

The Role of Urban Agriculture Programs in Increasing Agricultural Career Awareness Among Students



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RATIONALE

While student teaching at Asotin High School educator, I've seen firsthand how experiential learning transforms student engagement. My sister, who teaches in an urban school, has shared how her students are now exploring agricultural careers they previously knew nothing about. These personal insights inspired my investigation into how urban agriculture programs can reshape career perceptions and create opportunities for all students.

Key Ideas:

- Personal connection through family and teaching experience
- Agriculture as a pathway to equity and identity development
- Supports culturally relevant, real-world learning (Esters & Bowen, 2004; Parks, 2022)

INQUIRY QUESTIONS

- How do urban agriculture programs increase awareness of agricultural careers among middle and high school students?
- What strategies and practices within these programs are most effective in supporting urban students in seeing agriculture as a viable, inclusive, and future-ready career field?

WHAT IS URBAN AGRICULTURE?

Urban agriculture is the growing of food and the management of food systems in cities. It includes hydroponics, aquaponics, vertical farms, rooftop gardens, and community-based growing. These methods bring agriculture into schools and communities, especially where land is limited, connecting students to science, sustainability, and food justice (LaCharite, 2016; Diaz et al., 2018).

Key Concepts:

- Agriculture adapted for urban settings
- Includes school gardens, hydroponics, aquaponics, and Veterinarian labs
- Enhances science, nutrition, and sustainability education
- Establishes connections to local food systems (Ober Allen et al., 2008)

HOW CAN URBAN AGRICULTURE PROGRAMS INCREASE CAREER AWARENESS?

Urban ag programs deliver actual, hands-on learning that exposes students to careers of the future. Urban ag programs develop problem-solving, environmental literacy, and leadership—career skills for food system, urban planning, and environmental science careers. Students learn by doing, reinforced by experiential learning theory (Kolb, 1984).

Key Ideas:

- Sparks student interest in future careers
- Develops career awareness through hands-on activities
- Teaches transferable skills: teamwork, leadership, sustainability
- Aligns with experiential learning theory (Meek & Tarlau, 2016; Warner & Washburn, 2009)



Entrance to Point Defiance Park that is used as a resources for the Agriculture Program at the Science and Math Institute (SAMi) in Tacoma, WA

"After immigrating to America I was looking for school clubs related to sustainability since it's my passion and FFA turned out to be one of them."

-Lake Washington High School Student



FFA Members of SAMi teaching about Horse Evaluation during District 2 Jamboree



School Garden at Lake Washington High School

"The way I found out about agriculture and developed an interest in it was through park programs that offered classes about agriculture and had farm animals that I was able to interact with!"

-Lake Washington High School Student



School Greenhouse at Lake Washington High School

RESEARCH

Urban agriculture programs improve student engagement, leadership, and career awareness especially in schools where agriculture isn't traditionally emphasized. Esters and Bowen (2004) found that hands-on experiences help urban students understand diverse ag careers, while Bird et al. (2013) noted these programs build identity and confidence.

School gardens and hydroponics boost academic skills and real-world learning. Graham et al. (2005) and Ratcliffe et al. (2011) showed improvements in science and environmental knowledge. Students using vertical farms to grow food for their schools also build civic responsibility and technical skills (Freight Farms, 2023; FCPS, 2022).

Urban ag connects students to emerging careers in sustainability, food systems, and social change (Krasny & Doyle, 2021; LaCharite, 2016). Meek and Tarlau (2016) emphasize that Critical Food Systems Education empowers students to explore justice-driven roles in food and environmental systems.

Key Takeaways:

- Increases awareness of ag careers (Esters & Bowen, 2004)
- Enhances leadership, STEM learning, and civic skills (Bird et al., 2013; FCPS, 2022)
- Prepares students for careers in sustainability and equity (Meek & Tarlau, 2016)

ACTION

In my future classroom, I plan to implement a hydroponics system and school garden tied to science and sustainability standards. Students will grow and track crops, learn from industry speakers, and share their work with the community. To overcome common challenges—such as limited space, time, or misconceptions about agriculture—I will pursue grants, integrate cross-curricular content, and use inclusive, culturally responsive approaches.

Key Ideas:

- Launch hands-on ag projects (hydroponics + garden)
- Connect to STEM, career pathways, and service
- Use community partnerships and grants for support
- Address misconceptions with inclusive teaching (Conner et al., 2011; Morris & Zidenberg-Cherr, 2002)



Entrance to Agriculture Classroom and Veterinary Lab at SAMi



Pollinator Garden at Lake Washington High School



Multiple hydroponic kits used inside the agriculture classroom at Lake Washington High School

"I found ag initially to improve my gardening and planting skills in the city, but it quickly grew into much more, a supportive community that helped me pursue my dreams and shape my future."

-Lake Washington High School Student