



Growing the Good with OSU Urban GEMS

By Deanna Wilkinson, Ph.D., Tiffany Groce, Frederick LaMarr, Tijuana Russell, Cecil Brown, Jerry Saunders, Bob Leighty, Megan Beaver, Nasir Groce, Sanyika March, Jalen Payne, and Jamal Sanfo



Abstract

Who knew that you could grow healthy fresh food in basement of a church, a middle school science room, in a middle school cafeteria, a K-8 school counselor's office, an elementary school hallway, an office hallway, a university cultural center, a behavioral health and wellness center, a business association's storefront, or a household kitchen? Urban GEMS youth know. The USDA, Aetna Foundation, and OSU Connect and Collaborate invested in the idea allowing it to grow. Urban GEMS youth also know that the program aims to grow them as well --into leaders, entrepreneurs, scientists, activists, and scholars. This poster highlights the partnerships and processes that have allowed Urban GEMS to be established and to be celebrated as an award-winning program in two short years.

Project Overview

Investing in vulnerable youth is a social and economic imperative in many urban communities. Many of the nation's urban youth find themselves in communities lacking resources and opportunities for healthy living -- access to quality schools, health care systems, safe and secure housing, low-cost nutritious foods, and employment opportunities. Urban GEMS (Gardening Entrepreneurs Motivating Sustainability) employs cutting-edge food production technology to grow healthy foods while promoting healthy eating in urban neighborhoods characterized as food deserts. This poster focuses on the role of community partnerships to establish and expand Urban GEMS in just two years. More than a dozen organizations have been involved as partners to support and help build Urban GEMS. For example, RHH4L has been a founding partner allowing OSU to place innovative Tower Gardens in the community center to engage youth and their families in the education program. The OSU and RHH4L staff share insights on how they utilize their community connections to recruit and retain participants bringing cultural understanding thus enhancing our ability to deliver reality pedagogy. The Millennium Community School under the direction of Tijuana Russell has allowed OSU Urban GEMS to embed the program in the 8th grade curriculum. The poster concludes with the presentation of preliminary findings from pre-post test results of our first cohort of youth participants.

Project Objectives

The desired long-term outcomes for Urban GEMS are to:

1. Increase teen engagement in school/education through STEM and experiential learning program activities.
2. Increase nutritional knowledge to improve healthy eating and decrease unhealthy eating habits among participants.
3. Increase community involvement in changing patterns of food consumption.
4. Prepare young people for employment and/or higher education.

The measurable goals and objectives of Urban GEMS are to increase student engagement through project-based learning and improve health-related knowledge, attitudes and behaviors among participating youths.

We aim to increase the youths' fresh fruit and vegetable consumption by 50 percent during the program. Students are building competencies in youth leadership, teamwork, project development, project management, microbusiness operations, professionalism, event planning, and internet and social media marketing. They will also learn more about food safety, product development, branding, financial asset management, engineering solutions such as alternative, more energy efficient lighting systems, and connecting with career professionals.

As the youth are engaged in new activities and experiences, they will be asked to share their knowledge with their parents, guardians and other community adults to spread awareness of the benefits of healthy habits. Once youth complete 16 weeks of Urban GEMS at one of the implementation sites they are eligible to participate in our Urban GEMS Youth Work internship program funded by the Aetna Foundation's Cultivating Healthy Communities initiative and an OSU Connect and Collaborate grant. Our first group of young people are currently in their fourth week of eight weeks working their way through a series of projects that bring out their talents and interests as they engage in new experiences and discover new opportunities for their lives.

Adults' Perspectives on Urban GEMS

Tiffany Groce

OSU Project Coordinator



I got involved with Urban GEMS simply because I have a passion for Youth, and want to leave a positive imprint on their lives. We are teaching the kids how to be healthy as well as become extraordinary leaders in their community. As a strong community advocate for youth I can be effective in recruiting and motivating young people because of my life experiences. Youth quickly come to know I care about them. My favorite moment, so far, was the Salad-in-a-Jar Party we held for the youth and families during the filming of the BTN Live Big feature on Urban GEMS. The biggest challenge we have faced has been recruiting young men.

Tijuana Russell, Director Millennium Community School Implementation Site



My interest in hosting Urban GEMS at the Millennium Community School (MCS) came when I first saw a Tower Garden at APDS Inc. At MCS, we are pushing our students to academic excellence with opportunities to learn and utilize technology in a variety of ways. Urban GEMS enhances this experience for our eighth graders. All MCS students are benefiting from the infusion of living food gardens inside our building. It is a joy to listen to students comments about eating directly from the towers. My students are enjoying the program which offers them exposure to wellness information, real life applications with food, and career exploration experiences. I am still impressed by how well the program team was able to offer the Urban GEMS "Hands on" curriculum as a part of the students' weekly school schedule. This ensured that all student could be enriched by the opportunity. The partnership with OSU has great potential to grow as the years proceed. Thank you all for your dedication to our youth and future leaders being developed by programs such as this one at Millennium Community School.

