

**Gator Agriscience Teacher Academy: A Professional Development Event for Florida
Beginning Agricultural Educators**

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Introduction and Need for Innovation

The landscape of education is in a state of constant change and information integration. Teachers' responsibilities mirror this flux and require them to constantly update and adapt their content as well as continue to evolve their teaching methods for new generations of learners and their needs (Paşcalău et al., 2021). This presents an opportunity for professional development to address these challenges and provide teachers with the tools they need to be more successful and increase student learning (Yoon et al., 2007). Hill et al. (2013) and Desimone (2009) agree that high-quality professional development for teachers creates an opportunity to impact their knowledge and practices when certain active and collaborative methods are intentionally integrated into the program. Desimone (2009) and Hill et al. (2013) both outlined the characteristics of an effective professional development as content-focused, collaborative, active learning, coherent, and sustained duration. Hill et al. (2013) also identified modeling of effective practice and providing expert support as two additional characteristics. Utilizing these characteristics provides the best potential for impact on teachers and to increase student learning.

The Gator Agriscience Teacher Academy professional development event focused on these characteristics in the workshop session development. The content focus was the Agriscience Foundations 1 course in Florida; the workshop presenters were asked to develop hands-on, active workshop sessions; basing the workshops off the unpacked standards for this course helped the coherence of the content stay consistent; the contact time extended to 42 hours (20 hours recommended); and collective participation was accomplished not only by the teachers all coming from the agriculture concentration but also teaching in the same state.

Desimone (2009) recommended that not only these foundational characteristics be included in the conceptual framework for a professional development event, but also developers should establish an operational theory of how the event is going to influence teacher and student outcomes. For the Gator Agriscience Teacher Academy professional development event, the focus was on Experiential Learning Theory (ELT) (Kolb, 1984) for each workshop to cycle through the four-stage process of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Darling-Hammond et al. (2017) suggest including reflection in professional development for increased participant learning and understanding.

This innovative professional development addressed the need for agricultural content focus and curriculum planning due to the amount of beginning and alternatively licensed agricultural teachers in Florida as well as the lack of a set curriculum for these courses (Easterly & Barry, 2022). Teachers are required to create their own resources, materials, and assessments for courses they teach. Beginning teachers specifically identified the need for professional development in the technical areas of agricultural teaching. Sorensen et al. (2014) discussed the lack of professional development opportunities for more focused disciplines like agricultural education and beginning agricultural educators. They also identified the need to provide professional development on creating a diverse curriculum.

How it Works

Planning for the workshops began with an email request for workshop development to the Gator agricultural education faculty and graduate students with teaching experience. A lesson plan template was created to align resource development. This step was done with great intention and detail to the format and content of the lessons. The description of the workshop creation was intentionally hands-on and experiential.

Participants attended a four-day professional development event consisting of 24 hands-on, experiential workshops based on the Florida standards for the Agriscience Foundations 1 course. The first day began with guidance to improve direct instruction utilizing tools other than PowerPoint. Each 45-minute session consisted of facilitators modeling experiential learning content based on the standards and participants interacted from a student perspective. All workshops ended with reflection time, which was guided by semi-structured questions from the teacher's perspective. The next three days started with plant ID walks to develop resources for natural Florida flora identification and continued with workshop sessions. The last day focused on standard unpacking and co-planning time between participants. The session was focused on how to unpack a standard and allowed time for participants to collaboratively create their own unpacked standards. The last session allowed time for participants to plan their pacing guide for the year and was focused on how the participants could situate the learning approaches from the week into their curriculum.

Results to Date/Implications

For the first year, twelve beginning agricultural educators from Florida completed the 4-day professional development event. These teachers represented traditionally and alternatively certified teachers from various backgrounds and school demographics. Data were collected for four program evaluations: agriculture knowledge increase, awareness of course standards, teacher instructional preparedness, and teacher self-efficacy.

Future Plans/Advice to Others

In future versions of this professional development, we suggest adding lesson planning time at the end of each day and a full planning day on Wednesday to co-plan with other participants and get assistance from the University of Florida faculty and graduate students. We intend to do a post-posttest with 2024 participants to see how these participants implemented these resources in their classrooms. The participants appreciated and valued viewing the workshop and resources from the students' perspective and then reflection from the teachers' perspective. It would also be beneficial to set up Zoom meetings or visit teachers in person to observe them utilizing the resources from the workshop during the school year following the PD. This was a tentative plan for the developers and was requested by the participants.

Costs/Resources Needed

The total cost of this program was \$6,761, not including faculty and graduate time invested. This cost was covered by participant registration at \$500 per person, as well as grant funding. The budget included all lodging, meals, registration, and resources for the four-day professional development.

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