Learning from the Ground Up:

Experiential Learning in Food and Agriculture Systems Education at the University of California

By Kate Kaplan, Damian Parr, Jennifer Sowerwine, Lori Ann Thrupp and Mark Van Horn

UNIVERSITY OF CALIFORNIA Global Food Initiative

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The UC Global Food Initiative
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Preface to the UC Global Food Initiative Report on Experiential Learning in Food Systems

A growing number of educators, students, and university administrators recognize that experiential learning (EL) is an important element of higher education and is particularly valuable to agriculture and food systems-related education. EL makes valuable contributions to students' overall satisfaction in their learning process, their academic achievements, subsequent successful careers, professional or leadership skills development, and personal awareness and self-confidence. Yet, many educators, administrators, and even students are not aware of such EL programs and their great value as a part of university or college education.

This report provides information about existing EL opportunities in agriculture and food systems at the University of California. It is based on a general assessment of many EL programs and courses on the UC campuses, an evaluation of case study examples illustrating diverse programs, and insights shared by field leaders in the UC system. It identifies lessons learned about effective practices, successes and challenges, and implications for future programs. The examples serve as illustrations of successful EL opportunities reflecting a diversity of topics and program types.

- Some of the main points and lessons learned from this report are the following:
  EL opportunities in food and agriculture systems can be **clustered into overlapping types**: a) EL in formal courses and b) EL in extracurricular programs, including internships, co-curricular learning, student-led clubs or organizations, residential education, and paid employment. **The program content areas** include: farms and gardens, cooking and nutrition, food access, food procurement, food waste, food education, and other miscellaneous areas that do not fit the above categories.

- Based on lessons from the case studies, **key elements for success** of EL programs are: 1) stable and ample funding, 2) space/infrastructure, 3) effective outreach, and 4) student initiative and retention. Other important elements include faculty and administration commitment and student initiative.

- **Best practices** to develop and implement such programs vary considerably, and are identified in the summaries and case studies in this report.

- EL opportunities provide **multiple benefits to students**, including overall contribution for learning and academic achievement, preparation for jobs, skills for leadership, management and social interaction, facilitation of dialogue and critical thinking, insights for personal growth, and other capacities. Many of the programs also have benefits for stakeholders outside of the university.

- **Key challenges** for EL opportunities in food and agriculture include securing stable funding and resources to maintain, improve, and increase access to these programs across all UC campuses for both undergraduate and graduate students.

The authors hope that this report can provide both practical guidance as well as inspirational examples that can contribute to the educational/learning goals and objectives of the University of California, as well as to other higher education institutions.

Introduction to Experiential Learning in Food Systems

Experiential learning (EL) is associated with "learning by doing" but it generally goes beyond this. EL is best understood as learning through reflection on doing. The actual realization of EL requires the learner to engage in several stages of what is commonly viewed as an iterative cycle of experiential learning. Within the idealized EL cycle, learners move sequentially through four stages: 1) concrete experiences; 2) reflective observations; 3) abstract conceptualizations; and 4) active experimentations.[1] Four equivalent terms that relate more closely to common modes of learning in daily life include perceiving, understanding, planning and acting. Bawden (1998) summarizes the EL process by suggesting the following:

> "The process of learning starts with the immersion of the learner in a concrete experience from which as many observations as possible are gathered and perceptions recorded. This stage of information gathering is then followed by a phase of thinking, during which attempts are made to understand what has been experienced - and sense is made out what has been sensed! This stage is followed, in turn, with plans for action based on the understanding achieved. Finally, the planned action is taken, and as this changes the situation, the whole process is repeated, and more knowledge created." [2]

However, it is not critical or frequent for EL to follow a linear trajectory. Learners often prefer one of the four learning activities note above, within the EL activity cycle. As such, EL endeavors to facilitate each individual learner's purposeful actions in pursuit of changing his or her situation. Through these actions, learners create new knowledge by transforming the meanings they constructed from their experiences. EL also emphasizes a social process of learning. Educators can enhance the chances of learning by facilitating dialog and deliberation among learners who hold contesting observations or interpretations of shared experience.

EL can help students increase their self-awareness and intentionally strengthen and diversify their learning skills by helping them understand their strengths as learners and explicitly practice activities outside their preferences or strengths. With clearer awareness of learning preferences, students can positively contribute to team projects by drawing on their own strengths, while complementing each other's strengths. Instructors can work with students to design project teams that, while not neglecting balanced learning-style development, are arranged to leverage a team member's diverse strengths.

Courtesy of Mark Van Horn

Education about agriculture and food-related topics is generally well suited for EL programming, partly because these fields involve "on the ground" practical activities and tangible problem-solving gained through hands-on exposure. Challenges facing agriculture and food systems require new interdisciplinary approaches that reflect intricate society and environment linkages. New approaches to design and management in this field require ways of learning that emphasize the critical reflection on status quo and solution-oriented systems innovation, as well as interaction and teamwork among people. This report features a few EL programs in food and agriculture within the UC system that are engaging students in meaningful ways to better understand the critical challenges facing our agriculture and food systems. These programs are developing unique and innovative solutions to these challenges.

1 Kolb, D.A. (1984) Experiential Learning: Experience as the Source of Learning and Development. New Jersey: Prentice Hall

2 Bawden, R. J. (1998) The Community Challenge: The Learning Response. New Horizons 99: 40-59

Typologies of Experiential Learning Opportunities in Food Systems

Courtesy of Nicole Wong

Throughout the University of California campuses, Experiential Learning (EL) occurs in a diversity of settings related to food and agriculture. EL plays a role in undergraduate, graduate, and professional degree and certificate programming, and is equally prevalent across a wide range of co-curricular situations, meaning contexts where students gain relevant educational experience but do not receive academic credit.

Summarized below are the types or categories of EL opportunities that are available in food and agriculture education at University of California campuses. This typology is derived partly from an inventory of EL opportunities, as well as insights from educators and leaders in these programs. In general, the EL opportunities in this field can be divided into academic courses that have an EL component, and experiential programs related to food and agriculture systems that are not tied directly to courses. In many of these cases, the categories overlap and intersect.

A. Formal Courses and Curricula

Many formal courses provide opportunities for students to learn experientially through a wide range of activities and in many settings. While it may be easier for many to visualize experiential learning as occurring outside the classroom, it can occur in most settings in which students are actively and personally engaged in a process of having an active experience and reflecting on that experience. Whether in the classroom, in the field or in the laboratory, this often involves students creatively applying their knowledge and skills by thinking critically, solving problems, exploring values or making meaning. Thus, experiential learning can occur during lectures, laboratories, discussions, field trips, and even exams. In addition, certain academic curricula may also place a strong emphasis on experiential learning, as illustrated in the curriculum of the Major in Sustainable Agriculture and Food Systems at UC Davis, and the Minor in Food Systems at University of California Berkeley. (See Case Study on page 18 as an example.)

B. EL Programs Outside of Formal Courses

Internships

When many people think of experiential learning the word “internship” immediately comes to mind. While this word can have many meanings, within the UC context, we define an internship as a mentored learning experience outside of normal coursework in which a student gains experience-based knowledge and skills and generally earns academic credit for that learning. Internships can be on- or off-campus, paid or unpaid and of variable time commitments.

Internships are commonly seen as great ways for students to apply what they have learned in their formal academic courses, develop new knowledge and skills, gain work experience, explore career options and develop professional contacts. As a for-credit academic experience, an internship also provides an opportunity for students to contextualize and reflect on their internship experience under the guidance of a faculty or staff mentor. This guidance can contribute significantly to the educational value of an internship. Mentors can contribute to students’ increased learning by helping them develop learning objectives, assess their progress toward those objectives, contextualize and reflect critically on their learning and its significance.

Typologies of Experiential Learning Opportunities in Food Systems

Co-Curricular Learning

Co-curricular learning, as used here, denotes learning for which students do not earn academic credit. Often there is little to no guidance by a faculty or other experienced mentor, although guidance can be significant in some cases. Sometimes this learning is highly self-directed and may entail mentoring provided by peers or near-peers. For the students, the activities involved may be very similar to those involved in an internship, or they may go well beyond a typical internship – for example, involving purposeful travel tied to food or farming, community living experiences, or volunteering on farms or with non-profit organizations such as food banks.

