

**Cultivating Confidence: Addressing Content Knowledge Gaps Through  
Experiential Livestock Instruction**

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### **Introduction**

Both pre-service and in-service agricultural educators are expected to hold a wide array of agricultural knowledge to effectively prepare and teach their students for the multiple disciplines and careers within agriculture (Harlin et al., 2007; National Council for Agricultural Education, 2009). These disciplines include areas such as agribusiness, agricultural mechanics, animal sciences, leadership theory, plant sciences, and more, as well as the ability to blend these concepts into daily classroom instruction (Harlin et al., 2007). Strong agricultural content is essential, as educators are responsible for clarifying content, answering student questions, and preventing misconceptions (Darling-Hammond & Brandford, 2005; Kennedy, 1998). However, research shows that many pre-service and in-service educators feel deficient in content knowledge across various agricultural disciplines (Rice & Kitchel, 2016a). Pre-service educators have expressed dissatisfaction with the quantity, quality, and transferability of content shared in preparation programs, and some felt unprepared to apply it in practice (Rice & Kitchel, 2015), while in-service educators recognized gaps that hinder their ability to comprehend, break down, and transfer knowledge to students (Rice & Kitchel, 2016b).

The central struggle is not only acquiring content knowledge, but transforming the knowledge into pedagogical content knowledge (PCK): often referred to as the ability to adapt and deliver educational content in various ways, which will promote student learning (Shulman, 1986; Van Driel et al., 2002). When PCK is insufficient, educators struggle to connect theory to practice and may choose to focus on student engagement, as opposed to stressing effective content delivery (Rice & Kitchel, 2016b). To address these issues, teacher preparation programs must integrate content knowledge with pedagogy, including hands-on learning, and applying strategies for transferring knowledge from the classroom directly into practice (Rice & Kitchel, 2015; Hashweh, 2005). Ultimately, success in agricultural education depends on the educators' ability to merge content knowledge with effective teaching methods to create efficient learning environments (Rice & Kitchel, 2016a; Roberts & Ball, 2009). In response, Oklahoma State University has incorporated hands-on lessons as a required component of its teacher preparation course.

### **How It Works/Methodology/Program Phases/Steps**

Collegiate FFA (CFFA) is a student organization sponsored by the Oklahoma State University Department of Agricultural Education, Communications and Leadership. Membership is open to any student across campus with an interest in agriculture, though most members major in agricultural education and plan to pursue careers as school based agricultural education (SBAE) teachers. CFFA's mission is to provide leadership, social, and professional development opportunities for students.

In October 2025, CFFA hosted a livestock showmanship and fitting professional development workshop. The purpose was to give students a snapshot of the showmanship and livestock fitting skills they may need as future agricultural teachers. CFFA partnered with the Oklahoma State University farms to secure access to animals, all of which had recently been shown at the Tulsa State Fair, making them well trained and show ready. Expert student

presenters from upper-level agricultural courses led the hands-on sessions. After a provided dinner, attendees rotated through four stations: cattle showmanship, cattle fitting, sheep showmanship, and swine showmanship, each lasting 15 minutes. This workshop offered a practical and engaging experience tailored to the needs of future SBAE educators.

### **Results to Date/Implications**

Thirty-six students participated in the livestock showmanship workshop in October 2025. Students gained hands-on experience handling livestock and exposure to skills agricultural teachers need to be successful. The workshop helped fill gaps in agricultural content knowledge that preservice teachers often experience (Rice & Kitchel, 2016a). At the conclusion of the experience participants completed a feedback questionnaire which consisted of five open-ended questions. Unanimously, students reported the workshop was beneficial and increased their confidence in livestock handling and showmanship. One student stated, “It made me feel more knowledgeable in the species I’m not familiar with,” while another shared, “It definitely boosted my confidence with all livestock species.”

Students also valued how the workshop supported learning across all experience levels. One student noted, “I loved how intro level it was... I appreciated that rather than expecting us to know how to do things already,” and another explained, “I liked how there were multiple stations set up for everyone to have a chance to see something different.” These findings support Rice and Kitchel’s (2015) recommendation that teacher preparation programs provide applied learning opportunities that support skill transfer to teaching practice. They also reflect expectations that agricultural educators develop broad content knowledge and effectively blend and teach that content (Harlin et al., 2007; National Council for Agricultural Education, 2009). Overall, the workshop successfully provided hands-on, real-world experiences that increased preservice teachers’ confidence and skill development.

### **Future Plans/Advice to Others**

Based on the feedback received from participants, the Oklahoma State University CFFA organization plans to host additional livestock handling events in the future. The feedback was constructive and provided helpful insight into areas for improvement. Participants expressed a strong desire to spend more time with each species, so future schedules will be adjusted to allow for longer interaction periods. Another suggestion was to consider offering events focused on a single species at a time. CFFA will need to carefully plan the logistics of this option, considering school calendar time constraints and the availability of animals. Important factors to consider include the number of species needed to serve the group, where animals will be sourced, the equipment required for each species, available arena space, the presence of qualified animal handling experts, and the necessary cleanup materials.

### **Costs/Resources Needed**

The resources needed for this professional development workshop include access to well-trained, show-ready animals; competent presenters to lead each station; a facility capable of hosting the workshop; and graduate students or faculty who can help organize and facilitate the event. The club spent approximately \$200 for the cost of the meal provided.

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