



Environmental Education in Botanic Gardens: Exploring Brooklyn Botanic Garden's Project Green Reach

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| Program Profile | |
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| Program Description: | The Brooklyn Botanic Garden's Project Green Reach (PGR) Summer Program, Junior Botanist Summer Adventures, is a hands-on, outdoor education program. Resulting from a partnership between the Brooklyn Botanic Gardens and Brooklyn Title I schools, PGR has provided outdoor lessons and activities to urban students and teachers since 1990. There are two components to PGR, a school-year program and the summer program, Junior Botanist Summer Adventures. The school-year program is available to children attending Title I schools in grades K-8. The summer program is only available to students in grades 4-8 that have already completed the school-year program. Hands-on, inquiry-based learning is used in the youth teaching garden to encourage science education and environmental awareness among students from challenging home and school environments. |
| Program Goals: | The Project Green Reach (PGR) Summer Program, Junior Botanist Summer Adventures, targets children in 4 th to 8 th grade from Brooklyn's Title I schools and is designed to eliminate barriers that keep students from participating in the summer program, such as funding and transportation. The program aims to promote science education and environmental awareness. |
| Program Funding: | In 2008, the Brooklyn Botanic Garden's funding came from the following sources: 29% government, 26% contributions, 22% other earned income, 8% investment income, 8% admissions, 7% membership. |
| Program Links: | http://www.bbg.org/learn/teachers/ |
| Evaluation Profile | |
| Evaluation Goals & Questions: | The goals of the Junior Botanist Summer Adventures program evaluation were to investigate the long-term influence of hands-on gardening programs on urban youth, to document the program as a model for informal science learning and plant-based education, and to add to the qualitative research literature and general understanding of children's gardening and public horticulture. |
| Evaluation Methods: | <p>The program evaluation was conducted within the social constructivist framework and on a small representative sample of participants. Researchers used triangulation, or three methods of collecting data, which included observation, document review, and interviews.</p> <p>Researchers conducted field observations for three days during the fourth week of the six-week summer program (two 6.5-hour observations were on the first and third days).</p> <p>Past program documents, records, and photographs were also collected, analyzed for authenticity, and catalogued. These included planning meeting notes, annual reports, articles and publications about the program, classroom activity sheets, and student work.</p> <p>Informal interviews were conducted with the program coordinator and summer program interns to gain insight into the history, organization, and perceived significance of the program. Formal interviews were conducted with four program alumni and one former staff member to assess the long-term effects of the program. Selected interviewees were over 18</p> |

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| | <p>years of age and had participated in the program in the early 1990's. It was assumed that they could best speak to these long-term effects. Interview guides, developed from site observations and program research, were used to prompt participants in recalling their experiences. For analysis, interviews and researcher notes were transcribed.</p> <p>During data analysis, common topics from the transcribed interviews were coded and compared against observation and document analysis to identify the common themes of participants' experiences.</p> |
| Instruments: | A complete set of evaluation instruments is available in the report. |
| How were results used? | The results of this evaluation have not yet been utilized by Brooklyn Botanic Gardens (BBG). The BBG contact indicated that they currently lacked the staffing resources to fully implement the study, but that the recommendations do have the potential to help the program, as it is continually evolving. The common themes that emerged from participants' experiences can be helpful for demonstrating the positive effect to potential funders. |
| Evaluation Cost: | Costs totaled approximately \$4,000-5,000. This included the researcher's stipend, travel costs to Brooklyn, long distance phone calls, and interview transcription fees. |
| Evaluation Insights: | <p>What worked well?</p> <ul style="list-style-type: none"> Working with a group of collaborators from a variety of disciplines provided a wide range of expertise and viewpoints from both qualitative and quantitative research backgrounds. The evaluator came from outside the organization, allowing her to have an unbiased, objective view and to analyze the program in a way that program staff may not have done. It was possible to modify the interview questions for this evaluation from two previous master's theses done on the program. The positive program impacts that emerged from the evaluation can be useful when applying for funding. <p>What were important evaluation "lessons learned"?</p> <ul style="list-style-type: none"> At the time of the evaluation, there was a shortage of research done on the effects of gardening on urban youth, so finding supporting literature was difficult. The evaluator found that qualitative data can be more challenging than quantitative data to explain and justify to others in the field. Qualitative data doesn't allow for statistical analysis and so can be difficult defend to researchers accustomed to dealing with empirical data. A lack of reliable contact information, due to the transient nature of the participant population, made contacting alumni difficult. As a result, compiling a large study population was not feasible. <p>What could have been done differently?</p> <ul style="list-style-type: none"> The evaluator had limited time on site at Brooklyn Botanic Garden and additional time may have yielded further useful information about the program. A follow-up with study participants after the interviews were transcribed could have proved valuable in clarifying their thoughts on the program's effects. Although perhaps not feasible for this evaluation, observing the program during the school year may have yielded a larger participant sample size and further insight into the program. During the school year, teachers' input on the impacts of the program could have also been evaluated. |
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