Co-curricular learning experiences can have profound impacts on students' lives, learning, development and personal growth, and academic, professional and life choices. However, such experiences exist with very little support or involvement from the university. Thus, there are significant missed opportunities for the university, faculty and staff to have a positive impact on students' learning and for students' experiences to positively impact the university.

Student-Led Clubs or Organizations

Student led clubs and organizations give students a unique opportunity to be both leaders and participants in experiential learning-based programs. Students in leadership roles take on responsibilities that would not otherwise be available in programs led by campus administrators and faculty. In food systems and sustainable agriculture, such responsibilities include overseeing financial and operational matters, recruiting, marketing, and maintaining relations with campus administration. Student clubs in food systems also provide a unique chance for students to create hands-on learning and leadership opportunities on campus. The clubs may provide contexts for co-curricular learning as well.

Residential-Based Learning

Residential-based learning programs related to food and agriculture exist in campus housing or off-campus cooperative homes. Many UC campuses offer themed housing in on-campus dormitories; these programs often include environmental options that highlight gardening and sustainable food. Housing cooperatives across the UC system typically have a shared-food program, where residents coordinate bulk buying of food, divide cooking responsibilities, and share communal meals. Additionally, these programs often offer gardening opportunities or have connections to on-campus farms and gardens. Residential communities offer unique experiential learning opportunities, because a student's home becomes a personal classroom. Residential-based programs can be student led, but are often organized by the university or community organizations.

Courtesy of Kristen Rasmussen

Paid Employment

Paid opportunities in experiential learning include any work that a student is compensated for with a stipend, grant, salary, or hourly wage. Such opportunities range significantly across all content areas. Paid positions can be funded by the university, or by grants through student groups, community organizations, or private sources. Students typically do not receive academic credit in addition to financial compensation for these programs. However, these positions are enticing to students who must work during the school year, and also want to engage in hands-on learning opportunities.

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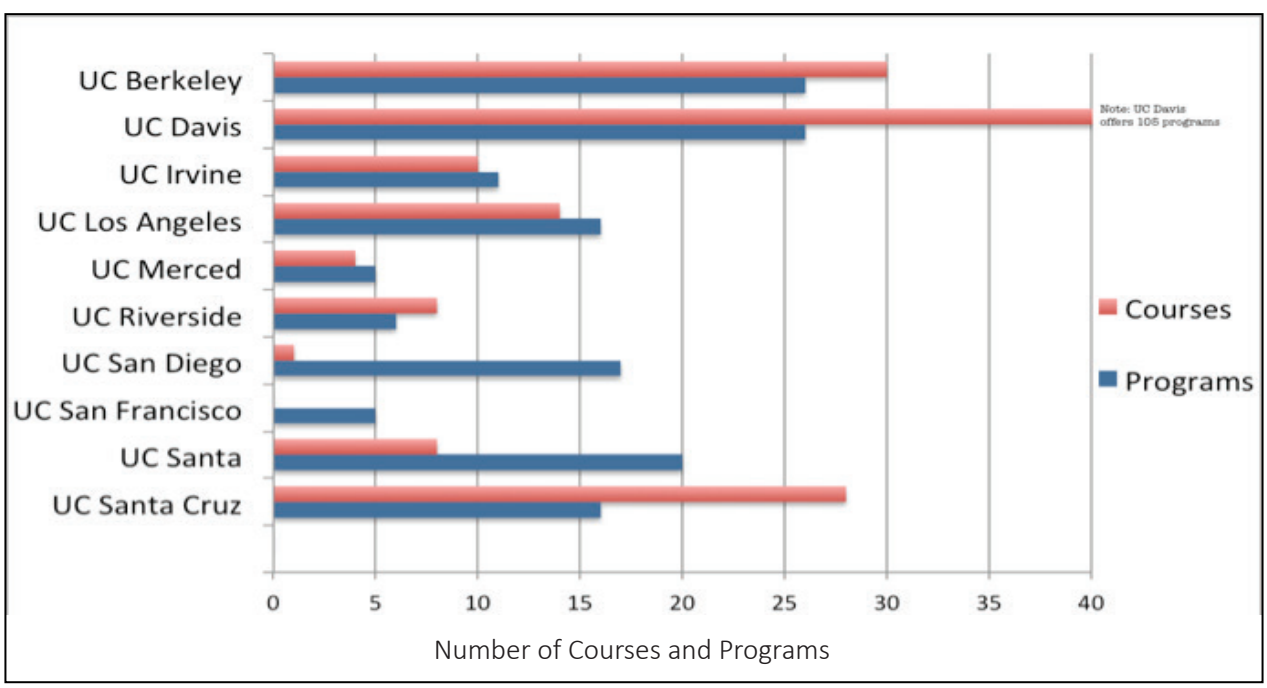
Figure 1 illustrates the number of identified food and agriculture programs, as well as academic courses on each campus that feature an experiential learning component. This information is based on a survey of EL programs on campuses, which was undertaken in Winter and Spring of 2015. Please refer to this LINK, to see more detail on these programs and courses.

FIGURE 1: Number of Programs and Courses with Experiential Learning Components by Campus (2014)



*Note: This information was based on a review of course catalogs and survey information compiled in 2015 at the University of California campuses. Courses with lab or field-based components are considered EL in the tally of courses. This overview is intended as an estimate, and the authors recognize that new EL programs are continually emerging on many campuses.

Experiential Learning Program Content Areas in Food Systems

Experiential learning opportunities are present in a variety of programs on each UC campus outside of the formal courses. This report uses six general content areas to categorize these EL programs: farms or gardens, cooking and nutrition, food access and food justice, food waste, food procurement, and food education. These categories were identified by representatives of the programs through a survey that was completed for this report. Figure 2 below displays the diversity of EL programs in food systems at the campuses, categorized by content area. Some of the programs do not fit directly into these categories, and are labeled "other."

Farms and Gardens

Student farms and gardens are found on an increasing number of college and university campuses in North America. In this discussion we do not attempt to distinguish between 'farms' and 'gardens' but instead focus on the wide diversity of facilities and programs of various sizes that emphasize experiential, student-centered learning in sustainable agriculture and food systems. Typically, a student farm is a place where students gain practical experience in sustainable agricultural practices and systems. The farm and garden programs generally focus on education and training in food production, and many also include marketing and management. Student farms are also often places where students can conduct research in sustainable organic agriculture and food systems (such as soil science, entomology, and agroecology), engage in outreach and service to broader communities, and participate in developing and offering educational experiences including courses. Students generally engage in self-directed learning, critical reflective thinking, and innovation.

Cooking and Nutrition

Cooking and nutrition programs are offered through many campus dining services, food banks and health centers, as well as student-led organizations. They incorporate hands-on learning opportunities in nutrition education and cooking skills. These programs help to create holistic experiences for students by providing skills and suggestions for how to prepare healthy meals with the food provided by food banks or suggested by health professionals. Programs that are offered through campus dining services often focus on new students, providing them with hands-on cooking skills and nutritional literacy that can help them make healthy, sustainable choices outside of the dining commons.

Food Access and Food Justice

Food Access programs refer to efforts to ensure that individuals and/or communities have healthy, affordable, culturally appropriate food. Student food banks, food pantries and food collectives are prime examples of on-campus opportunities for students to learn about and participate in food access programs and, in some cases, source some food from student farms or gardens. Such programs do not only provide food for individuals in need, but also stimulate other efforts to address food insecurity.. Food justice programs are generally similar to Food Access, and also may address labor injustices or other issues of equity and justice in food systems. Many of these programs work closely with community organizations.

