



Bronx Youth Urban Forestry Empowerment Program Evaluation (BYUFEP)

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Program Profile	
Program Description:	BYUFEP is a paid summer internship offered by Trees NY (www.treesny.org) to underserved high school students in the Bronx, NY. Through hands-on activities students learn urban forestry skills including: tree care, tree identification, tree pit gardening, tree inventory, parkland habitat restoration, and outdoor recreational activities. The program explores urban forestry in a variety of urban outdoor settings from a public housing development to regional open spaces.
Program Goals:	The BYUFEP is designed to enhance academic and work readiness skills (reading, critical thinking, problem solving) and to empower students to be stewards of the urban environment.
Program Funding:	US Forest Service More Kids in the Woods Grant: MKIW is challenge-grant program from the USFS to support programs that help students get outside. Grants range from \$5,000-50,000. The 2009 application link can be found at the below link: http://actrees.org/files/Funding/kiw09_details.pdf
Program Links:	http://www.nrs.fs.fed.us/nyc/focus/environmental_literacy/kids_in_the_woods
Evaluation Profile	
Evaluation Goals & Questions:	<p>Evaluation Goal: To understand the impact of the program on participants in terms of increased environmental awareness, attitudes toward the environment, stewardship behaviors and general program satisfaction.</p> <p>Evaluation Questions: Program impact on participants was measured via pre and post test questionnaires, weekly essays, and interviews with adult supervisors. The pre and post tests included a series of short answer questions about environmental knowledge, students' comfort levels in outdoor settings and a concept map in which students diagram urban forestry issues. Some of these questions included Likert scales which were developed to assess changes in environmentally responsible behaviors and to track evolution of feelings of self-efficacy and self confidence from the beginning to the end of the program. Several questions contain charts and diagrams that offered students different ways to communicate what they had learned. The original set of questions given to students may be found the BYUFEP Evaluation attached to this file. http://www.nrs.fs.fed.us/nyc/local-resources/downloads/BYUFEP_evaluation.pdf In the evaluation report adult interview questions are not provided, but the results are described.</p> <p>Evaluation was conducted by a US Forest Service evaluator.</p>
Evaluation Methods:	The evaluation drew on information gathered from participants, the program supervisor and the evaluator. This multi-layered approach is a particularly effective way to assess program impact. Participant responses were gathered from pre and post program questionnaires and weekly public essays. The supervisor provided periodic interviews about changes in student behavior, and a NRS (Northern Research Station; a USFS district) technician, who

