

# Outcomes and Impact Quarterly

---

Volume 2  
Issue 4 *Impacts on youth development, mental health, and agricultural productivity*

Article 3

---

12-5-2022

## Evaluating the Utah Agriculture in the Classroom Preservice Teacher Seminar

Amelia J. Miller  
*Utah State University, amelia.miller@usu.edu*


Zak A. Konakis  
*Utah State University, zak.konakis@usu.edu*

Emily Yoshikawa-Ruesch  
*Utah State University, emily.ruesch@usu.edu*

Debra M. Spielmaker  
*Utah State University, debra.spielmaker@usu.edu*

Denise Stewardson  
*Utah State University, denise.stewardson@usu.edu*

Follow this and additional works at: <https://digitalcommons.usu.edu/oiq>

 Part of the [Agricultural Education Commons](#), and the [Educational Assessment, Evaluation, and Research Commons](#)

---

### Recommended Citation

Miller, Amelia J.; Konakis, Zak A.; Yoshikawa-Ruesch, Emily; Spielmaker, Debra M.; and Stewardson, Denise (2022) "Evaluating the Utah Agriculture in the Classroom Preservice Teacher Seminar," *Outcomes and Impact Quarterly*. Vol. 2: Iss. 4, Article 3.

DOI: <https://doi.org/10.26077/b9b9-39a8>

Available at: <https://digitalcommons.usu.edu/oiq/vol2/iss4/3>

This Article is brought to you for free and open access by the Extension at DigitalCommons@USU. It has been accepted for inclusion in Outcomes and Impact Quarterly by an authorized administrator of DigitalCommons@USU. For more information, please contact [digitalcommons@usu.edu](mailto:digitalcommons@usu.edu).



## **Evaluating the Utah Agriculture in the Classroom Preservice Teacher Seminar**

*Amelia J. Miller, Zak A. Konakis, Emily Yoshikawa-Ruesch, Debra M. Spielmaker, Denise Stewardson*

### **Abstract**

*Utah Agriculture in the Classroom hosts preservice teacher seminars in partnership with five universities across the state. From 2017-2021, approximately 600 college students participated in these seminars. The preservice seminars provided agriculture-themed lessons aligned to state educational standards for future teachers to use as they build resources for their classrooms.*

### **Introduction**

In 1981, the U.S. Department of Agriculture (USDA) organized a task force to discuss the importance of agricultural literacy. This task force recommended that the USDA coordinate national agricultural classroom literacy and assist states to organize their own programs. Currently, *Agriculture in the Classroom* organizations implement programming to increase agricultural literacy among pre-kindergarten, 12<sup>th</sup>-grade teachers, and students (NAITCO, 2020). The *Utah Agriculture in the Classroom* (AITC) program seeks to increase pre-service teachers' agricultural understanding, provide lesson plans for future use, and increase self-efficacy in using agriculture as a context for addressing content standards.

The purpose of this study was as follows; (a) to evaluate the short-term preservice teacher seminar outcomes, including teacher perceptions of agriculture, use of agriculture as a context to teach curriculum standards, and intended use of seminar resources, and (b) to evaluate the mid-term preservice teacher seminar outcomes including actual use of seminar resources, self-efficacy to use agriculture as a context for addressing curriculum standards, and student perceptions of agriculture after the use of these lessons.

### **Response and Target Audience**

The target audience for AITC is pre-service agricultural teachers in Utah. An approach that AITC uses to increase agricultural literacy is partnering with universities across the state of Utah including Weber State University, Utah Valley University, University of Utah, Brigham Young University, and Utah State University to host preservice teacher seminars reaching nearly 600 elementary education students annually. These one- to three-hour seminars occur during the fall and spring semesters at the respective institutions and are typically held face-to-face, except for Zoom presentations necessitated by the COVID pandemic.

A logic model for AITC was first developed (Miller et al., 2022) and approved by the Utah AITC program leaders. This logic model was used to determine the short- and mid-term impacts of the elementary preservice program. This pragmatic approach aligns with Stufflebeam's Context, Input, Process, Product (CIPP) evaluation theory (Mertens & Wilson, 2019). An exit survey is used to measure short-term outcomes after each seminar. The exit survey includes 22 questions, with 13 questions focused on the teachers' change in agricultural knowledge as a

result of the workshop. The remaining questions ask participants about the overall delivery of the seminar.

A follow-up survey was used to assess the medium-term outcomes of the seminar. This survey was sent to all participants (2017-2021) who had provided their contact information ( $N = 231$ ). The medium-term survey data collection was active for two weeks. Utah AITC program provided an incentive of \$20 in educational resources to each mid-term respondent. Qualtrics was used for survey creation, distribution, and descriptive analytics. SPSS was used for further statistical analysis of responses.