Food Procurement

Food procurement typically refers to programs that source and sell food on campus. Campus dining services and food collectives are the main food procurement programs on UC campuses. Both entities work directly with individuals on campus and often in the surrounding community to purchase food for consumption. Such programs have significant influence over what kinds of foods are available to students, affecting such parameters as affordability, sustainability, and quality. On some campuses, student farms and other campus units provide fresh produce and other food products to dining services and other food vendors on campus. Student positions through campus dining services provide unique opportunities for students to work directly with a major university department. In student-led food cooperatives and collectives, students are often considered co-owners of a small business. As co-owners, students gain experience in running a business, which is rare amongst on-campus opportunities.

Experiential Learning Program Content Areas in Food Systems

Food Waste

Food waste programs work with the reduction of food waste and/or diversion of food from the general waste stream. Food waste reduction programs are often housed in or near campus dining commons or food retail locations. These programs use outreach methods to raise awareness about food waste and provide incentives to encourage individuals to reduce waste. Food waste diversion programs focus on redirecting uneaten food away from landfills and back into organic soil amendments through composting. Many of these programs feature on-campus composting systems. Programs also typically have partnerships with campus farms and gardens, where the diverted food waste can be converted into compost and recycled into the farmland on-site. Such partnerships help to create a closed-loop system of waste management on campus.

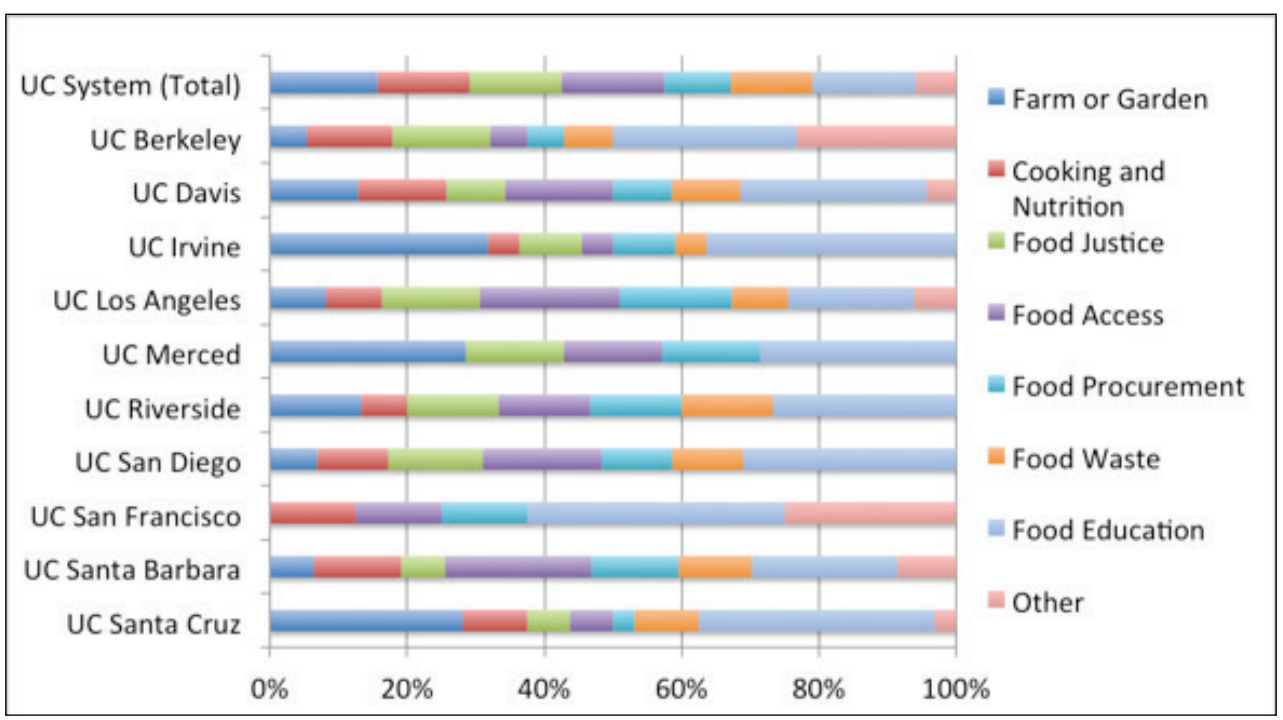
Food and Agriculture Education

Food Education is the broadest of the seven content areas. Although it is often associated with EL opportunities provided through formal courses, food and agriculture education also is central to many programs outside of courses. Many of the programs listed in this education category overlap with other categories listed above. This content area may involve specific science education experiences in topics such as agroecology, plant biology, or nutrition. These programs may also involve opportunities for students to develop food literacy and learn how to teach classes about food and agriculture topics.

Other

Some of the EL programs did not fit in the above-mentioned categories, and were therefore categorized as "Other" based on a survey of program leaders. Examples of "Other" EL programs would include soil remediation in agriculture areas, food business activities or food policy work.

FIGURE 2: EL Programs on the UC Campuses, Showing Percentage of Content Areas



Case Studies in Experiential Learning in Food Systems

Introduction: Using Successful Programs as Models for Expanding Hands-on Learning Opportunities on UC Campuses

A survey of experiential learning opportunities in food and agriculture across all UC campuses was undertaken in 2015 by the Global Food Initiative Subcommittee on EL. This survey assessed each program's core components including: number of participants, longevity of the program, educational objectives, and uniqueness. Key factors influencing the success of such programs were evaluated and a set of effective practices were compiled. The case studies featured in this report highlight a spectrum of EL program types and content areas within the UC system. The selection of cases is not intended to suggest a hierarchy of programs in the UC system. Rather, the cases should be considered as examples of existing programs that have been successful on individual campuses. These cases can be used as examples or models for establishing new programs on campuses where opportunities do not exist. The lessons learned from these cases can also offer insights for similar programs on other UC campuses that wish to expand effective practices or improve existing projects. There are many other successful programs in the UC system that are not featured in this report, but also could serve as good examples.

Courtesy of Nicole Wong

Lessons Learned from Case Studies in Experiential Learning

Based on the analysis of EL examples in the UC system, four key factors were found to influence the success of programs in providing hands-on activities and engaging students in meaningful learning and conversations about agriculture and food-related issues.

Funding

Funding is a common concern among many EL programs in agriculture and food systems. Most program representatives interviewed for this report stressed the importance of consistent and stable funding as a factor for success. Some of them have lacked adequate funding to ensure program sustainability. Some programs have received support from extramural grants and gifts, or secured funding through student fees, which are approved through a campus-wide student vote. In the latter cases, every student pays a nominal fee each year, which in turn funds program activities. This method appears to provide significant support for some student-run Experiential Learning programs and is very helpful for sustaining these programs. But this approach has not been feasible on all campuses.

Case Studies in Experiential Learning in Food Systems

Lessons Learned from Case Studies in Experiential Learning

Space or Infrastructure

Availability of space on each campus is highly variable. Urban campuses, such as Berkeley and Los Angeles, have significantly less property than more rural campuses for agriculture and food-related EL activities, especially for farm and garden programs. Some of the most successful farm or garden programs are found on campuses that can provide student programs with a significant amount of land. Most notably are the student farms at UC Santa Cruz and UC Davis. These programs are able to experiment with diversity of agricultural methods, grow a significant volume of crops, and host large numbers of students on the land. In contrast, space constraints on smaller campuses (or on urban campuses) can limit the success of garden and farm programs. Other programs, such as food pantries, food waste programs, and food collectives, also require space in the form of a building or room in visible areas on campus. In addition, these programs may also have infrastructure or equipment needs, such as refrigeration, kitchen or laboratory facilities. Having adequate space and infrastructure that can be sustained and dedicated to EL on campuses is vital in order to engage a large number of students.

Student Initiative and Retention

Courtesy of Kristen Rasmussen

Student initiative is very important in the development and implementation of EL programs. At the same time, for many student-run organizations, retention of student volunteers determines how successful a program can be. A majority of the experiential learning opportunities available on campuses are offered by student organizations that run on modest funding. These groups rely heavily on student and community volunteers to organize and maintain program activities. Yet, retaining student participation can be difficult. Unique aspects of academic schedules, such as finals week and summer break, make it challenging for such programs to maintain a consistent supply of human power. During these times when students are occupied with other activities, programs that require a lot of attention or maintenance are in risk of downsizing significantly or closing down entirely. Student-run farms, gardens, and food banks are especially vulnerable during these times. On the other hand, many programs with sufficient funding are able to provide students with incentives for consistent participation, either through paid internships, course credit, or meal vouchers (sometimes called "swipes") through campus food service. These programs with more stable funding tend to maintain somewhat regular operations, support student initiative, and retain student involvement more successfully.

