

## Best Practices for Structuring School Gardens

### 1. Best Practices Models for Implementing, Sustaining, and Using Instructional School Gardens in California

by Eric L. Hazzard, Elizabeth Moreno, Deborah L. Beall, and Sheri Zidenberg-Cherr (2011)

[http://ezproxy.library.nyu.edu:2384/S1499404611003745/1-s2.0-S1499404611003745-main.pdf?\\_tid=bc653b18-0337-11e5-8851-00000aacb361&acdnat=1432597542\\_dda4562e03ab7003e1a970141f37fba8](http://ezproxy.library.nyu.edu:2384/S1499404611003745/1-s2.0-S1499404611003745-main.pdf?_tid=bc653b18-0337-11e5-8851-00000aacb361&acdnat=1432597542_dda4562e03ab7003e1a970141f37fba8)

#### Article Details

- The study's aim was to analyze 10 exemplary school gardens in California that were implemented with instruction by volunteers, teachers, or garden coordinators in order to help create models and best practices by which other instructional gardens can be implemented.
- With obesity becoming more prevalent among children (>30% of children ages 6-19 are overweight or obese, which are indicated in BMI measurements as >85<sup>th</sup> and >95<sup>th</sup> percentiles, respectively), it is recommended to increase fruit and vegetable consumption (pg. 409).
- Doing so can be best accomplished in the school environment where children spend most of their days and in which school gardens can be created to provide access to healthier food.
- Authors state that: "Research interventions involving school gardens have demonstrated an increase in taste preference for and improved consumption of fruits or vegetables" and that "school gardens...are useful tools to teach nutrition principles" (pg. 409).
- Data was collected via conducting interviews with "key school members" (or those with direct involvement in garden success such as principles or volunteers) (pg. 410).

#### Study Outcomes

- According to the study, criteria for an "exemplary instructional school garden" as delineated by the California Department of Education (CDE) included:
  1. "Incorporation into the academic structure,
  2. sustainability for a minimum of 2 years for schools that had a school garden before the grant application period,
  3. and known and recognized in the professional school gardening field" (pg. 410)
- The third criteria – recognition in the professional school gardening field – was based on a list of professionals in the school garden field who assessed these garden programs to determine their status.
- Interviewees were asked about the practices used to implement and sustain their school garden and its role in academic instruction (pg. 410).

#### Main Findings

- Key points as outcomes of interviews:
  1. The involvement and collaboration of multiple groups and individuals (pg. 411):
    - Teachers, volunteers, community members, and administrators serve as important components ensuring proper resources, support, and sustainability for the gardens.
      - Need to first create a collaborative committee comprised of (pg. 412):

- School administrators
    - Teachers
    - Volunteers
    - Garden coordinator/Master gardener
  - Creating garden lessons that can be utilized for instruction in the garden:
    - Lessons were obtained through standard textbooks.
    - Some schools' garden-specific curriculum obtained from universities or agricultural education foundation.
    - Suggest utilizing local Cooperative Extension service programs' curriculum.
- 2. Resources were needed and were obtained through funding by (pgs. 410-411):
  - Grants (important to note that they applied not just to garden-specific grants, but others as well, such as math or science grants)
  - Fundraisers
  - Selling garden-grown products
  - Accepting donations
  - Utilizing unwanted resources from organizations
  - Developing partnerships (e.g. with local garden clubs)
- 3. Experienced Leaders (pg. 411):
  - Garden Coordinator: either volunteer or paid, part- or full-time individual who maintains garden premises, provides garden-lessons, and creates student gardening club.
  - Master Gardener: experienced volunteer with background in horticulture who maintains the garden, provides assistance in implementing it, or assists in its implementation.
- Study concludes that “these findings highlight 4 fundamental and interrelated areas of instructional school gardens: people, funds, materials, and instruction” (pg. 412).

## 2. Use of School Gardens in Academic Instruction

by Heather Graham, Deborah Lane Beall, Mary Lussier, Peggy McLaughlin, and Sheri Zidenberg-Cherr (2005)

<http://www.kohalacenter.org/archive/HISGN/pdf/useofschoolgardensinacademicinstruction.pdf>

### Article Details

- Assessing the impacts of gardens in California public schools on academic instruction, increases in fruit and vegetable consumption, and increases in nutritional knowledge through analyzing practices, attitudes, and barriers via questionnaires.
- Gardens were identified as “plants grown in the ground, in raised beds, in pots or in greenhouses in both classrooms or outdoors” (pg. 148).
- Questionnaire asked (pg. 148):
  - If garden was utilized in academic instruction
  - Garden’s purpose
  - Type of garden
  - Individuals responsible for the garden
  - Garden effectiveness
  - Resources used to maintain garden
  - Barriers in having a school garden

### Study Outcomes

- Most common responses (pgs. 148-149):
  - Garden utilized mostly for academic instruction (science and nutritional education), but also for growing produce.
  - Plants and vegetables grown.
  - Teachers, volunteers, and students were the individuals identified most as being responsible for school garden sustenance and maintenance.
  - Principles indicated the most-needed resources as (pg. 149):
    - Funding
    - Staff support
    - Administrative support
    - Time
    - Parent volunteers
    - Garden Coordinator
  - Barriers included limited time; teacher experience, interest in, and knowledge of gardens; lacking gardening curricular materials.

### Main Findings

- Study suggests the following for school garden success:
  - Curriculum materials
  - Teacher and student training in gardens
  - Awareness of resources needed for schools

## RECOMMENDATIONS FOR BEST SCHOOL GARDENING PRACTICES

Main Questions Asked in School Garden Questionnaires	Main Responses	Study Suggestions
<p>1. Purpose of garden:</p> <p>2. Individuals responsible for garden:</p> <p>3. Resources utilized and needed for garden maintenance:</p> <p>4. Barriers encountered:</p>	<p>➤ Academic instruction, growing produce</p> <p>➤ Teachers, parent volunteers, students</p> <p>➤ Funding, staff/administrative/volunteer support, garden coordinator</p> <p>➤ Lack of time, teachers' gardening experience, and gardening curriculum resources</p>	<ul style="list-style-type: none"> <li>● Obtaining curriculum materials</li> <li>● Providing teacher and student garden training</li> <li>● Increasing teacher training in nutritional education</li> <li>● Increasing awareness of resources needed for school garden implementation</li> </ul>