

Agricultural Education on the Move FFA partner training day

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Introduction/Need for innovation or idea

Agriculture Education on the Move (AEOTM) was established in 2011, when Missouri Soybean Merchandising Council saw a need for implementing agriculture education in elementary classrooms across the state. In 2018, the Missouri legislature approved a bill to authorize the Department of Elementary and Secondary Education to establish a pilot program to provide agricultural education in elementary schools, then to determine how to best implement a program statewide. Agricultural content integration into the general curriculum can help students learn through experiential learning (Mabie & Baker 1996). Many elementary teachers believe agriculture provides situatedness, connectedness, and authenticity to other content areas, but also report lack of instructional resources as a barrier (Knobloch, et al. 2007).

AEOTM is now managed as a program of Missouri Farmers Care, and has evolved to provide age-specific, industry-validated agricultural information to consumers through both school-based teaching and special events. Within schools, AEOTM educators deliver 3rd grade curriculum through 10 weekly lessons. Each hour-long lesson aligns the journey of products grown by Missouri farm families with key classroom objectives and standards in core subjects. In 2020, AEOTM began a partnership with Missouri FFA, where high school FFA members can become AEOTM educators in their own schools. AEOTM staff and university faculty conducted a needs assessment with commodity organizations, agriculture teachers (who supervise youth AEOTM educators), and full-time AEOTM educators to identify areas of program strength, needs, then develop a strategic plan to grow the AEOTM/FFA and 4-H partnership. Specific needs identified included: 1) FFA/4-H advisors needed help in preparing their students to present AEOTM lessons, 2) AEOTM needed to grow participation and facilitate more consistent teaching from youth educators, and 3) university needed opportunities for preservice teachers to build content knowledge, experience teaching high school students, and a mechanism to train, identify, then recruit future agriculture teachers who had positive teaching experiences.

How it works/methodology/program phases/steps

From these shared needs, AEOTM staff, interns, and university faculty collaborated to create the AEOTM Training Day. Training purposes included 1) to prepare high school FFA members for their role as AEOTM educators, 2) to provide experience for preservice teachers, and 3) to build connections between AEOTM educators and Ag Education faculty and students.

The training was planned and conducted by pre-service Ag Education students at University of Missouri. FFA advisors were allowed to register up to five FFA members to attend. The AEOTM program director sent out invitations to attend using a Qualtrics survey created by a faculty member. Prior to the training day, AEOTM interns (who were also undergraduate AEL students) prepared all materials needed for attendees to complete the ten activities from the curriculum. Materials and lunch were provided by AEOTM. Leaders made the decision to cap the participation at 5 students per school and 125 students total, based on room size and teaching capacity. The event was free for FFA members, and we were at capacity.

The training day was a service-learning project of the undergraduate Ag literacy class, a curriculum class within the teacher certification program. At the beginning of the training,

Preservice teachers taught all the students together for the first lesson- soybeans. The soybean lesson was taught from beginning to end, modeled in full, including the hands-on activity and a discussion on how to access and teach the curriculum. This took about one hour. After the first activity, students were divided into four groups. These groups rotated through a short training on lessons 2-5, where the preservice teachers reviewed the content of the lesson, then facilitated the hands-on activity in full. Students rotated every 30 minutes. After lunch, students stayed in their small groups and rotated through lessons 6-9, then came together into one group for the final lesson and wrap-up. Preservice students provided all content and instruction. FFA members were given a t-shirt and a curriculum notebook, and were encouraged to take notes on behavior management, how to order and prepare materials, and classroom management.

Results to date/Implications

On September 12th, 2022, 125 FFA members from 30 schools attended AEOTM Training Day on the University of Missouri campus. The event was held on an early fall Monday for two reasons- many 4-day schools do not have school on Mondays, and the training needed to be after schools had started, but before FFA members began their AEOTM teaching duties. We utilized Qualtrics to evaluate teacher perceptions of AEOTM Training Day. Thirteen teachers completed the questionnaire, which was sent one month after the conclusion of the event. A five point Likert scale was used for each of the statements. The scale ranged from 1-Extremely dissatisfied to 5-Extremely satisfied. Overall teachers were satisfied with the event ($M=4.46$, $SD=.50$) and indicated a desire to bring students in future years ($M=4.31$, $SD=.72$). Additionally, teachers reported they would recommend this event to another agriculture teacher ($M=4.62$, $SD=.72$).

Ag Ed on the Move experienced record growth in 2022, teaching 8,266 elementary students in 144 schools in 50 counties, a 73% increase in participation. Preservice students and Ag Education faculty focused on building relationships with FFA members for recruitment. Preservice students reported gains in confidence and content knowledge as part of the project.

Future plans/Advice to others

We are currently considering the addition of a spring training to ensure that all of the students who are interested in becoming involved with Ag Ed on the Move can be trained. However, spring is a busy time of the year for agricultural teachers and students, so the specific time frame will need to be carefully evaluated. Although most stations were hands-on, FFA members were bored toward the end of the day. We plan to revise lesson 10 and have FFA members teach the preservice teachers. We had behavior issues with FFA members from one school. After investigating, the students had all previously taught the curriculum. We plan to limit future participation to first-time attendees and break schools within student groups.

Costs/resources needed.

There were no direct costs to the university- students provided the teaching as part of their service-learning assignment, and we utilized classrooms in the agriculture building at no cost. We were able to borrow microwaves and power strips for the corn plastic activity. Ag Education on the Move partners provided t-shirts (\$11/participant), notebooks (\$11/participant), lunch (\$6/participant), and teaching supplies (\$3.50/participant).

References

- Knobloch, N. A., Ball, A. L., & Allen, C. (2007). The Benefits of Teaching and Learning about Agriculture in Elementary and Junior High Schools. *Journal of Agricultural Education*, 48(3), 25-36.
- Mabie, R., & Baker, M. (1996). A comparison of experiential instructional strategies upon the science process skills of urban elementary students. *Journal of Agricultural Education*, 37, 1-7.