Outreach

In order for programs to gain attention on campus and in the community, they must have effective outreach and publicity efforts. For many programs, outreach campaigns include tabling outside of campus dining halls or in heavily trafficked areas of campus, or using social media. Tabling appears to be a productive way to increase an organization's name recognition on campus. Most UC campuses also have sustainability offices or other umbrella organizations that act as liaisons between student groups and the campus community. These larger groups are able to use their campus-wide connections to reach a larger number of students than a single organization would be able to on its own. It is also beneficial for programs to form partnerships with community organizations that have the capacity to conduct outreach effectively off-campus.

Other important factors for the success of EL programs include commitment from campus administrators and faculty members, as well as strong leadership skills of students involved in these programs.

Case Studies in Experiential Learning in Food Systems

Summary of Best Practices Based on Case Studies

Below is a summary of effective practices and tips that are recommended by coordinators or leaders of the EL programs that are highlighted in this report. The practices pertain to general management and guidance in developing such programs, but do not provide detail on the curriculum per se.

Farms and Gardens

- Offer diverse methods of student participation, including internships, formal courses, informal workshops, research/ special projects.
- Provide diverse opportunities for student to participate in activities related to gardening, farming, food, nutrition, scientific experimentation, education, and community outreach.
- Sell farm-grown crops and other products to the campus and/or larger community.
- Host social events, including shared meals.
- Host tours, field trips and educational events for gardeners, farmers, school children, teachers, etc.

Cooking and Nutrition

- Use demonstration kitchens (if available) where participants can gather for hands-on cooking lessons.
- Provide basic cooking and kitchen skills workshops, especially for new students.
- When free food is provided, supplement with recipes and meal suggestions.
- Provide lessons in nutritional literacy to help students make healthy, educated decisions.

Courtesy of Kristen Rasmussen

Food Justice

- Foster partnerships with community organizations with similar missions.
- Host workshops to encourage conversations on campus about relevant issues.
- Create a coalition of campus organizations to maximize outreach to students across campus.
- Provide comfortable meeting spaces to create safe spaces for constructive dialogue.

Food Access/ Food Security

- Partner with on-campus and local farms and gardens to provide fresh, local produce to the community.
- Supplement food donations with cooking lessons and recipe suggestions.
- Offer kitchen space (when possible) for students to prepare and store food.
- Provide a variety of healthy, sustainable, and culturally appropriate food.

Food Procurement

- Focus food service procurement on sourcing of local, humanely and sustainably produced, nutritious and/or culturally appropriate food when possible.
- Allow participants to give constructive feedback on quality and availability of food.
- Provide meal vouchers or enable the use of student meal plans, as incentives for participation in food procurement activities.
- Create opportunities for students to lead outreach campaigns.

Case Studies in Experiential Learning in Food Systems

Summary of Best Practices Based on Case Studies

Food Waste

- If possible, keep waste conversion projects on campus to create a closed-loop system.
- Maintain strong outreach programs to increase campus participation.
- Host workshops to teach participants how to create personal compost systems at home.
- Partner with on-campus farms and gardens to return converted waste into local systems.

Food Education

- Provide participants a diversity of opportunities in leadership to maximize participation.
- Develop curriculum that supplements each learning objective with a hands-on activity.
- Partner with campus farms and gardens, food collectives, and food banks to provide a "living classroom" for participants.

Benefits of Experiential Learning Opportunities in Food Systems

Through this analysis, survey findings, and exploration of case studies, many benefits of experiential learning opportunities in food and agriculture systems have been identified by students, faculty and other leaders in the University of California system. Highlights of the benefits of EL in food systems for students include:

- Provides valuable contributions to students' overall satisfaction in their learning process
- Contributes to academic achievements
- Builds experience that is useful for acquiring jobs and launching successful careers
- Strengthens leadership and/or management skills (in some cases)
- Gives opportunities for teamwork and social interaction in many cases
- Develops or expands practical skills that are useful in problem-solving
- Enhances critical thinking and reflection about shared experiences
- Contributes to innovation and new and creative approaches to challenges
- Helps build capacities to address life challenges beyond college

Courtesy of Mark Van Horn

Students and program leaders surveyed in this study mentioned many additional benefits and skills that are specific to particular EL programs and courses, and are mentioned in the subsequent case studies. Many students perceive these benefits as qualitative advantages that are considered very important parts of their university education.

In addition, many of the EL programs provide benefits to stakeholders, including community organizations and individuals, who interact with the students involved. Some of these benefits include fresh foods provided from student garden and farm projects to food banks or underserved community members, educational and training support from UC students to schools or non-governmental organizations (on farming, nutrition, and related topics), and student's assistance on food policy analysis or outreach that serve advocacy groups. Other examples of benefits and advantages of EL are provided in the cases below.

Case Study:

Berkeley Student Food Collective at UC Berkeley

Year Established:

2010

Program Type:

Co-Curricular, Student Club, Course for Credit, Internship

Content Areas:

Cooking and Nutrition, Food Justice, Food Access, Food Education

Number of members (per year):

~100-150 students, ~10-15 community members

Contact Information:

operations@foodcollective.org

Website:

Foodcollective.org

General Background

The Berkeley Student Food Collective (BSFC) is a cooperatively run, non-profit community grocery store. It is located adjacent to the UC Berkeley campus. The BSFC is dedicated to providing fresh, local, healthy, environmentally sustainable, and ethically produced food at affordable prices to the Berkeley campus and greater community. The organization seeks to educate students about nutrition and food systems, empower new leaders, and train youth to work in and manage a sustainable business. Through inclusive, democratic decision-making, the BSFC promotes community-building and environmental stewardship.

How Experiential Learning is Supported

The BSFC uses its physical space to provide a "living classroom" for students to redefine how people work with and think about food. The organization offers a variety of opportunities for students to: learn how to cook, and strengthen community and professional development skills. Student and community volunteers are considered co-owners in the collective and subsequently gain hands-on experience in running a sustainable business. In addition to volunteer positions, paid internships are available through the campus work-study program. The Food Collective hosts for-credit, student facilitated courses each semester through the Democratic Education at Cal program (DECal). The course is called Berkeley in the Global Food System and Cooperative Enterprise for a Resilient Future. The BSFC has recently launched an Anti-Oppression committee to encourage dialogues about current food and social justice issues.

Impacts On and Off Campus

The BSFC provides the Berkeley community with access to healthy, sustainably sourced food at affordable prices. Free workshops and courses taught through the collective offer students and community members opportunities to expand culinary skills and engage in conversations around the local food system. The Education and Events Committees within the BSFC organize special events within the Berkeley community, partnering with organizations such as the Berkeley Women's Shelter, the UC Berkeley Food Pantry, and Fruitful Minds.

Support from the University

In 2010, the BSFC received a $91,000 grant from The Green Initiative Fund that allowed the organization to open their Bancroft Way storefront. Since then, the collective has received grant funding from other campus outlets, including the Associated Students of the University of California (ASUC) and the Chancellors Advisory Committee on Sustainability. The store is largely self-sustaining, so grant funding is used to support educational efforts and paid opportunities for students.

Challenges to Success

Getting people through the door to visit the retail store is key to the BSFC's success. It can often be challenging to ensure that the student body and community are aware of both the store's existence as well as the organization's educational mission. This boils down to advertising and communication. The BSFC plans to expand outreach and publicity on campus and within the larger Berkeley community. Their goal is to strengthen both energy and social capital in order to expand sales and educational programs.