	<p>periodically worked with the program on technical projects and made periodic observations. The evaluator also listened to student’s final presentations.</p> <p>Weekly Public Essays: Program participants wrote weekly essays responding to specific questions. The report describes the first and final weekly essays. The first essay asked students to first describe what they like and disliked about the program; the second asked if the program helped students meet their goals. Essays were analyzed by clustering into common themes that included liking hands-on activities, increased environmental appreciation and an interest in doing something for the environment in the future.</p> <p>Pre-Post Program Questionnaire: The pre/post program questionnaire included short answer questions about NYC natural resources, connections between urban and rural ecological systems and green careers. Some questions asked students to draw a concept map to show their understanding of relationships between the urban forest and other issues. The concept maps were included as a way to assess different types of learning styles. These types of questions assessed student knowledge about the urban forest and related systems.</p> <p>Other questions targeted student attitudes about the urban environment asking students what they liked and disliked about being outdoors. Self-confidence was assessed through Likert scaled questions about students’ ability to make changes in their environment. A similar scale was used to ask students about stewardship behaviors that they participated in before the program and their intent to do so after the program.</p> <p>Supervisor and NRS Technician Observations: The evaluator interviewed the program supervisor about the overall success and challenges of the program. These discussions focused on program delivery including issues of supervision, logistical and programmatic issues. The NRS research technician’s interview focused on how students had incorporated “environmental and tree-related” vocabulary in their everyday conversations. He also noted a general change in attitude over the summer as students became confident enough to work independently and with enthusiasm.</p>
Instruments:	A partial set of evaluation instruments is available in the report. They include the pre and post test questionnaires and public essay questions. Interview questions asked of the supervisor and NFS technician are not included.
How were results used?	<p>In its second year, the program was scaled back due to funding constraints, as the partners did not secure More Kids in the Wood Funding. For the third year, Trees NY applied for MKIW funding again, specifically taking into account recommendations from the evaluation to improve the program.</p> <p>Staffing and Program Support Increased: The evaluation noted logistical difficulties of having only one full time supervisor and strongly recommended additional staffing for the program. Additionally, basic needs like a regular meeting site and easy access to working technology were noted and included as a part of planned program improvements.</p> <p>Curricular Changes: One goal of NFS educational programming is to help students understand ecological systems, natural resource management and connections between rural and urban ecological systems. The evaluation noted that while students’ understanding of tree identification and health improved, the pre and post test did not show significant changes in knowledge and understanding ecosystem system interaction. BYUFEP plans to improve its curriculum to include these areas of study as a part of program improvement. The evaluation also recommended a stronger curriculum to make sure students were “meaningfully engaged at all times”. The new curriculum combined with better staffing and access to equipment should address these concerns.</p>
Evaluation Cost:	This evaluation was part of a larger USFS evaluation project exploring the impact of their urban environmental education programs. The USFS project gave program partners, like Trees NY who facilitated BYUFEP, a grant of \$5,000 to participate in the evaluation. USFS Northern Research Station NYC Urban Field Station researchers developed the logic model and evaluation tools, conducted the evaluation analysis and wrote the final report.
Evaluation Insights:	<p>What worked well?</p> <p>The evaluation was designed in conjunction with Trees NY staff which helped make it comprehensive and appropriate to participants’ experience. The combination of question types – short answer, Likert scale and diagram drawings –combined with longer essays and</p>

	<p>supervisor observations gave an in-depth picture of the program and its impact.</p> <p>What were important evaluation “lessons learned”? The multilayered evaluation approach was a key component to the depth and quality of this evaluation. Changes in student knowledge about urban ecology, feelings toward their environment and their intent to act on its behalf were supported by supervisory observations. Additionally, NFS staff involved in the project added qualitative assessment that also supported changes in student behavior and knowledge.</p> <p>As noted above, the creation of the evaluation tools in collaboration with program staff, helped build a strong evaluation, while creating an effective feedback and implementation process following recommendations made after the evaluation. Unfortunately, while the early design of the evaluation was created collaboratively, staff were not able to give feedback on later stages of evaluation or analysis due to staffing changes and other management pressures. Nevertheless, staff and evaluators felt the collaborative process was an effective way to create a focused survey and evaluation.</p> <p>What could have been done differently? The evaluation gave a good overall picture of the program’s impact on students by including information about several areas of interest to the NFS --environmental knowledge, green career knowledge, comfort in the outdoors, behavior change, stewardship etc. One area of interest was that of stewardship behavior and the intent to act upon the environment. Some minimal follow up and contact with students following the summer experience could give more insight into the impact of the program in this area. A short follow up email asking students what stewardship activities they have participated in since the program could assess this. The evaluation suggested that additional connectivity to school year programs could support students continued interest in stewardship activities. A simple follow up questionnaire could remind students of their summer experience and include opportunities for them to engage in further stewardship activities.</p>
Experience with MEERA	<p>How was MEERA used to conduct the evaluation? I looked at sample evaluations online, went through the step by step guides, and used its advice--particularly in constructing a logic model.</p> <p>What was helpful about using MEERA to conduct the evaluation? The step-by-step guides, the database of prior evaluations, and the links to outside resources were all useful.</p> <p>What recommendations would you have for others who are considering using MEERA to evaluate their programs? Take the time to seek out prior evaluations and to follow the links to external resources -- these are invaluable.</p>
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