

Agnese Nelms Haury

Program in Environment and Social Justice

Community & School Garden Program (CSGP)

The University of Arizona's Community and School Garden Program (CSGP) connects Tucson educators and community organizations with university students, who work as interns in schools and communities, supporting the installation, development and maintenance of garden programs. Through a required course, they also learn about food justice, sustainable agriculture, curriculum development, and community engagement.

College College of Social and Behavioral Sciences

Associated courses

AIS 497F/597F American Indian Studies, ENVS 497F/597F Environmental Science, GEOG 497F/597F Geography and Development, HPS 497F Public Health, LAS 497F/597F Latin American Studies, NSC 497F/597F Nutrition, PLS 497F/597F Plant Science, STCH 497F/597F Science Teaching, TLS 497F Teaching, Learning and Sociocultural Studies, TTE 597F Teaching and Teacher Education

Credit Yes

Project initiated by

An Arizona undergraduate intern, Arizona faculty member, high school teacher, high school class, and the Community Food Bank of Southern Arizona collaborate to support a school garden at Project More Charter High School (2009)

Faculty and/or Advisor(s)

Director- Sallie Marston, Professor of Geography & Development

Associate Director/Arizona & TUSD Liaison- Moses Thompson

Associate Directory- Greg Barron-Gafford, Associate Professor of Geography & Development



Student Engagement
& Career Development

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Community partner(s)

Tucson Unified School District, Community Food Bank of Southern Arizona, Tucson Audubon Society, Arizona Sonora Desert Museum, National Park Service, Native Seeds/SEARCH, Garden Kitchen, Mission Garden, Tucson Village Farm

University partner(s)

Biosphere 2, Women in Science & Engineering, College of Science, College of Social & Behavioral Sciences

of students reached each year

60

Funding

Colleges of Science, Social and Behavioral Sciences, the Graduate College and the School of Geography and Development, and foundations and private donors

Evaluation

Formal and informal



Student Engagement
& Career Development

A Place of Consequence: Learning to Listen and Grow in a School Garden

By Kimi Eisele

One January morning at Manzo Elementary, two fifth grade students, a brother and sister team, greet nearly a dozen visitors at the front of the school. They lead the visitors to a cistern in the school's inner courtyard. "This collects rainwater," the brother says. "Up to 600 gallons for our gardens."

They point out a chicken tractor, which lets chickens feed off grass on school grounds, and a worm bed where worms turn cafeteria leftovers into rich soil. Then they lead visitors to the gardens, complete with vegetable beds, a chicken coop, a hydroponic growing system connected to a new aquaponic system for raising tilapia.

The student tours happen monthly for visitors to the school garden, which was started in 2006 by Moses Thompson, then the school counselor. Thompson found the garden was a powerful way to engage students in learning and interpersonal connection, particularly students with extra stress and behavioral issues.

"I say it's magical, but it really was. You set two kids who were fighting to work together in the garden, and they're

immediately de-escalated. The gardens were really powerful as a counseling tool," Thompson says. And, he adds, they also helped engage children in lessons about agriculture, nutrition, and responsibility.

To support his work in the garden, Thompson began seeking outside interns. Around the same time, the Community Food Bank of Southern Arizona approached Sallie Marston, a professor in the Arizona School of Geography & Development, to initiate a similar internship program for its school gardens. The synchronicity meant university interns were soon supporting teachers and students at Manzo and other schools in garden-based learning.

The garden at Manzo is now the flagship site of the Community & School Garden Program (CSGP), a robust partnership between the University of Arizona and Tucson Unified School District often hailed as one of the best models of community engaged student learning.

"At a fundamental level, the garden makes kids feel good about being at school," Thompson says.

The same might be said of its impact on Arizona students.

Wesley Parks, a neuroscience and cognitive science major, signed up for the CSGP his senior year. He learned a lot about the infrastructure of sustainability—how gardens could be built into communities and schools, he says. But he also learned how to communicate to diverse audiences, from children to administrators to community members. “Early on what hit me was that Tucson was a whole community beyond the bubble of campus. This opened my eyes to people living and working and dying here,” Parks says.

“In class, interns learn the basics of sustainable agriculture and gardening, but also discuss topics such as food security, white privilege, and leading from behind to better prepare them for working in community.”