Case Study:

Student Organic Garden Association at UC Berkeley

General Background

The Student Organic Garden was started in 1971 on UC Berkeley land as a student and community space, adjacent to the Oxford Tract Experiment station that is part of the College of Natural Resources. In 1991, the University sold part of the land to the local utility district. In response to the reduction in the garden's physical space, students founded the Student Organic Gardening Association (SOGA) to create a formal group of garden stewards. Since then, SOGA has acted as the leadership body of the garden.

How Experiential Learning is Supported

Students and community members alike are encouraged to engage in the garden by attending Open Hours, starting projects, and being allies to SOGA. Garden volunteers gain hands-on learning experience in horticultural skills, grant writing, community organizing, and a plethora of other activities. SOGA hosts three courses each year through the Democratic Education at Cal (DECal) program: (1) Introduction to Organic Gardening and Food Justice; (2) the Berkeley Urban Gardening Internship; and (3) Garden Leadership and Management. These courses provide over 200 students yearly with hands-on instruction in the garden and local community farms and gardens. Students receive course credit for these classes, which are student-facilitated and supported by faculty sponsors.

Impacts On and Off Campus

SOGA has partnered with multiple groups on campus to host workshops and events to further the conversation of urban sustainability, food justice, and related themes. Food grown in the garden is free for students or community members who are involved in the garden and is often donated to the UC Berkeley Food Pantry. Workshops are open to the public and provide community members and students with hands-on skills in various projects such as kombucha making, building raised beds, propagating, and family-oriented gardening.

Support from the University

The University of California and the College of Natural Resources allow students access to the land where the garden has continued to flourish for the last 44 years. Additionally, SOGA receives funding from grants through The Green Initiative Fund, the Student Environmental Resource Center, and the Chancellor's Advisory Committee on Sustainability.

Challenges to Success

Since SOGA is primarily run by students, there is a large turnover in leadership at the end of each school year. Although grants have been helpful for some basic functions, SOGA's grant funding is obtained on a year-to-year basis and has not been consistent or sustained over time. The group has only recently been able to pay interns over summer, which will hopefully help to secure recurring grants. These interns are able to pass down institutional knowledge between SOGA generations. However, during regular semesters, it is difficult for students to fully commit their time to the garden. There is currently a core team of about 4 or 5 part-time managers, but much more help and sustained funding are needed to make the garden thrive. The SOGA garden size is less than one-third acre and therefore has very limited space for growing large amounts of food and for extensive training to accommodate growing demand and interest among students.

Year Established:

1991

Program Type:

Co-Curricular, Course for Credit, Internship

Content Areas:

Campus Garden/Farm, Food Justice, Food Access, Food Education, Food Waste

Number of members (per year):

~150-200 students, ~10-20 community members

Contact Information:

studentorganicgarden@gmail.com

Website:

http://berksoga.tumblr.com

Case Study:

EL in Sustainable Agriculture and Food System Major at UC Davis

UC DAVIS
SUSTAINABLE AGRICULTURE AND FOOD SYSTEMS

Year Established:

2011

Program Type:

Course and Curricula (Undergraduate Major)

Content Areas:

Cooking and Nutrition, Farm or Garden, Food Justice, Food Access, Food Education, Food Procurement, Food Waste

Number of members (per year):

100 students

Contact Information:

gerdman@ucdavis.edu

Website:

http://asi.ucdavis.edu/programs/safs

General Background

Students majoring in Sustainable Agriculture and Food Systems (SAFS) focus on the social, economic and environmental aspects of food and agriculture. The program integrates diverse learning experiences inside and outside the classroom to help students obtain diverse knowledge and skills in areas such as systems thinking, experimentation and inquiry, interpersonal communication, understanding values, strategic management, and civic engagement. EL is essential to students becoming proficient in all of these areas. All students take courses in a broad range of disciplines, but each student focuses her/his studies within one of three tracks: agriculture and ecology, food and society, or economics and policy.

How Experiential Learning is Supported

EL is central to the SAFS curriculum and is integrated into it in multiple ways. The major requires the completion of 12 units of internship. Up to 4 units can be earned on campus (e.g., at the Student Farm or Dining Services), and at least 8 units must be earned off-campus (e.g., with farms, food businesses, government agencies or non-profit organizations). Interns develop learning objectives then track their activities, their significance and progress toward their objectives, through written reflections. EL is a key feature of the major's five core courses and many other courses in the major, including required hands-on agricultural production courses. Within the core courses, students engage in exercises that help them become more self-aware, work collaboratively in groups, solve problems, link theory and practice, and interact with a wide range of food and agricultural professionals (e.g., via field trips and seminars). Through senior capstone courses, they also work with individual practitioners and organizations to help them address a wide range of real-world challenges and opportunities for improving the sustainability of food and agricultural systems.

Impacts On and Off Campus

Students from many majors enroll in SAFS courses, which engage them in critical thinking about agriculture and food system sustainability and diverse ways of learning. SAFS students doing internships and in the capstone courses have many positive impacts on and off campus by making valuable contributions to diverse efforts to enhance sustainability in many areas.

Support from the University

Support from the University takes many forms, including faculty teaching, other support for classes, staff advising and internship mentoring within numerous departments and campus units.

Challenges to Success

One challenge arises from the labor intensive nature of EL, combined with the requirements to integrate EL into many aspects of the major. These factors put significant demands on faculty, staff, and students who are supporting students in the major. Another challenge is related to the rapid increase in the number of students enrolled in the major in its first five years of existence, which has made it difficult for faculty and coordinators to keep up with changing needs.

Case Study:

Sustainable Living & Learning Communities at UC Davis

General Background

The Sustainable Living and Learning Communities (SLLC) is a coalition of five campus communities (the Domes, Tri-Cooperatives, Student Farm, Experimental Community Gardens, and Project Compost) that foster hands-on EL. As a cooperative alliance, the SLLC upholds foundational values of intentional living and action, community, food and land, experiential learning, and the intersectional space that bring the communities together. The programs encourage members to share knowledge of sustainable practices and learn by doing and reflecting.

How Experiential Learning is Supported

Each of the five communities that compose the SLLC offers UC Davis students unique experiences in hands-on learning. Together the programs boast EL opportunities in gardening and farming skills, cooperative decision-making, waste diversion, and community development, in the arts, sciences and engineering fields. Students participate in these communities in diverse ways through internships, residential programs, co-curricular activities, courses, research and more projects. The residential-based programs within the SLLC, the Domes and Tri-Cooperatives, offer students a unique, immersive opportunity in experiential living and learning.

Impacts On and Off Campus

The formal coalition of organizations has created a deeper sense of community among sustainability-minded students on the UC Davis campus. SLLC provide a space for dialogue around current issues in the food system. The alliance has identified the need for a long-term academic coordinator, who could facilitate internship opportunities within the program. Ultimately, the SLLC has created an identity on campus that upholds a commitment to sustainability and community. The program offers students with easily accessible opportunities in experiential learning.

Support from the University

Although most of the individual communities are primarily student-led, staff and faculty support them in diverse ways and the Student Farm has a modest staff that co-facilitates student learning with students. SLLC leaders are currently partnering with the campus planning administration to make the communities more inclusive for students across the campus. Possible future projects include new campus common spaces or additional cooperative housing units.

Challenges to Success

Organizationally, the different programs are located in diverse parts of the university and formal relationships and governance of these programs within the SLLC is still evolving. The programs are working to create a governing body that will allow for democratic decision-making, while ensuring the sustainability of the organization over time. In addition, the levels of financial, staff, and other forms of support are quite variable among the programs.

Year Established:

2013 (originally organized as the Sustainable Research Area in 1987)

Program Type:

Co-Curricular, Internship, Residential Based Learning

Content Areas:

Cooking and Nutrition, Farm or Garden, Food Access, Food Education, Food Justice, Food Procurement, Food Waste

Number of members (per year):

400+ students

Contact Information:

mxvanhorn@ucdavis.edu

Case Study:

Dig: Student Garden Association at UC Los Angeles

Year Established:
2012

Program Type:
Student Club

Content Areas:
Farm or Garden, Food Access, Food Education, Food Waste

Number of members (per year):
30 students

Contact Information:
digucla@gmail.com

Website:
digucla.weebly.com

General Background

The "DIG" Student Garden Coalition was born out of students' desire to learn more about gardening and food systems on campus. Working with the administration, students secured tools and a small plot of land near the student recreation center. The coalition was originally overseen by E3—an umbrella organization for sustainability-minded programs on campus—but has since grown into its own entity. DIG manages a second campus garden, the Edible Amphitheatre Garden. Although the program caters primarily towards students, all UCLA community members are welcome to participate.

