

Insights on Using Student Farms and Facilities for Experiential Learning from the NACTA 2022 Experiential Learning Workshop

Introduction

The NACTA Experiential Learning Committee, following repeated interest during the virtual NACTA conferences of 2020 and 2021, hosted a workshop. This workshop explored the dimensions and dynamics of student-led, student-oriented campus farm entities as an example of high impact experiential learning with a focus on the operation and development of experiential learning programs on farms and facilities. The workshop lasted two hours, had 60 registered attendees and consisted of a panel discussion and a small group activity. The panel consisted of four faculty that actively teach classes and guide experiential learning programs on student-oriented campus farm entities (Table 1). The purpose of this Teaching Tip is to provide those unable to attend the workshop with the highlights of the panel discussion. We also have another Teaching Tip that covers the small group activity.

How do panelists conduct experiential learning on farms/facilities at their institutions?





Dr. Mulvaney, in addition to teaching in the Department of Animal Sciences at Auburn University also is the Coordinator of Leadership and Student Development. In these roles he works with the Alabama Agricultural Experiment Stations to facilitate assorted Frameworks for Learning programs, leadership development activities related to the Alabama Agricultural Land Grant Alliance and developed several courses in leadership and communication leading to the development of a minor in leadership studies in the College of Agriculture. He has also championed the use of learning laboratories (campus farms/facilities) within his department. This can be seen in: Intro to Animal Sciences, Livestock Welfare and Practicum, Value Based Marketing, and Modern Livestock Systems.

Dr. Cowan manages Kansas State's Willow Lake Student Farm (WLSF) and advises the WLSF Club, an organization created to both learn about and support WLSF. The farm has played a prominent role as demonstration and lab space for several of Dr. Cowan's classes and has served as a model or case study site for courses in horticulture, food science, entomology, and interior architecture and industrial design. Students have cited course-related activities at WLSF as having been among the most impactful in their respective courses. Additionally, Dr. Cowan is investigating how in-person permaculture design certificate (PDC) courses create opportunities for students to navigate the information being presented—embodied through hands-on activities and embedded both in the physical environment (a permaculture site) and in a network of co-

learners—and whether the PDC model can be extended to traditional college courses and Extension outreach.

Dr. Porr oversees the farms and facilities at Murray State and in this role, she is involved in working with undergraduate students to facilitate experiential learning on various university farms. These opportunities include an active faculty-managed/student-run show pig operation; student workers on the beef cattle, swine, and equine animal farms, as well as in the areas of crop science, horticulture, agronomy, and at the university arboretum; and undergraduate research opportunities that utilize resources on the various farms. Under faculty guidance, students engaged in research often present and publish their projects.

Table 1- Panelists for NACTA 2022 Experiential Learning Workshop

 <p>Michelle Santiago- Moderator</p>	 <p>Don Mulvaney- Panelist & Committee Chair</p>	 <p>Jeremy Cowan- Panelist</p>	 <p>Shea Porr- Panelist</p>
<p>Dr. Michelle Santiago is a Professor of Agribusiness and Chair of the Department of Agriculture at University of Central Missouri.</p>	<p>Dr. Don Mulvaney is an Associate Professor at Auburn University's Department of Animal Sciences. Over his career at Auburn, he has developed or taught 33 courses in Animal Sciences, Leadership and Ag Communication, all rooted in praxis. Including some courses heavily rooted in experiential learning on our campus equine, swine, beef and meat lab farms/facilities (aka: learning laboratories)</p>	<p>Dr. Jeremy Cowan is Assistant Professor of Sustainable Food Production Systems and a member of the Urban Food Systems faculty in the Department of Horticulture and Natural Resources at Kansas State University. He oversees K-State's Willow Lake Student Farm (WLSF) and advises the WLSF Club. Dr. Cowan's research interests include how experiential learning environments can improve (or hinder) the adoption of sustainable agriculture techniques and technologies.</p>	<p>Dr. Shea Porr is the Department Head of Murray State University's Animal/Equine Science Department. She has held several positions in both academia and industry before joining Murray State University. Currently, she teaches and advises students, coordinates the Racer 1 program, and oversees the farms and facilities. She is involved in working with students to facilitate experiential learning on various university farms.</p>

How do panelists incorporate reflections in experiential learning activities?

The panelists emphasized reflection and discussion as tasks in much of their experiential learning activities. Dr. Mulvaney built in a 'journaling' requirement to his practicum class at Auburn that forces students to go beyond stating "we did X in class." He supported student confidence by giving frequent critical feedback on entries throughout the semester. Similarly, Dr. Porr assigns weekly summary and reflections in her equine science classes that are guided by rubrics. Those rubrics change priorities over the course of the class sequence; initially emphasizing the summary portion but changing to prioritize the reflection in the second class. Additionally, she incorporates reflective components into extra credit assignments.

In contrast, Dr. Cowan requires reflections with each hourly report in the Small Farm Practicum. As an independent study course, with individualized learning objectives, each hourly report addresses what was done during that day on the farm, and how those activities contributed to the students' overall learning objectives. Students in his fruit and vegetable production courses only see the farm for specific lab sessions. Since those activities are structured towards group activities, with learning objectives that span both classroom and hands-on, field-based instruction, those courses end with an on-farm 'debriefing' at the end of the semester. This allows all course activities to be reconciled with the courses' learning objectives, and to have the impact of the student's efforts right in front of them, as they are discussed.

How to deal with low student engagement during experiential learning?

A never-ending challenge for educators is motivating students in the classroom. Students need to be fully engaged in activities to maximize the benefits of experiential learning. Dr. Cowan discussed that getting students involved in all aspects of the activity while in the class can move students out of the mindset of just volunteering their participation. This can be facilitated by assisting the students by contextualizing the activities with what students are interested in, and then work on teaching students how to find their own context and broaden it. Students that don't connect with an activity tend to make their dislike known in student evaluations. This can be discouraging for educators that want to incorporate experiential learning activities in class. Dr. Cowan has found that many of the comments he's received expressed appreciation for the opportunity to apply theoretical information from class on the farm, and other students like the opportunity to be hands-on in nature.

How can non-farm affiliated faculty do experiential learning on farms/facilities?

A great way for any educator to start doing experiential learning of any type is to find a partner. Dr. Porr shared how she has been facilitating introductions between faculty in her department and Agriculture. Communication and Education departments to develop video resources and to create cross-class assignments for students. Similarly, Dr. Cowan shared how at Kansas State, students in Agriculture. Education and Communication are required to take some agriculture-production courses which provide opportunities for faculty to design activities that play to the strengths of different majors in their classes. Embracing this idea, an audience member shared

how at their institution students organize public events for their department and how they'd like to involve students and faculty in other departments in their college with these events.

Fundamentally, experiential learning is a process for constructing knowledge and understanding from real-world experiences. Use of experiential learning to build skills and facilitate the progression from theory to practice may be accomplished in numerous ways but few may exceed those available through university-based farms. Our panelists shared their own strategies and challenges faced when leveraging campus farms and facilities within the classroom. Agricultural programs as an applied science have a responsibility to prepare students for their future careers and providing structured hands-on learning within the classroom is an important first step to students progressing to professional agriculturalists. We hope this discussion is the first of many within NACTA and at the local institution level.

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