Examining Early Career Ag Teachers Knowledge and Beliefs of Key SAE for All Principles

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Introduction/Need for Research

The American Association for Agricultural Education (AAAE) identified "nurturing positive youth development through AFNR systems" as a core research value and provided examples such as "examining career and leadership development for youth in AFNR" (AAAE, 2023, p. 14). This pilot study aligns with these by exploring one of the essential elements of the Three-Circle Model of Agricultural Education: Supervised Agricultural Experiences (SAEs) (Moore, 2022). SAEs have been a central part of School-Based Agricultural Education (SBAE) since the early 1900s (Croom, 2008). In 2018, a revised approach called SAE for All was introduced. This framework aimed to ensure that every student enrolled in SBAE could engage in meaningful career development through SAE participation. Although many of its concepts were familiar to agricultural educators, SAE for All introduced updated terminology and expectations, including the categories of Foundational and Immersion SAEs (The Council, 2015). Research has shown that teacher understanding of SAE for All remains limited, which continues to serve as a barrier to implementation (Eck & Davis, 2024; Hainline & Smalley, 2023). According to the National Agricultural Education Supply & Demand Study (Foster et al., 2025), 64% of newly hired teachers were alternatively certified or held no formal certification, which may contribute to the knowledge gap. This pilot study examined early career agriculture teachers in [state], focusing on their understanding and beliefs related to SAE for All principles. The goal was to determine if limited knowledge influenced teacher beliefs and to identify potential areas for future professional development and support.

Conceptual or Theoretical Framework

This study was guided by Bandura's (1986, 2001) Social Cognitive Theory, which explains how learning occurs through the interaction of personal, behavioral, and environmental factors. The focus here was on personal and environmental influences. Participants were asked to evaluate both their factual knowledge and personal beliefs about SAE for All principles. SCT highlights that individuals may hold on to certain beliefs even when presented with accurate information, especially when those beliefs are reinforced by prior experience. While teacher certification background was not the central focus, it was considered as an environmental factor that may influence exposure to models or training. This framework helps explain why gaps between knowledge and belief may exist and supports the development of professional learning that addresses both understanding and internal acceptance.

Methodology

A survey was developed by the researchers to assess participants' knowledge and beliefs related to key SAE for All principles. The instrument included five demographic questions and 20 statements. For each statement, participants were asked to indicate whether they believed it was True, False, or if they did not know. They also rated their level of belief in each statement using a 5-point Likert-type scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*). The sample for this pilot study consisted of early career agriculture teachers (0–5 years of teaching experience) attending a professional development workshop hosted by [state organization]. Of the 20 statements, seven were true and 13 were false, with the false statements designed to reflect common misconceptions about SAE for All. The 32 participants were invited to complete the survey electronically via Qualtrics prior to the start of the workshop. Descriptive statistics were used to compare responses from traditionally and non-traditionally certified teachers.

Results/Findings

Thirty of the 32 SBAE instructors in attendance completed at least a portion of the survey, as some did not complete the beliefs section. Of these 30 early career teachers, 16 (53.33%) were traditionally certified through university agricultural education programs, while 14 (46.67%) were either alternatively certified or not certified at all. Only one of the seven true statements was missed or unknown by more than 75% (n = 23) of the participants. “A student’s Foundational SAE lasts their entire time in your ag program.” Was rated as true by only 23.33% (n = 7) of the participants. It should be pointed out that only 12.50% (n = 2) of traditionally certified teachers chose this as a true student while 35.71% (n = 5) of the teachers who were not traditionally certified selected it as a true statement. Four of the 13 false statements were missed by at least half of the participants, but only one of those was missed or unknown by 75% (n = 23) or more of the participants. Only 23% (n = 7) of the participants said that “SAE supervision must be onsite where the SAE is conducted” as false. The other three false statements that 50% or more of the participants missed or did not know were mostly missed by participants who did not have traditional certification. Only one of the 14 not traditionally certified participants answered these statements correctly. These statements were: “Every student should have an Immersion SAE,” “Service learning is the same as community service and can be an SAE,” and “Any SAE project that is being raised/conducted at the school is considered a school-based SAE.”

When looking at the belief ratings of the true statements, any statements with mean above 3.00 indicated a net agreeance with the SAE for All principle. Only one true statement, “A student’s Foundational SAE lasts their entire time in your ag program,” fell below this threshold (M = 2.88; SD = 0.85). On the other hand, false statements with a mean below 3.00 indicate a net agreeance in believability by participants in the SAE for All principle related to the statement. Three false statements had a mean above a 3.00: “Every student should have an immersion SAE” (M = 3.48; SD = 0.74), “SAE supervision must be onsite where the SAE is conducted” (M = 3.37; SD = 0.87), “Any SAE project that is being raised/conducted at the school is considered a school-based SAE” (M = 3.30; SD = 0.81). These elevated belief scores indicate that participants lacked knowledge of key SAE for All principles and held incorrect beliefs with confidence. This gap between knowledge and belief supports prior concerns and highlights the need for professional development that goes beyond delivering information to actively correcting misconceptions. Without addressing both areas, accurate SAE for All implementation is likely to remain inconsistent and limited in practice.

Implications/Recommendations/Impact on Profession

This pilot study of 32 early career agriculture teachers (0 to 5 years of SBAE experience) suggests that a teacher’s level of knowledge may directly influence their beliefs regarding key principles of SAE for All. The findings revealed several misconceptions and knowledge gaps among participants, regardless of certification pathway. Prior research has identified limited knowledge of SAE for All as a persistent barrier to successful implementation (Doss & Rayfield, 2019; Hainline & Smalley, 2023). Additionally, studies focusing on alternatively certified teachers have consistently reported challenges related to both SAE implementation and understanding of the SAE for All philosophy (Jolliff et al., 2025). These findings reinforce the need for more targeted and accessible professional development for all early career agricultural educators. Whether teachers are traditionally or alternatively certified, this study indicates that many do not fully understand essential components of SAE for All, which may hinder their ability to implement inclusive, career-focused SAE programs across diverse student populations.

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