How Experiential Learning is Supported

The DIG coalition provides a unique student-led space on the UCLA campus. Garden managers organize tailored workshops to provide students with hands-on gardening skills. The space also acts as a forum for students to discuss food issues on campus, in the local community, and globally. DIG works with UCLA faculty to incorporate the campus gardens into academic course curriculum. Instructors are given access to a number of beds in either garden, which they are able to use as a living classroom. Additionally, DIG members are working with campus administration to turn underutilized spaces on campuses into native landscapes or edible garden plots. This initiative has given students hands-on experiences in project development, while building communication and leadership skills.

Impacts On and Off Campus

At its conception, DIG received a great deal of attention from instructors and media outlets on campus for being a new voice for sustainable food and gardening issues. Since then, DIG has grown to further support student autonomy on campus. The program encourages students to design and execute projects that supplement campus sustainability efforts. DIG is a close ally of the Garden Mentorship Program, which is also supported by E3. The program sends student volunteers to K-12 schools in the Los Angeles area to aid in installing gardens and to create curriculum around gardening and food issues.

Support from the University

The university most directly supports DIG by allowing the program to operate its two gardens on university-owned land. DIG also receives funding through the UCOP Global Food Initiative, as well as the Healthy Campus Initiative. This funding has allowed the coalition to successfully establish its two gardens and its robust educational program. DIG members are currently working with UCLA administration to start a program that would allow community members to rent garden plots. Revenue from this program would allow the coalition to be self-sustaining.

Challenges to Success

Like many student organizations, DIG finds that maintaining student involvement is a constant challenge. Special schedules such as finals week and summer break make it difficult to encourage students to devote time in the gardens. During these times, only a handful of students are committed to caring for the gardens.

Case Study:

Swipe Out Hunger at UC Los Angeles

Year Established:
2009

Program Type:
Student Club

Content Areas:
Food Access, Food Procurement, Food Waste

Number of members (per year):
80 students,
20 community members

Contact Information:
rachel@swipehunger.org

Website:
Swipehunger.org

General Background

Swipe Out Hunger—previously Swipes for the Homeless— is a national non-profit organization working to alleviate hunger on campuses and surrounding communities. It was founded by students at UCLA and since its start, has spread to a dozen other universities. The program allows students on participating campuses to donate unused meal points from their meal plans to students and community members in need. By facilitating this process, Swipe Out Hunger is not only providing nutritious meals to food insecure individuals, but the organization is also raising awareness about homelessness on campus. Nationally, more than one million meals have been served.

How Experiential Learning is Supported

Swipe Out Hunger has created a culture of philanthropy on campus that has given students a direct way to engage in issues of food access, waste, and procurement. Members of the organization work closely with the student population through tabling outside of dining halls and through campus-wide outreach. The program's outreach efforts help to start conversations around food access on campus, working to remove the stigma about food insecurity issues. Facilitation of these conversations gives students hands-on experiences in public speaking and using effective dialogue. Additionally, students gain business experience through work with campus Dining Services to organize the transfer of meal points into meals for the community.

Impacts On and Off Campus

On the UCLA campus alone, an average of 800 meals are donated each quarter through Swipe Out Hunger. At UC Santa Barbara, the Swipe Out Hunger student group supports the campus food bank in addition to donating food to local nonprofits. Every quarter, an average of 500 students participate on each campus. In 2012, Swipe Out Hunger leaders were invited to the White House and celebrated as "Champions of Change." This recognition has given the organization much-deserved attention on a national scale. Swipe Out Hunger now has chapters on 14 college campuses across the country.

Support from the University

In order to establish and maintain a Swipe Out Hunger chapter, students must work closely with Campus Dining Services to forge a formal partnership. Through this partnership, students are given the opportunity to donate their meal points and alleviate food insecurity on campus, while Dining Services is able to build an ongoing, positive relationship with the community. This fall, the UC Office of the President is working with Swipe Out Hunger to launch the program on all UC campuses.

Challenges to Success

Establishing partnerships with University Dining Services on different campuses can be difficult. It is often challenging to negotiate budget allocations for unused meal swipes, since swipes do not translate into a specific amount of food. Maintaining effectiveness is also challenging, as the organization must ensure that programs are reaching the people and communities most in need. This challenge requires consistent evaluation of food insecurity on campus and how it can be best addressed.

Case Study:

Merced Campus Garden at UC Merced

Engineers for a Sustainable World

Year Established:

2014

Program Type:

Co-Curricular, Student Club

Content Areas:

Farm or Garden, Food Education

Number of members (per year):

5 students

Contact Information:

ibeltran2@ucmerced.edu

Website:

Facebook.com/UCMCampusGarden

General Background

The Merced Campus Garden was officially established in 2014 by the organization Engineers for a Sustainable World. Since then, the garden has offered a physical space for students to grow fresh food while experimenting with sustainable agricultural practices and technology. The garden is modeled after UC Merced's commitment to solar energy. Solar related projects have ultimately made the garden largely self-sustaining. Consequently, the Merced Campus Garden is considered one of the most energy efficient, student-run gardens in the UC system.

How Experiential Learning is Supported

The garden has become a living laboratory where students are encouraged to build and experiment. Members of Engineers for a Sustainable World have successfully built a solar-powered drip irrigation system, featuring solar timers and water pumps. The system eliminates the need for manual watering, while increasing the efficiency of water use. Additionally, the group partners with other organizations on campus to plan and implement planting schedules and crop selections. Students in all participating groups gain hands-on gardening experience as well as critical thinking and organizational skills. As the garden continues to grow as a permanent part of the campus community, garden leaders hope to expand hands-on education for students and community members.

Impacts On and Off Campus

In addition to experiential learning opportunities in the physical space, the Merced Campus Garden provides students across campus an opportunity to participate in the local food system. Garden leaders have been working with the Yosemite Leadership Program and Campus Dining Services to provide locally grown, fresh produce for the dining halls. Garden leaders hope to expand this partnership to include the campus food bank in the future to increase access to healthy food across campus.

Support from the University

Funding for the garden has been provided through the Associated Students of UC Merced and the UC Merced Sustainability Council. This funding has allowed the Engineers for a Sustainable World to both construct the garden and maintain it using sustainability-driven technology. The group has also gained support from Campus Dining Services through the aforementioned partnership.

Challenges to Success

Retaining student leadership is the biggest challenge to the garden's continuity. The garden is currently run by a few members of both the Engineers for a Sustainable World and the Yosemite Leadership Program. Having a larger leadership team and consistent volunteers would allow the garden to expand educational programs and increase visibility on campus through outreach efforts.

Case Study:

Taste Buds at UC San Diego

General Background

Taste Buds is the name of a dynamic partnership between Registered Dietitian Elizabeth Shaw and Senior Executive Chef Vaughn Vargus from UC San Diego Culinary Services. The team has been the driving force behind Taste Buds Educational Sessions. The program is hosted at the Demonstration Station, an integrative kitchen-classroom located in the newly renovated 64 Degrees Restaurant. Each quarter, the program offers an educational series where members of the UC San Diego campus are invited to participate in hands-on cooking and nutrition lessons. It is currently the only UC Culinary Services program with an educational demonstration space.

How Experiential Learning is Supported

Student and employee participants in Educational Sessions gain valuable experience in a variety of food-related topics. Past events include lessons on cooking techniques, meal planning, and nutritional literacy. The program highlights the Taste Buds goal of providing the UC San Diego community with the necessary skills and knowledge to make healthy, sustainable choices around food. Demonstration sessions provide an enjoyable learning atmosphere outside of a traditional classroom setting. Students, especially those in their first year of school, walk away feeling more comfortable in their cooking abilities and understanding of nutrition.

