning time. A case could be made that these elements are implicit in the language of the current CS2P logic model, but it might still make sense to portray them more explicitly before using the logic model as a tool for program expansion.

Activities/Strategies

Before the impacts of a program can be credibly claimed as resulting from that program, it needs to be determined that the program is actually being implemented as planned. The data gathered during this evaluation suggest very strongly that the CS2P program is being implemented with a high degree of fidelity to the program model. The

following “Activities and Strategies” from the CS2P model have been effectively transferred to the field through on-the-ground operations:

- Train faculty in Projects Learning Tree, WET and WILD and make other curriculum materials available.
- Model use of environment-based curricula in the classroom and outdoors.
- Assist faculty with curriculum integration and facilitate development of thematic units.
- Fund substitute teachers during planning and professional development time.
- Facilitate and support faculty collaboration.
- Provide direction and guidance to the project.
- Acquire classroom materials to support environment-based study.
- Support school initiatives by leading classroom lessons, leading field trips, advising community-based projects, and more.
- Provide stipends to teachers for summer planning and professional development activities.
- Fund field trips.

This evaluation gathered some evidence suggesting that the following set of activities and strategies are also represented in on-the-ground operations, but less completely than the components listed above:

- Identify special natural places for each grade level to study.
- Facilitate and support involvement of steering committee.



Finally, the components of the “Activities and Strategies” column of the CS2P logic model for which this evaluation did not gather direct evidence include:

- Build sustained relationships between faculty and local landowners and resource professionals.
- Train and support faculty in enriching curriculum through community-based projects.
- Train and advise interested staff in grant writing and fundraising. Identify opportunities and support projects for school to address community needs.
- Help to host annual celebration.
- Advise financial decisions.

The components listed above may be occurring at WES, but this evaluation was primarily exploratory at the outcome level of program logic, and thus seeking direct evidence for the above named outcomes was not an explicit focus of the evaluation questions. The lack of reported evidence for this latter group of outcomes should not be interpreted as a failure of either the program or the evaluation. Rather, it is an indicator of directions to pursue as resources become available to expand the scope of both programming and evaluation. The salient overall pattern is that the outcomes that *did* show up in interview data tended to be about teacher practice, and those that did *not* show up tended to be more about community connections and ongoing sustainability. This seems to be a reasonable result given that the program is still in its second year.

The above discussion involved activities and strategies explicitly identified in the program logic model. During interviews, WES staff reported the following unstated, but highly useful strategies utilized by CS2P administrators:

- Being flexible during implementation process
- Establishing rapport and trust with WES faculty
- Facilitating monthly meetings effectively

In sum, all the efforts of NHPLT staff have been valuable to varying degrees. Presumably, this is due in part to the decision of program managers to focus on certain activities and strategies based on the genuine, on-the-ground needs of WES teachers and students. Thus, solicitation of teachers' needs should continue, and inputs of resources and time by program staff should be driven by those needs to some degree. That said, it may also be useful to focus in the future on activities and strategies that have not been transferred to the field as effectively as others, or, alternatively, to consider eliminating those activities and strategies from the logic model. Also, program staff may wish to consider representing more explicitly in the logic model the unstated strategies discussed above, including utilizing a flexible implementation process, establishing rapport and trust, and effectively facilitating monthly meetings.

Outcomes

It has been demonstrated through the findings and discussion section of this report that the CS2P program has already made clear strides toward achieving the following short-term (3-year) goals outlined in their logic model:

- Teachers better understand how environment-based education supports curriculum goals.
- Teachers are better able to align PLT and other materials with school curriculum goals.
- The faculty works more collaboratively and there is grade-level cohesiveness.
- Teachers view the outdoors as a natural extension of the classroom and students spend more time outside for academic study.

It is too early to claim results on any of the longer term outcomes/impacts described in the CS2P logic model. If program stakeholders do undertake to refine the existing logic model, it may make sense to limit the more immediate outcomes to the realm of teacher practice, with impacts on students and community being more systematically shifted to longer time frames.

