

A Day on the Farm: A Mutually Beneficial Partnership Between a Middle School SBAE Program and Pre-Service SBAE Teachers

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Introduction

Middle school (grades 6th through 8th) standards increasingly emphasize college and career readiness (Wang & Wang, 2025). Early engagement in postsecondary exploration has the potential to support social mobility by increasing students' awareness of diverse opportunities (Lombardi et al., 2022; Rutledge & Gnilka, 2022). These initiatives are most impactful when students participate actively in the career exploration process (Marciniak et al., 2020; Wang & Wang, 2025). As young students begin to explore postsecondary options, it is imperative for universities to target these students in interactive recruitment efforts (Lombardi et al., 2022).

As career and technical education expands, school-based agricultural education (SBAE) programs are rapidly growing within California middle schools (Englin et al., 2025). This expansion highlights an increasing need for educators prepared to teach agricultural content in the middle grades (Jones et al., 2020). However, teaching positions in the lower grades may be less appealing to SBAE teachers who typically are largely focused on grades 9-12 (Golden et al., 2014). To develop a strong pipeline of middle school SBAE teachers, preparation programs should provide meaningful experiences focused on the unique context of middle grade learners.

Experiential learning opportunities which allow SBAE pre-service teachers to work directly with middle school students could be a valuable tool in building their self-efficacy and interest in teaching in a middle school program (Toombs et al., 2022). To achieve this outcome, a faculty member in SBAE teacher preparation at California State University, Chico (Chico State) collaborated with a middle school SBAE teacher at Palermo Middle School to design and facilitate a Day on the Farm experience where middle school students toured Chico State farm facilities and participated in workshop stations facilitated by Chico State SBAE pre-service teachers.

Methodology

The idea for the Day on the Farm event originated when Palermo Middle School's agriculture teacher requested a Chico State Farm tour and an agricultural careers presentation for students. Through discussions, an idea emerged to include SBAE pre-service teachers enrolled in AGED 421, a senior-level teaching methods course, for an experience with mutual benefits for both Palermo Middle School students and Chico State SBAE pre-service teachers. The objectives of the event were to: (1) Engage Palermo Middle School students in an immersive experience at Chico State Farm for recruitment and career exploration activities, and (2) Provide SBAE pre-service teachers with experience in planning and delivering instruction for middle school students.

SBAE pre-service teachers in AGED 421 were organized into six groups. One group was selected to lead farm tours while the remaining five groups each developed and delivered a 10-minute active learning mini lesson on an agricultural topic aligned with Palermo Middle School's curriculum. Topics included animal identification, grape production, soil testing, cold metal hand tools, and agricultural equipment. Farm tours included visits to the various livestock, crops, and greenhouse units on the premises. Career opportunities in these various facets of agriculture were included in both farm tours and station rotations. The planning, facilitation, and reflection activities were graded components of AGED 421.

This innovative idea project was based in experiential learning theory (ELT). Activities were designed for both middle school and university students to include the four components of Kolb's (1984) ELT model. The abstract conceptualization and active experimentation steps were completed prior to the Day on the Farm event thorough the middle school agricultural courses and SBAE pre-service teachers' training in lesson facilitation. Concrete experiences included the

participation in and facilitation of farm tours and station rotations. Reflection occurred for middle schoolers at the end of the event through small group discussions. SBAE preservice teachers participated in both group verbal reflection and written personal reflections through AGED 421.

Results

In April 2025, 85 Palermo Middle School students and 24 SBAE pre-service teachers participated at the Day on the Farm event. The day’s agenda can be found in Table 1 below. Middle school students were separated into two groups and cycled between farm tours and workshop stations. Both event objectives were met. Middle school students responded positively, sharing reflections such as, “I want to come here for college now,” “I had so much fun learning about all the ag careers,” and “This was the BEST day!” All SBAE pre-service teachers were able to interact with and instruct middle school students prior to their student teaching experience. They were challenged to maintain student engagement and manage the pace of instruction within the allotted time. There was a division in the group’s interest to teach middle school in the future with some expressing an increased openness to the possibility while others confirmed a preference for high school instruction.