Impacts On and Off Campus

Since UC San Diego does not offer a nutrition studies program, Taste Buds Educational Sessions are a vital part of nutrition education on campus. The program has reached hundreds of students and campus employees since its inception and continues to grow. Additionally, the program provides students and campus community members an opportunity to interact directly with Culinary Services leadership. The Taste Buds team has been working adamantly to increase cross-department team building. These partnerships have allowed the program to increase visibility across campus.

Support from the University

The Taste Buds Educational Sessions are funded and administered by the campus Culinary Services. The program has also gained support from Marketing and Information Technology departments on campus. Such support has allowed the program to increase outreach efforts and create multi-media educational materials.

Challenges to Success

Although the program has gained significant assistance with outreach efforts, internal marketing is a consistent challenge. Since students constantly rotate through the Residential Halls at the end of each school year, program leads must continually do outreach to maintain student awareness of the program.

Year Established:

2013

Program Type:

Community Based Learning

Content Areas:

Culinary Education, Nutrition and Healthy Living

Contact Information:

tastebuds@ucsd.edu

Website:

hdh.ucsd.edu/tastebuds

Case Study:

Associated Students Food Bank at UC Santa Barbara

Year Established:

2011

Program Type:

Student Club

Content Areas:

Food Access, Cooking and Nutrition, Food Justice, Food Education

Number of members (per year):

10 students and employees

Contact Information:

Katie.freeze@gmail.com

Website:

foodbank.as.ucsb.edu

General Background

The AS Food Bank addresses food insecurity on the UCSB campus by providing students with both fresh and non-perishable food. The organization is located in the University Center on campus and features a food pantry, study space, and an area equipped for food preparation. The space has serviced over 5,000 individuals since its inception in 2011. As part of the UC Food Security Team, the AS Food Bank has made plans for future organization and expansion, including the possibility of expanding food options to include fresh dairy and bread.

How Experiential Learning is Supported

The AS Food Bank is unique from many traditional food pantries, because it provides integrative educational programs in addition to providing food. Recent programs include recipe and food preparation courses to help participants maximize available ingredients and become acquainted with unfamiliar produce. By increasing both access to food and nutritional literacy, the Food Bank has created a holistic approach to tackling food insecurity.

Additionally, student organizers learn public speaking, marketing, and leadership skills. Through their work in the physical Food Bank space, as well as in community outreach efforts, students gain experience in running a successful operation.

Impacts On and Off Campus

The AS Food Bank has partnered with multiple student organizations on the UCSB campus. In collaboration with the AS Recycling and Department of Public Worms, the Food Bank has been supporting the development of the Edible Campus project. The project aims to expand edible landscaping on campus. The availability of local, fresh food on campus will allow the Food Bank to provide produce more often than is currently available. The Food Bank is also a principal organizer of the California Higher Education Food Summit, which drew over 150 attendees in its first year.

Support from the University

Funding for the Food Bank is provided through a campus-wide lock-in fee, as well as the Global Food Initiative. This funding supports 6 paid employees, who work directly with clients to ensure that the Food Bank is addressing the needs of the community. The last year has been critical in the AS Food Bank's growth, with substantial support from UCSB Chancellor Yang, the Campus Food Security Team, and the Global Food Initiative. Partnerships with UCSB faculty have also been critical for ensuring the continuity of the Food Bank on campus.

Challenges to Success

In order to successfully expand both the food pantry and educational programs, the AS Food Bank requires more physical space. A larger space would increase visibility and accessibility. An expansion would allow the Food Bank to stock larger quantities of food. It also opens up the possibility of adding a refrigerator to provide fresh food on a daily basis.

Case Study:

Department of Public Worms at UC Santa Barbara

General Background

Originally established as part of the student-led recycling program, the Department of Public Worms has since evolved into a dynamic, self-sustaining group. DPW is mainly student-run and offers educational programs to both students and community members. The programs aim to reduce food waste, divert what is wasted back into the land, and to educate the UCSB community on how to play an active role in diverting the waste stream on campus.

How Experiential Learning is Supported

Through their various projects, the Department of Public Worms provides hands-on learning opportunities across campus. The group manages on-site vermicomposting bins, compost piles, and demonstration garden plots. These projects are used to facilitate student-run educational programs. Program highlights include the importance of composting and how to start and maintain personal compost systems. As liaisons between the organization and the student community, student leaders gain valuable experience in outreaching and public speaking. Facilitating educational programs adds to this experience, as students gain lesson planning and teaching skills.

Impacts On and Off Campus

Since 2005, DPW has become a center of compost expertise on campus. The group is able to take a portion of the food waste from Dining Services and turn it into compost, a valuable resource in the production of fresh food. This process creates a closed-loop food system on campus. The "Edible Campus Project" is DPW's newest addition to this system. In partnership with the AS Food Bank and UCSB Sustainability, the project aims to establish a farm on campus to promote sustainable food production and waste diversion. In addition to in-person services, DPW also provides on-line resources, including composting guides. These resources have expanded the program's reach off-campus and subsequently have opened up the conversation about food waste in the surrounding community.

Support from the University

Although the program receives support from campus faculty and staff, the greatest contribution comes from a cross-campus lock-in fee paid by students each quarter. This fee guarantees that DPW will have sufficient funding without having to rely on funding from campus departments. The increase in student-generated funding has allowed them to strengthen current programs and prepare for future expansion.

Challenges to Success

Expanding compost systems and food production on campus requires increased access to land. This need has proved to be the organization's biggest challenge, since open space is very limited on the UC Santa Barbara campus. DPW will continue to work adamantly with campus administration to secure a permanent space for their expansion.

Dept of Public Worms

Year Established:
2005

Program Type:
Student Club

Content Areas:
Food Waste, Farm or Garden

Number of members (per year):
6 students
1 staff

Contact Information:
Sarahs@as.ucsb.edu

Website:
Recycling.as.ucsb.edu

Case Study:

Center for Agroecology & Sustainable Food Systems at UC Santa Cruz

Year Established:

1967

Program Type:

Courses, Co-Curricular, Internships

Content Areas:

Farm or Garden, Food Education

Number of members (per year):

236 students,
39 Apprentices

Contact Information:

dmparr@ucsc.edu

Website:

casfs.ucsc.edu

General Background

The Center for Agroecology and Sustainable Food Systems (CASFS) grew out of a campus garden started by philosophy faculty and master gardener Alan Chadwick and undergraduate students. The student garden expanded to become the nationally-recognized UC Santa Cruz Farm and Garden Apprecenticeship in Ecological Horticulture Program, and later CASFS. CASFS is nationally recognized for its Apprenticeship program, which provides a hands-on learning opportunity for individuals outside of the UCSC community.

How Experiential Learning is Supported

The center has recently developed new opportunities for UCSC undergraduates. Upper and lower division internships now give students a chance to work alongside the Apprenticeship program. These quarter-long internships allow students to rotate through different work sites and mentors on campus. This provides diversity in work environments and teaching styles. Additionally, some internships offer the possibility for students to personally design and execute projects with the assistance of CASFS staff. Students also have the opportunity to participate in the center through an Agroecology Practicum (ENVS 133). The course offers hands-on work in the UCSC farms and gardens. In addition to undergraduate student opportunities, the farm acts as a living laboratory for graduate students doing research.

Impacts On and Off Campus

Professors from a variety of academic courses—ranging from art to insect ecology—often use the farm to complement lecture-based curriculum. The center also hosts a number of programs for the community including: the Life Lab Science Program, Food What?!, Friends of the Farm, and Grow a Farmer and field-based labs. These programs, combined with the Apprentice program, bring thousands of community members to the farm each year. CASFS's success has inspired universities across the country to use it as a model for creating new student and community programs.