Each semester up to 60 Arizona “interns” work in nearly 25 garden sites in communities or K-12 schools that serve predominantly low-income residents or students. To participate, Arizona students enroll in a semester-long course, which is cross-listed in 10 different departments, with the Colleges

of Education, Science, Social & Behavioral Sciences, Agriculture and Life Sciences, and Public Health, earning 2 to 6 credits for the 1.5 hours a week of course time combined with between five and 18 hours per week at their assigned garden sites.

In class, interns learn the basics of sustainable agriculture and gardening, but also discuss topics such as food security, white privilege, and leading from behind to better prepare them for working in community, says Marston, who serves as one of the course instructors, along with Thompson and Barron-Gafford. The interns then assist with installing and maintaining the gardens and helping site coordinators and teachers to connect K-12 curricula to these outdoor classrooms.

Places of consequence

At Manzo, the fifth-grade guides lead the visitors to a table of rich brown soil. “Our worm bin,” the girl says, digging to find a worm. Worms break up digested food waste and create better soil, she explains.

The garden also supports an aquaponic system, which combines aquaculture with hydroponics, or water-grown plants. Bacteria breaks down fish excrement into nitrates, which are then used to fertilize plants in the system. The clean water is then

recirculated back into the system.

“This is connected to ancient technology from Tenochtitlan,” Thompson explains. “So, it’s part of cultural education as well.”

Nichole Villa, a neighborhood resident, said the CSGP gave her daughters, Kyasha and Kyana, important exposure to science and to Arizona students during the years they attended Manzo.

“They learned how to harvest and do inventory. They went to Fourth Avenue and sold greens we’d grown,” Villa said.

The Manzo gardeners offer a market of surplus produce to the community on Wednesdays. Food is given for donations only, except for fish and eggs, which are sold. Any additional surplus goes home with interns and kids.

A survivor of Hurricane Katrina, Villa said that experience taught her to think more closely about self-sufficiency. “It brought to our attention the idea of being able to have that resource if a disaster happened. I wanted my kids to be educated and have plenty of knowledge of gardening and be able to grow their own food,” she said.

When the girls started at Manzo, Villa already had a small garden at home and was using vegetables in smoothies. “At school they could do so much more with it, raising fish and chickens. They fell in love with being a part of it.”

Thompson says one of the reasons the program is so successful is because learning happens in a “place of consequence.”

“School garden work is really fragile. It’s underfunded and it’s in this chaotic ecosystem of teacher turnover.”

In gardens, “Things live and die; crops either succeed or fail,” he explains. “The more scientific you are about how you run your garden, and the better you keep records, the more you’ll grow in the next seasons. This is science and math in action. Traditional education really misses the boat on this.”

Thompson now works for the CSGP as a liaison between Tucson Unified School District and the University. He trains interns and teachers, helps raise funds for the program, and continues to support garden maintenance, doing small jobs like fixing irrigation systems or building chicken tractors. “School garden work is really fragile. It’s underfunded and it’s in this chaotic ecosystem of teacher turnover.”

Because of high teacher turnover in many of the CSGP partner schools, the program initiated the Green Academy for teachers

to learn gardening basics and curriculum tie-ins. The Academy now trains 50 classroom teachers a month and offers them professional development credit for participating.

In this way, CSGP emphasizes real-world learning for elementary school students, university students, and teachers alike.

Learning to listen

It’s not uncommon for outside institutions like the University to approach communities with a deficit mindset, Thompson says. The CSGP works actively to counter that through engagement processes that celebrate local assets rather than fixating on deficits.

Early on in the garden, Thompson saw how much the community could offer. As he connected with children in the garden, he’d learn about their families, dads and uncles that worked as plumbers or carpenters, for instance. “At morning drop-off, I’d go to those parents and say, ‘I heard that you’re a plumber.’ Then I’d lean on them for their expertise. They’d help me buy supplies at cost. They’d start hanging around. The kids could feel a sense of pride,” Thompson said. “There are so many skill sets in the neighborhood.”

Arizona interns learn of these assets—and this way of approaching

community engagement—through coursework and hands-on experience.

Rachel Wehr became a CSGP intern during her junior year at Arizona. As an environmental science major, she was interested in engaging K-12 students and wanted to find more meaning in her academic work. “I grew a lot in my interpersonal skills from speaking to new people, especially people with backgrounds different from me,” she says.