Jerry Saunders, CEO APDS Behavioral Healthcare Partner

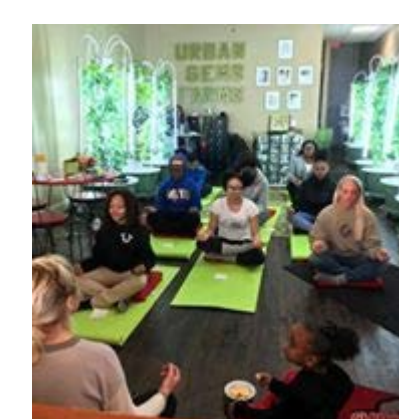


APDS is located and serves in communities considered "food deserts." At APDS we appreciate and understand the critical importance of the Urban GEMS program providing options for immediate and long term solutions to meet the needs of families and communities to have fresh and nutritious food. In addition, it provides an opportunity for its participants to learn and experience entrepreneurship first hand.

We have several Urban GEMS towers located and operating during our 3-month summer day camp which serves 120 youth 6 to 12 years of age. They are learning the importance of fresh food, gardening, teamwork, and entrepreneurship. We have a tower in our home office and our staff and family members are enjoying fresh vegetables on an ongoing basis.

In the next 3 to 5 years, I would like to see the number of towers multiply and increase the number of communities that Urban GEMS operates in nationwide. For Urban GEMS to be a self-sufficient profitable organization.

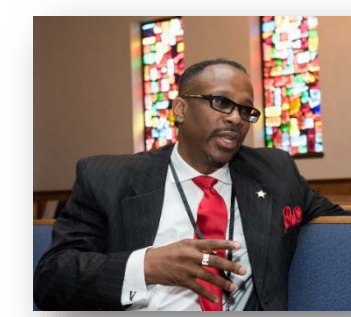
Megan Beaver Graduate Student OSU EHE



I got involved in Urban GEMS because I was hoping to immerse myself in research that was impactful. This program has left a tremendous impression on the youth and family members of those involved. I have witnessed it transform students' knowledge and attitude towards healthy eating, community engagement, and basic entrepreneurial skills. It is most rewarding when you see a child who has previously been disengaged change their attitude and involvement in the classroom and become an active participant. Classroom management is challenging some days!

Pastor Frederick V. LaMarr

Reaching Higher Heights 4-Life
Implementation Site



I believe people are matched together because of Passion and Purpose which lead to my collaboration with the innovative Inner City Work of Dr. Deanna Wilkinson. Like the visionary George W. Carver, Urban GEMS is impacting the lives of youth teaching the fourfold principles of innovation. 1) Growth with healthy eating and living. 2) Entrepreneurship with the business mind of good and services with the product that is grown. 3) Mentoring one another and learning as Iron sharpens iron. 4) Sustainability is possible when combining healthy living, business mindset and effective mentoring. My fondest memory was the Salad-in-a-Jar Party when good education was mixed with good eating and conversation.

Cecil Brown, Dean of Students Millennium Community School Implementation Site



I got involved with the Urban GEMS because I believe in promoting healthy eating, and that I have a responsibility to introduce my students to entrepreneurship. With the Urban GEMS I get the best of both worlds. Students not only learn about healthy living, they get to be involved in learning how to sell a product that is healthy.

The effect of Urban GEMS varies throughout our eighth grade class, but most of the students are attempting to learn, and with each class I am noticing that more are getting involved. My favorite moment has not happened yet, I am looking forward to the looks on the students' faces when they see the flowers that will be breaking through the earth in late winter, that we planted out in the gardens in the back of the school. I am hoping that will be a breakthrough moment. When our students, see the life emerging that they had a hand in helping come to life. The biggest challenge is getting 100% participation. I believe that the skills that our students receive from this program are important and I just want all of them to get and give as much to the program as they can.

Bob Leighty

Executive Director
Parsons Area Merchant's Assoc.



I first became aware of Urban GEMS a couple years ago when I saw three brightly lit, lush produce towers in the basement of Family Missionary Baptist Church. How cool! What was this project about? It turned out that Dr. D. was looking for another program space on the Southside. We found our opportunity to collaborate and "plant" Urban GEMS on Parsons through the OSU Connect & Collaborate grant program. This is our chance to grow a new partnership with Urban GEMS and PAMA, for PAMA to connect the Urban GEMS youth to local business experts, to expand the market for Urban GEMS produce, and to help these young entrepreneurs learn and partner and succeed.