Support from the University

UC Santa Cruz has been able to support CASFS with access to land for agricultural purposes over the past almost 50 years. The UCSC farm now runs on 30 acres, while the Chadwick Garden contributes another 3 acres. Having access to the large amount of land enables CASFS to experiment with a diversity of sustainable agricultural practices, and allows community programs to run simultaneously.

Challenges to Success

In recent years, funding for faculty and staff at the center has increased through private and public non-university funding sources. However, it remains difficult for the center to give the desired attention to all undergraduate, graduate, and community programs. Similarly, the center must balance using the farm as an educational space as well as a site for commercial production. The center continues to face funding challenges. Although the University provides considerable funding for the farm's operation, CASFS programs, the Apprenticeship, research, and undergraduate opportunities rely heavily on foundation grants and gifts, produce sales, and tuition from the apprenticeship program.

Case Study:

Program in Community and Agroecology at UC Santa Cruz

General Background

The Program in Community and Agroecology (PICA) was founded on the principles of social justice and sustainability. The program combines a residential community and an experimental garden into a robust educational experience. The garden is used to host community gardening workdays, educational workshops, and weekly student dinners. PICA also highlights the importance of food justice and urban agriculture. To support such conversations, the group has incorporated an urban garden demonstration site into its educational programs.

How Experiential Learning is Supported

As a sustainable residential education program, PICA allows students to participate through a variety of roles. Each quarter, the program offers eight positions within a main leadership team and eight internships. There is also an opportunity for students to live in the adjacent housing community and participate in a residential-based program. Participants at each level gain experience through hands-on gardening lessons, leading garden tours, and organizing or participating in sustainability workshops. PICA has a strong focus on leadership development and training, with special attention on grant writing, facilitation, fundraising, communications, and mentorship skills.

Impacts On and Off Campus

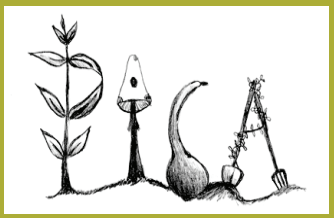
In order to ensure that their programs reach students across the university, PICA has established student garden market carts in various areas of campus. These carts are used both to sell fresh, locally grown produce and to raise awareness about sustainable agriculture and food justice issues. PICA also teams up with a number of academic courses across multiple colleges to provide an outdoor classroom. This partnership has allowed professors to expand the experiential learning opportunities offered in traditional lecture-based courses. Although the residential community is an important aspect of PICA, the program is open to the entire Santa Cruz community. Community members are welcome to participate in Saturday garden workdays, which create a deeper connection between the UCSC campus and the surrounding town.

Support from the University

Students in PICA have been successful in writing grants through university-sponsored programs. Through the Campus Sustainability Council, Measure 43, and the Carbon Fund, PICA has been able to raise over $17,000 for educational projects. The program also receives support from a Faculty Director, Professor Stacy Philpott.

Challenges to Success

Although students have had success in funding the residential education program, it has been difficult for the organization to find stable funding for staff positions. These positions are vital to providing students with administrative and personal support in both the garden and the residential community. Thus far, the program has been funded by a patchwork of grants, but would be able to thrive if consistent funding was made available.



Year Established:

2002

Program Type:

Internship, Co-Curricular, Paid Employment, Residential Based Learning

Content Areas:

Farm or Garden, Food Education, Food Waste, Food Justice, Food Access Cooking and Nutrition

Number of members (per year):

~210 students
40 community members

Contact Information:

omthom@ucsc.edu

Website:

pica.ucsc.edu

Experiential Learning Opportunities through the UC Division of Agriculture and Natural Resources (UCANR)

Research and Extension Center System

ANR hosts 9 REC facilities across the state. The centers host opportunities for undergraduates to work on research projects with professors or as paid interns over summer. They also organize programs for community college students with the opportunity to transfer to UC Berkeley. The centers also lead youth education programs in agriculture and community building.

Graduate Students in Extension

GSE is currently being piloted on the UC Berkeley campus. Graduate students are accepted to the program through a competitive grant process. The participants are then required to incorporate Cooperate Extension into their personal research, while partnering with both a campus department and community organization. Additionally, participants organize seminars and workshops on campus. These workshops address both internal skills (info graphics, surveys) and external relations (marketing, etc.).

San Benito County Youth Programs

San Benito County Cooperative Extension offers positive youth development programs, focused on leadership and life skills for youth ages 5-19. Additional programs are offered for educators to help build competency and capacity around delivering science. Associated curriculum stresses the demonstration of concepts, rather than merely feeding students information. This process gives students opportunities to collaborate and build hands-on skills.

Master Gardeners and Food Preservers

The Master Gardeners program is hosted through 51 Cooperative Extension offices throughout California. Each office trains between 15-40 volunteers each year, with participants coming from all backgrounds. Master Food Preserver programs host 300 volunteers in 31 offices. Volunteers in both programs learn hands-on agricultural skills and in turn lead community workshops. Workshops include: planting seeds, propagating, planting vegetables, pruning, etc. Students in communities with Master Gardener and Food Preserver programs are encouraged to get involved through corresponding campus departments. In the future, independent study could be used to incentivize students to participate in the program.

4-H: Youth Development & Mentoring Programs

4-H is a national program that is hosted through Cooperative Extension offices in California. The program champions the constructivist theory, in which concepts are learned through hands-on applications. Youth involved in 4H have access to leadership opportunities as summer camp instructors. As instructors, teens are trained to plan and direct camp activities that focus on hands-on skill building. There is currently talk of incorporating UC students into 4-H programs through internship opportunities.

Elkus Ranch Environmental Education Center

Elkus Ranch, located in San Mateo County, provides an outdoor classroom for students to build hands-on skills in nutrition, horticulture, and development. The center hosts the Healthy Living Ambassadors Program, which trains teenagers to help build and lead elementary school garden programs. There are possible future opportunities for UC students to participate in the program as mentors to HLAP participants. The center also hopes to work closely with UC students to expand research opportunities on the land.

The Future of Experiential Learning in UC Food Systems Education

Courtesy of Jocelyn Hsu

The University of California system—including all ten campuses and the Division of Agriculture and Natural Resources—offers students a variety of experiential learning opportunities both on and off campus. Some campuses provide a larger quantity and variety of programs than others. Experiential learning opportunities are constantly expanding across the entire UC system. Now, each campus has at least one student-led farm or garden; a majority host student food cooperatives; many offer internships through campus dining services. UC campuses also collectively offer abundant academic courses that incorporate hands-on learning components. These courses teach students theoretical concepts as well as their applications to society and living systems.

An inventory of experiential learning opportunities in the UC system has been created in tandem with this report, and can be accessed through the UC Global Food Initiative website. Together, this report and the inventory can help students, faculty, staff and administrators connect and learn across the UC system. Although there is currently an impressive spread of experiential learning opportunities, each campus has the potential to increase or improve in at least one program content area. Individuals and groups that are interested in starting or expanding opportunities on their campus should connect with similar organizations on other campuses that can offer guidance in creating and maintaining a successful program. Likewise, existing organizations with similar interests are encouraged to communicate across campuses in order to share best practices and maximize program effectiveness. Additionally, this report and inventory can help students find experiential learning opportunities on their own campus. Making it easier for students to connect with programs that interest them will in turn increase student participation on campus and further expand experiential learning programs.

As current programs continue to grow and new programs are created, students will have a bounty of opportunities to engage in hands-on, reflective learning. The University of California is already a leader in integrative food systems research and curricula, and a significant opportunity exists for the UC to encourage other institutions to expand similar learning programs. Workshops and meetings involving participants across campuses will help facilitate discussions on the current state of experiential learning in the UC system around food and agriculture. Participants in such workshops could also cooperatively develop plans for strengthening experiential learning on each campus through curriculum and professional development.

With sufficient and stable funding and solid administrative and faculty support, the future of experiential learning in food systems education is bright. Through cross-campus cooperation among key educators and leaders and support from the Global Food Initiative, the University of California is poised to strengthen hands-on learning opportunities for students. These opportunities prepare students to be highly effective participants and leaders in food systems, from local to global levels.

Courtesy of Jennifer Sowerwine