

A Comparison of Traditionally Certified and Non-Traditionally Certified Early Career Ag Teachers Knowledge of Key SAE for All Principles

Kloe Stokes
Graduate Student
Stephen F. Austin State University
PO Box 13000
Nacogdoches, TX 75962
(936) 468-4061
stokeskd@jacks.sfasu.edu

Dr. Candis Scallan
Associate Professor
Stephen F. Austin State University
PO Box 13000
Nacogdoches, TX 75962
(936) 468-4061
carrawaycl@sfasu.edu

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Introduction

Supervised Agricultural Experience (SAE) has long been recognized as a foundational component of school-based agricultural education, yet national reports continue to identify inconsistent implementation across programs (National Council for Agricultural Education, 2015). The SAE for All model was introduced to modernize and standardize SAE expectations, but teachers' ability to implement the model effectively depends heavily on their understanding of its core principles. Early-career teachers, in particular, face challenges translating SAE expectations into practice, and their preparation pathway may influence the depth of knowledge they bring into the classroom (Roberts & Dyer, 2004). As agricultural education increasingly relies on alternatively certified teachers to fill workforce shortages (Foster et al., 2014), questions remain about how certification route shapes teachers' SAE knowledge and readiness to implement the SAE for All Model.

Studies in agricultural education have documented gaps in teachers' understanding of SAE structure, assessment, and integration, especially among novice teachers (Eck & Davis, 2024; Hainline & Smalley, 2023). Research comparing traditional and alternative certification pathways suggests that alternatively certified teachers often enter the profession with strong content expertise but less exposure to agricultural education pedagogy, including SAE philosophy and application (Foster et al., 2014). However, limited empirical work has directly measured early-career teachers' SAE for All knowledge or examined how preparation pathway influences that knowledge.

Conceptual Framework

This study is grounded in the Theory of Planned Behavior (Ajzen, 1991), which suggests that behavior is shaped by attitudes, subjective norms, and perceived behavioral control. Within this framework, teacher knowledge functions as a precursor variable that informs all three components. Teachers who possess stronger knowledge of the SAE for All Model are more likely to hold positive attitudes toward its use, perceive stronger professional norms supporting SAE implementation, and feel more capable of guiding students through SAE experiences. Certification pathway also plays a structural role in shaping these cognitive foundations by influencing the training, mentoring, and pedagogical preparation teachers receive. Thus, TPB provides a clear theoretical rationale for examining differences in SAE knowledge between traditionally and alternatively certified early-career teachers: differences in preparation are expected to produce differences in the cognitive conditions that underlie teachers' intentions and capacity to implement SAE with reliability.

Methods

The Texas Farm Bureau conducts a multiple day workshop for early career ag teachers (teaching five years or less). One section of this workshop teaches participants about the SAE for All Model. At the start of this session, participants from the 2025 and 2026 workshops

completed an online survey containing demographic items and 20 statements aligned with core SAE for All principles, answered as “True,” “False,” or “I don’t know.” Responses were exported to Excel and coded as 1 for correct, 0 for “I don’t know,” and –1 for incorrect. Scores were summed for each statement to determine which principles were most and least understood. Forty-nine participants completed the survey, giving each statement a maximum possible score of 49. Participants were then categorized as traditionally certified ($n = 29$) or non-traditionally certified (alternatively certified or not yet certified) ($n = 20$), and group-level sums and percentages of possible scores were calculated to compare understanding between groups.

Results

Across all participants ($n = 49$), the most correctly understood principles were “Every student should have an SAE – True” (score = 43) and “A student’s SAE must be conducted off campus and can never occur during the school day – False” (score = 42). The most misunderstood principles were “SAE supervision must be onsite where the SAE is conducted – False” (score = –16), “A student’s Foundational SAE lasts the entire time in your ag program – True” (score = –13), “Any SAE project that is being raised/conducted in the school is considered a School-Based SAE – False” (score = –8), and “Every student should have an Immersion SAE – False” (score = –7). When comparing certification pathways, the largest percentage differences were observed for “Any SAE project that is being raised/conducted at the school is considered a School-Based SAE – False” (65.34%), “More than one student can use a school-based business as their SAE – True” (49.65%), “A student’s Foundational SAE lasts the entire time in your ag program – True” (44.82%), and “Service Learning is the same as community service and can be an SAE – False” (44.13%). Notably, on the Foundational SAE principle, traditionally certified teachers scored lower (–44.82%) than their non-traditionally certified counterparts (0%).

Conclusions/Implications

Findings indicate substantial misunderstandings of SAE for All principles among early career agricultural education teachers in Texas. While traditionally certified teachers demonstrated stronger understanding in some areas, such as Immersion SAEs, they exhibited greater misunderstanding regarding Foundational SAEs. Additionally, both groups showed notable gaps in understanding School-Based and Service-Learning SAEs. These findings suggest a continued need for targeted professional development focused on SAE for All principles. There may also be value in offering differentiated workshops specifically designed for alternatively certified or not-yet-certified teachers. Future research should examine whether these misunderstandings persist among more experienced teachers and explore regional differences in SAE for All understanding within the state and nation.

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