Table 1. Day on the Farm Agenda

Time	Activity
8:00 am to 8:50 am	Pre-service SBAE teachers arrive for set up
9:00 am to 9:10 am	Middle school students arrive and are divided into groups
9:15 am to 10:05 am	Group A: Farm Tours Group B: 5 Station Rotations
10:10 am to 10:20 am	Snack Break
10:25 am to 11:15 am	Group A: 5 Station Rotations Group B: Station Tours
11:20 am to 11:30 am	Final reflections with middle school students
11:30 am to 12:00 pm	Pre-service SBAE teachers clean up and reflection discussion

Future Plans

There are plans for future iterations and expansion of a Day on the Farm event for middle school students. We have considered opening the event to other area middle school SBAE programs, potentially with separate morning and afternoon sessions. Strengthening alignment between station topics and recently taught middle school curriculum will deepen experiential learning connections for middle school students (Kolb, 1984). Recruitment efforts may be enhanced by incorporating additional Chico State College of Agriculture faculty and administration in programming efforts. With additional funding and capacity, the addition of providing lunch for participants is also being explored.

Resources Needed

A budget was constructed to include \$200 for the inaugural Day on the Farm event. These funds were dedicated to snacks and water for the refreshment time between group transitions. Additional resources outside of these purchased refreshments included flip charts, markers, name tags, pavilion facilities (building space, tables, chairs, room partitions, etc.), and farm tour equipment, all of which were pre-existing resources. Additionally, Chico State College of Agriculture recruitment staff provided swag for student participants. Palermo Middle School provided transportation and supervision of their students. If the event is to be expanded, additional funding, potentially from participate fees or grant funding, would be required.

References

- Englin, J., Roberts, R., Stair, K. S., & Burnett, M. F. (2025). Emerging trends for middle school agricultural education in the United States: A scoping review. *Journal of Agricultural Education, 66*(1), Article 6. <https://doi.org/10.5032/jae.v66i1.2783>
- Golden, M. E., Parr, B., & Peake, J. (2014). An assessment of the needs of middle school agricultural education instructors in Georgia. *Journal of Agricultural Education, 55*(5), 222-234. <https://doi.org/10.5032/jae.2014.05222>
- Jones, S., Doss, W., & Rayfield, J. (2020). Examining the status of middle school agricultural education programs in the United States. *Journal of Agricultural Education, 61*(2), 41-56. <https://doi.org/10.5032/jae.2020.02041>
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall, Inc.
- Lombardi, A. R., Rifenburg, G. G., Hicks, T., Taconet, A., Challenger, C. (2022). College and career readiness support for youth with and without disabilities based on the National Longitudinal Transition Study 2012. *Exceptional Children, 89*(1), 5-22. <https://doi.org/10.1177/00144029221088940>
- Marciniak, J., Hirschi, A., Johnston, C. S., & Haenggli, M. (2020). Measuring career preparedness among adolescents: Development and validation of the career resources questionnaire. *Journal of Career Assessment, 29*(1). <https://doi.org/10.1177/1069072720943838>
- Rutledge, M. L. & Gnilka, P. B. (2022). Breaking down barriers: A culturally responsive career development intervention with racially minoritized girls of color. *Journal of College Access, 7*(1), 72-98. <https://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=1143&context=jca>
- Toombs, J. M., Eck, C. J., & Robinson, J. S. (2022). The impact of a project-based learning experience on the SAE self-efficacy of preservice teachers. *Journal of Agricultural Education, 63*(1), 29-46. <https://doi.org/10.5032/jae.2022.01029>
- Wang, D. & Wang, G. (2025). Improving career readiness in middle school students: A systemic review of intervention approaches. *Frontiers in Psychology, 16*. <http://doi.10.3389/fpsyg.2025.1582195>