“TREASURE” SAE: The Teacher Rejuvenation for Enhancing Agriscience Students’ Utilization of Real-world Experiences Virtual Simulation Game

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Introduction

- SAE developed student knowledge, skill, occupational attitude, & educational attitudes (Ricketts, Duncan, & Peake, 2006; Lawver & Torres, 2012; Williams, 1979)
- Students begin SAE from extrinsic motivators (Bird, Martin, & Simonsen, 2013)
- Lack of knowledge about SAE (Lewis et al., 2011)
- No definition of success (Barrick et al., 2011)
- Teacher conceptual and theoretical beliefs are not carried out to implementation (Retallick, 2010; Wilson & Moore, 2007)
- Examination of components of successful SAE programs
What did we do?

- Identified need areas
  - Determined pre-service & in-service teacher interest
  - Reduced teacher barriers
  - Recruited supportive community members
  - Developed a “culture” supportive of SAEs for all
  - Promoted supervision engagement
What did we do?

- **Student outcomes**
  - Increased engagement in SAE programs
  - Improved agricultural education content knowledge
  - Improved problem solving and critical thinking skills
  - Increased awareness and pursuit of ag careers
  - Improved accessibility to resources for engagement
What did we do?

- Pilot Professional Development Session
  - Online, asynchronous learning module
  - Gaming simulation with real-world SAE scenarios

- Teacher Feedback
  - Pre-module creation: needs assessment
  - Three face to face gaming sessions: issues identified
  - Post-module reflection: summative evaluation
What was the outcome?

Great choice! Not only did you consider the needs of the community, but you factored in what the community has to offer. Your rate of return on all resources matches or exceeds your input. This program excites you and offers numerous opportunities for your program. You are satisfied with your job and less likely to leave the profession. You have increased SAE opportunities for your students, too! Keep considering all the factors that impact community involvement when making decisions.
Teacher Feedback on the Pilot

- Open-ended reflection questions given to 50 agricultural education teachers across Georgia
- Focus group discussions with teachers following game play
- Gaming simulation could be improved with...
  - Immediate, automated feedback to game players on why their choices in the game were beneficial to:
    1. Reducing teacher burnout
    2. Building community credibility
    3. Enhancing quality of life
What did we learn?

- Teachers were encouraged by online PD
  - Increased engagement
  - Increased interest in engaging in PD

- Teachers struggle with SAE implementation
  - Student project ideas
  - Resource acquisition
  - Establishment of culture for SAE
  - Conducting quality supervision of projects
Recommendations for the Classroom

- Encourage students/game players to see the educational purpose of the game (not just playing to “win”)
- Structured reflection is key
  - Immediate, automated feedback through the gaming software is appreciated by players
- Consider using game simulations as vicarious exposure before face to face laboratories
Recommendations for PD Sessions

- Find ways to integrate technology
- Increase accessibility to the PD knowledge
- Don’t forget that we need to remember the fundamentals of the profession
- Ensure a focus is made on engagement in the gaming session
Questions?

Thank you!!