Evaluation results were used to assess the usefulness of resources to educators and determine if program outcomes regarding agricultural literacy were met. This research aligns with the American Association for Agricultural Education's (AAAE) Research Priority 1: What methods, models, and programs are effective at informing the public about agricultural and natural resources issues (Roberts & Brashears, 2016)?

### **Outcomes and Impact**

From 2017 through 2021, 584 preservice teachers responded to the short-term survey immediately following the Utah AITC seminar. When asked about their growth as a result of the seminar, 70% of the participants indicated they agreed or strongly agreed their agricultural knowledge increased after the seminar. Most participants (98%) stated it was likely or very likely they would use the resources provided in the seminar and explore the Utah AITC website for further resources. Eight (8) questions addressed the delivery of the seminar; all responses were positive. Of the 584 responses, more than 85% rated the pace, organization, and relevance of the presentation as very good.

For the medium-term survey, twenty-three participants ( $n = 23$ , response rate = 10%) completed the survey, with a high number of participants being unreachable. Of the 23 respondents, one graduated from their undergraduate teaching program in 2018 (4%), five in 2019 (22%), 12 in 2020 (52%), four in 2021 (18%), and one had not yet graduated from college (4%). Upon graduation, 21 respondents taught for some duration; 18 (86%) are currently teaching, and 2 (9%) entered the teaching profession, but at the time of the survey were no longer teaching. One participant was not currently teaching but was working with elementary students and teachers in some capacity.

A desired outcome of the seminar was to increase the teachers' self-efficacy in using agriculture as a context to meet curriculum standards. Mid-term respondents felt somewhat comfortable using agriculture as a context to teach lessons in their classes ( $n = 22$ ,  $M = 2.67$ ,  $SD = 0.8$ ). While teachers indicated comfort using agricultural themes within their lessons, several ( $n = 6$ ) stated they had not used lessons from the Utah AITC website in their classrooms. More respondents ( $n = 11$ ) indicated they had not yet used these lessons but planned to in the future.

Of the lessons teachers did use in the classroom, most lessons (50%,  $n = 4$ ) were tied to science educational standards, while others were connected to nutrition/health (25%,  $n = 1$ ) or reading (25%,  $n = 1$ ). Participants were asked to comment as to why they had not used lessons from the

Utah AITC website following participation in the webinar. The word “forgot” was used three times, one person stated they were unsure how to incorporate the lessons, and one person stated they have a long list of requirements to accomplish within their class; therefore, these lessons did not fit ( $n = 20$ ). One respondent indicated they would not use the lessons because their values did not align with the material.

### **Public Value and Next Steps**

While the mid-term survey obtained a low response rate, the results have provided insight for Utah AITC program planners. The short-term results indicate preservice teachers found the seminar informative and they planned to use these in the future. However, mid-term results indicate participants did not follow through in their own classrooms. To encourage graduates to use the agricultural literacy materials, it is recommended Utah AITC find ways to follow up or engage with teachers in professional learning communities during their first few years of teaching to remind the new educators about the resources and how to use them to address curricular standards. Utah AITC staff should also consider the timing of the seminar within the undergraduates’ course sequence to ensure the most effective placement for more immediate implementation of the resources. In other states, AITC programs should consider evaluating their programs to determine the effectiveness of this model to address AAAE Research Priority 1.

### **References**

- Mertens, D. M. & Wilson, A. T. (2019). *Program evaluation theory and practice* (2<sup>nd</sup> ed.). Guilford Press.
- National Agriculture in the Classroom Organization. (2020). *About Agriculture in the Classroom*. National Agriculture in the Classroom.  
<https://www.agclassroom.org/get/about/>
- Roberts, T. G., Harder, A., & Brashears, M. T. (2016). *American Association for Agricultural Education national research agenda: 2016-2020*. Gainesville, FL: Department of Agricultural Education and Communication.  
[http://aaaeonline.org/resources/Documents/AAAE\\_National\\_Research\\_Agenda\\_2016-2020.pdf](http://aaaeonline.org/resources/Documents/AAAE_National_Research_Agenda_2016-2020.pdf)
- Miller, A.J., Konakis, Z.A., Yoshikawa-Ruesch, E. & Spielmaker, D.M. (2022). *Utah Agriculture in the Classroom Preservice Teacher Workshop Logic Model Theory of Change Program based on the Social Science Theory of Self-Determination Theory*. National Center for Agricultural Literacy.  
[https://cdn.agclassroom.org/ncal/research/program/Preservice\\_Logic\\_Model.pdf](https://cdn.agclassroom.org/ncal/research/program/Preservice_Logic_Model.pdf)