Dr. Deanna Wilkinson

Principal Investigator
OSU Associate Professor



I started Urban GEMS to make a positive difference in the lives of inner city youth who are exposed to community poverty and violence. Urban GEMS is bringing the community together to provide new opportunities for teens. The program is designed to produce positive impacts on participants. My favorite moment happened last Thursday when the MCS boys enthusiastically played a nutrition quiz game during Urban GEMS and our interns got to experience a yoga mindfulness lesson --both lead by graduate student Megan. This project is a great opportunity to translate research to practice through our ongoing evaluation efforts. Growing the program at the right pace and maintaining balance with my other faculty responsibilities are challenges I face.

Youths' Perspectives on Urban GEMS

Nasir Groce

Youth Leadership Awardee
Urban GEM @ RHH4L



I like Urban GEMS because it is a fun program that is changing the Southside community through gardening. I never thought of that being a way to change lives but it is having a tremendous impact. Urban GEMS is teaching me how to grow my own food and how to use my resources.

Urban GEMS is also preparing me for life because it has taught me how to cook things like stir fry, blend smoothies and ways to prepare lots of other foods. My favorite activity, so far, is the advisory board meetings because I get to meet new and important people.

Sanyika March

Urban GEM student @MCS



The thing that I like most about Urban GEMS is that I get to watch the food grow and take care of the plants. Also I enjoy working with plants 1 on 1. Urban GEMS is teaching me to build trust with others, to run a business, practice public speaking and having a proper attitude for success when working with others.

My favorite activity is taking care of the plants and learning more about how to keep them alive without going outside. My goal is to help get more people involved in building a stronger Urban GEMS community.

Jalen Payne

Urban GEM student @MCS



I like the work and learning about plants. I like that the teachers are nice and are dedicated to the project. I am learning how to take care of plants and harvest the food. I love making the smoothies, especially when we use the plants from the tower. The biggest challenge has been keeping track of the lights and making sure they don't go out. We have two systems now --LED lights and fluorescent T-5 lights. The T-5 bulbs seem to burn out a lot. The plants do not grow well if the lights are burned out. I volunteered to be the lighting specialist because it interests me.

Jamal Sanfo

Urban GEM student @MCS



Two things I like about Urban GEMS are: 1) I love making the nutritious smoothies during the class, and 2) I like learning how to read dietary labels on the food that I eat. In Urban GEMS I am learning to keep track of what I am eating and the benefits of healthy foods. I am learning a lot about sugars and fats, and the impact they have on my body. My favorite activity is taking care of the tower gardens. I enjoy the process of harvesting especially. The biggest challenge is making sure that plants stay alive and healthy.

Preliminary Evaluation Results

Thirty-two cohort one participants completed pre- and post-test surveys enabling the team to examine within individual change over time on key measures. Our pilot sample was 100% African American, 12.3 years old on average (range 8-18), 68.4% female, and 94.7% receiving free and reduced lunch. The survey instrument was organized into 14 sections. The reliability coefficients for study multi-item scales are within the acceptable range (displayed in Table 1).

Findings (pre-test to post-test)

- 11% increase in # of youth who eat 2 or more fruit each day
- 51.7% increased fruit consumption
- 62% plan to keep eating fruit
- 9% increase in # of youth who eat 3 or more vegetables each day
- 51.7% increased veggie consumption
- 55.1% plan to keep eating veggies
- 44.8% improved knowledge of healthy eating
- 51.7% plan to use new cooking skills

Table 1.

Measurement Scale Names	Time 1	Time 2	Alpha Coefficients
Social Consciousness Scale	0.888	0.892	
Decision Making Scale	0.757	0.848	
Problem Solving Scale	0.728	0.814	
Empathy Scale	0.891	0.865	
Science Aptitude Scale	0.952	0.917	
Positive Youth Leadership	0.921	0.922	
Gift Scale	0.795	0.884	
Non-academic Barriers Scale	0.838	0.948	
Career/Workforce Readiness	0.811	0.917	

Table 2.

Measures	Time 1		Time 2		t-statistic
	Mean	SD	Mean	SD	
How hard would it be for you to drink less soda?	1.57	1.30	1.30	1.30	t=2.80**
Grit Scale Score	2.98	3.18	3.18	3.18	t=2.28*
Youth Leadership Scale	3.1	3.26	3.26	3.26	t=0.69

* = p-value less than .05, ** = p-value less than .01



These early results from our first Cohort have been useful in refining our curriculum and strengthening our commitment to sustainable change with youth leading the process. Cohort 2 is currently in engaged in program implementation which consists of 2-3 hours of hands-on learning each week for 32 weeks. Our new Urban GEMS farm on Parsons is thriving with towers in full production and interns steadily learning the ropes of food production and small business start-up. The Urban GEMS staff has worked very hard to get to know the students as is necessary for effective educational practice. Each facet of Urban GEMS is taking shape. We are encouraged by the first cohort's progress measured through survey data as well as our teacher reflections on student engagement and academic performance. School and community support for Urban GEMS has been outstanding in helping us to build a new program that is being recognized for its promise even in its first years of life.



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