Focusing CS2P Strategies for Continued Program Success and Sustainability

Though program sustainability was not a theme of this interim evaluation, evidence emerged that holds promise for continued CS2P successes. For true school change to occur, long-term sustainability should be at the forefront of program administrators' minds at all times. In order to ensure the continued success of the CS2P pilot project once the CS2P program withdraws WES, the following options could be explored:

- When a program staff is offering support in the form of leading hikes or facilitating activities, ensure that there is a clear understanding of how this role-modeling is building longer-term capacity, rather than temporary help, for the school. For instance, NHPLT staff may want to shift their strategy during school visits from predominantly role-modeling, to co-leading activities and/or observing and offering feedback to teachers leading activities and hikes.
- Program staff should decide whether increasing teachers' natural science knowledge will remain a stated goal of the CS2P program, or if the closely related goal of natural science integration will be the focus, or both. If increasing teachers' natural history knowledge remains a stated program goal, consider building that type of training intentionally into monthly meetings and/or school visits/hikes led by NHPLT staff. Additionally, evaluators should refine their inquiry to more explicitly target PLT goals as stated.
- Consider placing a strong emphasis on establishing long term community partnerships and incorporating additional school staff into program planning.

Future Program Start-ups

The CS2P program has been successful at WES thus far, in part, due to the leadership of program staff, especially their willingness to allow the design of the pilot project to flex based on teachers' needs



and stated wishes. This flexibility on the part of program staff resulted in teachers feeling ownership and excitement for the CS2P program versus feeling as though it was something forced upon them. Teachers commented throughout the interviews on the importance of carefully selecting program leaders when introducing school initiatives, of those leaders being sensitive to the needs of and pressures on teachers, and of allowing a program plan to adapt to those needs and pressures.

Future Evaluation

The pre-collected data provided by program staff was very helpful. Continuing to relay such collected data to evaluators in such an organized fashion is invaluable. The template for program staff school visits was organized in a thoughtful manner and made data analysis much easier. One suggestion concerning that system, is to expand the CS2P design question to include refined program goals, so that program staff can comment directly on any advancements observed toward attaining those goals. Additionally, the curriculum/culture question could be expanded and made more specific by listing the ways program staff would like curriculum to be changing (i.e. integration of natural science, use of physical resources, etc.) As a final note on staff collected data, program staff may wish to revise the school visit form based on any strategy or goal changes instituted following this interim evaluation.

In preparation for Phase II of this evaluation, the first step will be for NHPLT staff to determine whether refinements of strategies and goals of the pilot project are warranted, based on the interim evaluation results, and if so, what those refinements entail. Program staff should then communicate any refinements to evaluators, who will help to ensure that the Phase II evaluation approach reflects the most current program model. The paragraph below describes a minor finding that occurred during the analysis leading to this report, which serves as an example of the larger need to continually refine program and evaluation goals and terminology.

During the data analysis stage of this evaluation, the evaluation team found that the two closely related goals of natural science integration versus natural science understanding have met with much different results. The data show a clear increase in natural science integration across grade levels, which was not matched by evidence of comparable increases in teachers' natural science knowledge. This finding emerged only after evaluators realized that they had not been explicitly inquiring about the change in status of natural science knowledge in all cases because they were not making a clear distinction between natural science knowledge and natural science integration in their own understanding. This type of confusion is certainly natural and common in evaluation, and working to refine the program and evaluation goals can help hone and polish future evaluation efforts.

Finally, evaluators and program staff should focus on how to measure any changes in the program from the point that this interim report was produced until the end of Phase II, and evaluators should refine their Phase II inquiry to explicitly target CS2P goals as stated.

LITERATURE CITED

- Chi, B. 2000. Service-learning as “Citizenship” Education: The Promise and the Puzzle. Corporation for National Service.
www.nationalservice.org/research/fellows_reports/2000/chi.pdf
- Heness, S. 2001. K-12 Service-Learning: A Strategy For Rural Community Renewal And Revitalization. Corporation for National Service.
<http://www.etr.org/nsrc/pdfs/fellows/henessbiblio.pdf>
- Hungerford, H. R., and T. Volk. 1990. Changing learner behavior through Environmental education. *The Journal of Environmental Education*, 21(3), p. 8-12.
- Liebermann, J., and L. Hoody. 1998. *Closing the Achievement Gap: using the Environment as an Integrating Context for Learning*. San Diego, CA: State Education and Environment Roundtable.
- Living and learning in rural schools and communities: a report to the Annenburg Rural Challenge*. (1999a). Cambridge, MA: Harvard Graduate School of Education.
- Living and learning in rural schools and communities: lessons from the field*. (1999b). Cambridge, MA: Harvard Graduate School of Education.
- Miles, M. B. and A. M. Huberman. 1994. *An expanded sourcebook: Qualitative data analysis* (2nd ed.). California: Sage.
- Monroe, M. C. (2002). Evaluation's friendly voice: the structured open-ended interview. *Applied Environmental Education and Communication*, 1, 101-106.
- Mueller, A.M. and E. Abrams. 2001. Sense of Place: Informing Environmental Educators. Paper presented at the National Association for Research in Science Teaching, St. Louis Mo. March, 2001.
- Place-based Education Evaluation Collaborative (PEEC) website:
<http://cee.schoolsgogreen.org/PEEC/>
- Putnam, R. 2001. *Bowling Alone: The Collapse and Revival of American Community*. New York: Touchstone books.

