Emergent Learning Opportunities in an Inner-City Youth Gardening Program

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Program Profile	
Program Description:	City Farmers is an inner-city youth program established in 1994 through the sponsorship of 4-H. The program is open to youth from all backgrounds to engage in gardening, learn about plant science, and hone entrepreneurial skills. Youth meet three mornings a week for eight consecutive weeks during the summer. The eight weeks are divided into 2-week "activity settings," each focusing on a different aspect of gardening in the context of a market economy. The 2-week cycles include: (a) nurturing, (b) harvesting, (c) marketing, and (d) special projects. During the nurturing cycle, youth learn to prepare soil for planting, plant seeds, transplant seedlings, and help plants grow through proper watering and weeding. In the harvesting cycle, youth are taught how to identify, harvest, and prepare crops for market. During the marketing cycle, youth contact local businesses interested in the program's produce, fill orders, and develop marketing skills to sell their goods at a local farmers market and directly to businesses. During the special project cycle, the youth participate in a variety of program improvement projects such as planting trees or maintaining paths on site.
Program Goals:	The program's primary intent is to provide inner-city youth with a meaningful activity to be engaged in during the months of summer vacation. The program was tailored by 4-H to serve middle school aged inner-city children who are at risk for dropping out of school and who have relatively few other extracurricular activities available to them. Additional goals of the program include teaching youth about plant science, entrepreneurship, and team skills.
Program Funding:	4-H Club
Program Links:	http://www.denvergov.org/Extension/4H/YouthDevelopment/4H/YouthDevelopment1/tabid/386955/Default.aspx
Evaluation Profile	
Evaluation Goals & Questions:	The main goal of this evaluation was to investigate how informal, experiential education programs, whose primary goal is not to teach science, can lead to meaningful science learning for participants. The potential for gardening programs to be an effective tool within this framework is addressed in this article.
Evaluation Methods:	This evaluation used a qualitative case study design guided by an ethnographically informed discourse analysis. Data collection methods included video taping (transcribed verbatim), field notes, and interviews.
Evaluation Instruments:	Because this study took the form of an ethnographic, qualitative case study, there were no a priori evaluation instruments.
How were results	The results of the City Farmer's summer program evaluation were distributed to 4-H clubs as

used?	well as to a variety of academic journals. In subsequent years of the program, changes were implemented based on advice obtained from the evaluation. For example, program participants were able to plant individual garden plots and tend to their own vegetables throughout and beyond the time span of the eight week program.
Evaluation Cost:	Grants in the amount of $1000 and an additional $200-300 were awarded to the evaluator. These grants covered the cost of interview transcription, tapes, and other video equipment. The video camera and tape recorder used were borrowed from the university the evaluator was attending at the time. Costs not covered by grants included travel costs and computer software for data analysis.
Evaluation Insights:	**What worked well?** Interviews worked well with youth to obtain pertinent information about the program's success. The evaluator also felt that being personally involved in the program as she evaluated it helped her gain greater insights into the strengths and weaknesses of the program. **What were the important evaluation "lessons learned"?** The evaluator learned that determining whether students develop science skills in the context of a non-formal educational setting is very difficult. She found that it is important to develop pertinent evaluation questions before beginning an evaluation and to be focused on finding answers to those questions. However, it is also important to be open to learning unexpected things. The evaluator suggests that using the program's participating youth to provide direct feedback about the success of the program could prove useful in future evaluations. **What could have been done differently?** The evaluator would have liked to have surveyed the program participants about their attitudes toward nature and science before the program, as well as about their levels of activity in both of these realms to be able to better understand the effect the program had on these participants. She also felt that youth did not respond well to providing information through non-interactive data collection tools such as questionnaires; she felt that using interactive tools like focus groups to obtain information might have been more useful in this particular setting.
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