Thinking Inside the Box: Partnering with Veterinary Medicine Faculty to Develop Low-cost Cattle Palpation Simulator Models

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Introduction

- Agriculture teachers are expected to teach a wide range of technical agriculture skills, such as performing physical examinations of animals (Wells et al., 2023).
- Using live animals for teaching and learning purposes can be problematic (Hart et al., 2005).
- Thus, simulation use can be a practical alternative.
- When used appropriately to supplement actual learning experiences, simulation use can be valuable for students (Tiffany & Hoglund, 2014; Wells & Miller, 2022).
- Cost is a significant barrier to simulation use, particularly regarding high-fidelity simulations (Chinnugounder et al., 2015).
- Perhaps a low-cost approach would be practical.

How it Works

- During the Fall 2023 semester, we began a collaborative partnership to: (1) benefit students enrolled in the Veterinary Technology and Pre-veterinary Medicine degree programs and (2) allow pre-service teachers the opportunity to learn how to build low-cost cattle palpation simulator models.
- Dr. Wells recruited pre-service teachers to participate while Dr. Kirby gathered materials.
- On the evening of October 25, 2023, we met at the A. Carman Pavilion Animal Health Technology Facility.
- Before model construction began, Dr. Kirby provided background information about palpating live cattle and directions regarding the simulator model construction process.
- Afterward, Dr. Kirby facilitated the simulator model construction process and addressed technical questions and concerns.
- Over 45 minutes, we constructed and tested six simulator models.

Implications, Future Plans, Advice, & Costs

- From our perspectives, we successfully achieved the two aforementioned objectives.
- We observed that the pre-service teachers were very engaged in the simulator model construction process. Each pre-service teacher verbally indicated that they planned to use similar low-cost simulator models when teaching their own students.
- We plan to replicate this approach as a half-day professional development opportunity for agriculture teachers. Our intention is to dive deeper into animal science-related subject matter while providing participants with simulator models to take back to their programs.
- We suggest that agricultural teacher educators at other institutions consider partnering with technical agriculture faculty to provide similar learning opportunities for the stakeholders they serve.
- The simulator model materials cost approximately $50.00. We used three hours of our time to conduct this activity.

References

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