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Appendix A: CS2P Logic Model

New Hampshire Project Learning Tree Connecting Schools to People and Place Logic Model

Hypothesis: If we implement place-based education, with a focus on curriculum integration and professional development, we will achieve the following:

- Strengthen teacher knowledge, skills, and strategies to teach all disciplines using the environment.
- Increase student academic achievement and enthusiasm for learning.
- Build stronger connections between a school and people and places in a community.
- Improve student and community stewardship for forests and other natural resources.

Resources/ Inputs	Activities and Strategies	Short Term Outcomes (By the end of year three)	Intermediate Outcomes (By the end of year five)	Long Term Outcomes (By the end of year ten)
Environment-based Curricula	Train faculty in Projects Learning Tree, WET and WILD and make other curriculum materials available.	Teachers and students better understand how the natural systems around the school and in the community operate.	Teachers are experienced with teaching the curriculum within the context of their local environment and community.	Teachers favor an environment-based approach to teaching and use it when designing new units.
Professional Development	Model use of environment-based curricula in the classroom and outdoors. Train faculty in ecological concepts related to grade level curriculum topics. Assist faculty with curriculum integration and facilitate development of thematic units. Facilitate and support faculty collaboration. Identify special natural places for each grade level to study.	Teachers better understand how environment-based education supports curriculum goals.	There is a greater sense of school cohesiveness for curriculum instruction.	
PLT Staff as In-school Consultant	Build sustained relationships between faculty and local landowners and resource professionals. • Model and facilitate use of local expertise. • Institute mechanism for ongoing use of local expertise. • Train, advise and support community volunteers in ways to support school. Train and support faculty in enriching curriculum through community-based projects. Facilitate and support involvement of steering committee.	Teachers are better able to align PLT and other materials with school curriculum goals. The scope and sequence reflects a progression in student skills and knowledge regarding natural science.	Teachers use their grades' adopted special places regularly and visit other nearby public and private lands for academic study. Teachers incorporate service-learning into their curriculum. The schoolyard is enhanced by student projects.	Students are motivated to improve their local community and initiate independent projects.
Pass-through Funding to School	Fund field trips. Fund substitute teachers during planning and professional development time. Acquire classroom materials to support environment-based study. Provide stipends to teachers for summer planning and professional development activities.	The faculty works more collaboratively and there is grade-level cohesiveness.	Community sees local environmental quality improved by student led projects.	The community values the school's role in contributing to community quality.
Fundraising Consultation	Train and advise interested staff in grant writing and fundraising.	Teachers view the outdoors as a natural extension of the classroom and students spend more time outside for academic study.	Students are more aware of interrelationships between community and environment.	
Community Expertise	Support school initiatives by leading classroom lessons, leading field trips, advising community-based projects, and more.	Students take action to improve their schoolyard and special places.	Students and teachers possess a stronger sense of respect and responsibility for the school and adopted special places.	Teachers, students, parents, and community members possess the knowledge, commitment, and skills to be caring stewards of our forests and other natural resources.
Steering Committee	Identify opportunities and support projects for school to address community needs. Provide direction and guidance to the project. Help to host annual celebration. Advise financial decisions.	Community members are more involved in programs and activities at the school. The community is more aware of what is taking place in school.	Students demonstrate an understanding of how ones actions affect the environment.	

Appendix B: CS2P Evaluation Overview 2004-05

Connecting Schools to People and Places Project

Evaluation Methods 2004-2005

May 1, 2004

Lisa Scott, Michael Duffin, George Tremblay

Project evaluation will:

- Evaluate effectiveness of the CS2P model in terms of process (program implementation)
- Evaluate effectiveness of the CS2P model in terms of outcomes (results)
- Provide useful information for project staff, school administrators, and funders to assist with program development, justification and refinement

Evaluators' Roles

- Meet with project staff to develop evaluation plan, and make modifications as needed
- Organization and analysis of pre-existing data
- Data collection including surveys, some site visits to schools, and interviews
- Data analysis
- Report writing (interim report to be completed July 1 and final report to be completed on or around July 15, 2005)
- Supervise student research assistant(s)
- Estimated number of days to complete CS2P evaluation products: 50 total (25/phase)