After graduating, Wehr worked with the Food Corps program of Americorps and was placed serendipitously with the CSGP. Now she works as part of the CSGP staff, managing the Arizona interns.

Successful community engagement happens in multiple ways. The gardens themselves require a lot of labor, Wehr says, from making sure irrigation systems are functioning to making sure crops are tended to. Interns also help to creating meaningful lessons to co-lead with teachers.

Preparing students to work in community schools is an important part of the process. “We have an assignment called ‘Get to know your site,’ in which interns ask questions about physical space, logistics, demographics of school, teachers they’ll be working with,” Wehr says. Interns also train in working with minors, safety issues, and basic learning levels of elementary students.

Wehr says the most successful interns are consistent in their attendance, respectful and enthusiastic persons on site, and can jump in when they see a need, even if it's outside of their job duties. They also know how to listen, she says.

“To listen to what’s already happening in the community and then building off that work. Because there’s already so much happening, it’s amazing.”

Parks signed up for CSGP because he was looking for opportunities to teach science. As a senior, he figured he’d have a lot to offer the garden and its students. But working in the community challenged some of Parks’ assumptions about academic institutions and his own role as a university student.

“I remember thinking I had to translate the information that I was gaining from the University into something more understandable to the general public. It created that barrier right away,” says Parks.

Learning to listen was one of the most valuable lessons Parks learned through the program. “That’s been a shift and a reframe for me. To listen to what’s already happening in the community

and then building off that work. Because there’s already so much happening, it’s amazing.”

Measuring interns’ progress

Arizona interns in the CSGP are evaluated in a variety of ways throughout the program. To track their progress, Arizona interns complete weekly reports, logging hours, activities, needs and concerns, Wehr says.

Interns are also asked to reflect on their experience. “We ask them how they’ve changed as a result of the project. For example, has their capacity to work collaboratively improved?” Marston says. “Have they gained a capacity to translate things they’ve learned in the classroom to the world? Our job is to help them put their classroom learning to work and see how abstract concepts and ideas can be translated into practice.”

When Wehr was an intern, it was important to reflect on her experiences right away so she wouldn’t forget. She also wished she’d had more language to describe the experience to others, particularly future employers. So this is something she’s built into the program as a staff member, focusing the last class of the semester on how to translate the experience to future employers. “My intention was to get them to talk about it in terms of skills that employers look for. Things like

interpersonal communication, problem solving, leadership.”

Some students also evaluate the program’s impact in schools and communities more formally, Marston said. “We have trained interns to do community-based research. For an extra unit, they meet once a week, and learn how to develop survey questions, approach community, and present results. They also do those interviews and surveys with other interns and the school kids.” Those results have been helpful in leveraging additional funds for the program, she said.

The power of sustained involvement

After a decade of partnership, Marston and Thompson say that one of the prerequisites for meaningful community engagement is time and commitment, which allow for ongoing relationships and trust.

As a university program, Marston says, “You have to prove yourself to every one of those schools. They’ve all experienced something different from the University.”

Arizona interns that establish a consistent presence in the garden help build that trust, she says.

Thompson agrees. “To do a one-off community thing and expect that will have a deep

impact is ridiculous,” Thompson says. “Not even a semester or a year is enough. We need to talk in terms of 5, 10, 20 years.”

Parks, who came into the program as a Arizona student, now works as a Food Corps volunteer, earning a stipend to manage one of the CSGP school gardens. There, he oversees weekly lessons, manages interns, and helps connect teachers to the learning power of the garden.

Parks says he now understands firsthand the challenge of keeping a garden going and how critical school and community buy-in is. “A lot of school garden programs will come in and institute a program for a year and then leave. But if the school doesn’t have internal support, it is at risk of collapsing. In order to sustain these gardens long term, you need a person there long term, someone who’s part of the community.”

Parks is doing his best to build that internal support, advocating for the garden’s longevity by making sure teachers, administrators, and community members get involved. And he’s doing it by putting into practice what he learned as an intern. “It’s been an interesting transition, going from working with the amazing team at Manzo to trying to embody that in my own way here. I’m trying to instill the same values that I learned at Manzo in my interns now.”