NHPLT staff Roles in evaluation process

- Develop overall evaluation plan with evaluators
- Provide input throughout the year via meetings, phone and/or email on evaluation direction and appropriateness of instruments
- Liaison between evaluators and school (e.g. setting up interview schedule)
- Share pre-existing data with evaluators
- Collect and share observation notes, project documentation, photos with evaluators as designated
- Assist in administration of surveys, including data entry
- Provide data such as test scores as designated
- Provide incentives for participant participation in evaluation process

Evaluation Strategies for CS2P Evaluation 2004-2005

Area of focus	Strategies	Timing	Evaluation Questions
Phase I	a) Interview participating teachers (1-2 day site visit)	6/1-6/4	<ul style="list-style-type: none"> • <i>Set of questions focused on input of resources by PLT staff</i> • <i>Set of questions focused on structure, efficiency, and effectiveness of monthly meetings</i> • <i>Set of questions focused on use of Beth's time/expertise at the school</i>
	b) Utilize any pre-existing data (as available) to support interim report conclusions	4/26-7/1	
	c) Monitor existing system for NHPLT staff to record their monthly observations on program processes and outcomes	4/26-7/1	
Phase II	d) Observe 1-2 monthly meetings	Fall '04	<ul style="list-style-type: none"> • <i>Set of questions focused on changes to curriculum development as a result of CS2P program</i> • <i>Set of questions focused on changes to teacher practice as a result of CS2P program</i> • <i>Set of questions focused on exploring the impacts of program refinements resulting from Phase I</i>
	e) Use pre-existing data to establish baseline data as relevant to Phase II questions	Fall '04	
	f) Teacher/school staff/NHPLT staff interviews (1-2 day site visit)	Spring '05	
	g) Teacher surveys	Spring '05	
	h) Collect samples of student work to reflect incorporation of natural science into the curriculum	2004-2005 School Year	
	i) Revision/use of supply sheets to monitor use of kits, school supplies, etc.? (Contingent on successful implementation of this tracking system)	2004-2005 School Year	

Appendix C: Interview Guide

Connecting Schools to People and Places Project

Phase I Teacher Interview Questions

May 19, 2004

Lisa Scott, Michael Duffin, George Tremblay

Introduction

- Explain who I am and confidentiality piece (ie. we may use quotes, however, no quotes will be directly attributed to you; only the evaluation team will see the full transcripts; we are looking for themes and patterns)
- Can I tape record the interview?
Name and position at school?
- Overview: Interview will cover three main areas – input of resources by PLT staff, monthly meetings, and Beth’s time at Woodsville. I will first ask questions covering those areas broadly and then, depending on time, ask more specific questions about those areas.

Starting questions

- How would you describe the CS2P program?
- What kinds of support do PLT staff offer teachers to help institute CS2P and which do you find most helpful?
Follow-up: In the past year PLT has acquired resources such as books, classroom supplies, and school-wide supplies; facilitated monthly meetings and summer planning meetings; and scheduled guest speakers from the community. Which of these resources and forms of support have you utilized and found most helpful?
- What is your opinion of the monthly meetings?
- How could the structure of monthly meetings be changed to support teachers more effectively?
- When Beth comes to the school, how can she best support teachers?
- Overall, how could the PLT staff support teachers more effectively?
- In the time since CS2P has been introduced to Woodsville, have you seen teachers spend more, less, or the same amount of time on natural science? Do you think that teachers are using the school grounds and local places more, less or the same? What about involvement of community members... more, less, or the same?

Follow-up questions

Input of resources by PLT staff

- Are you doing anything differently as a result of support or resources from PLT, and if so, why?
- What 1 or 2 forms of support or resources have not yet been offered by PLT that should be?

Monthly meetings (ie. structure, efficiency, and effectiveness)

- What seems to be the goal of the monthly meetings?
- What should be the goal of the monthly meetings?
- In what ways have the monthly meetings affected teacher practice?
- What are your thoughts on the content training provided at monthly meetings? What additional content training could be provided that would prove useful to you? Is it more helpful to have content training or open planning time? Why?

NHPLT staff member's time at the school

- How would you describe the availability of NHPLT staff when she comes to Woodsville?
- What are your thoughts on the system used to meet with Beth when she visits the school? How could that system be improved?
- NHPLT staff is at the school 2 times per month. Should she be there more?

Wrap-up Question

- Any other advice you have for improving the CS2P program, or anything else you'd like to share?

