

A National Exploratory Study of the Adoption and Implementation of SAE for All

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Abstract

Supervised Agricultural Experiences (SAE) are one of three major components of School-Based Agricultural Education (SBAE), but teachers have recognized many barriers to fully implementing them in their programs. SAE for All was adopted in 2015 and implementation resources were made available in 2017 to address these barriers. This study investigated SAE for All implementation on a national level and was framed by the diffusion of innovations theory. A Qualtrics survey was administered to all SBAE teachers in 32 states through their respective SBAE leaders, collecting 505 usable responses. Participants had students completing Foundational SAEs at the highest rates, with Placement and Entrepreneurship SAEs as the most conducted Immersion SAEs. Research SAEs were implemented in the smallest numbers, while over half of participants had School-Based Enterprise and Service Learning SAEs taking place in their programs. Participants also recognized a variety of resources available to implement SAEs, with the majority using resources they had available on campus. AET was the most utilized record book by participants. Data is also presented by AAAE region. Recommendations for continued adoption and implementation of SAE for All are provided and include student and teacher professional development for specific SAE for All categories, incorporation of SAE for All throughout teacher preparation programs, and developing additional resources for school-based SAE opportunities.

Introduction and Review of Literature

Along with classroom instruction and leadership development (FFA), work-based and experiential learning through Supervised Agricultural Experience (SAE) is one of three components of School-Based Agricultural Education (SBAE) (Croom, 2008; The Council, n.d.). This work-based learning component is often believed to have begun as Stimson's (1919) home project for boys enrolled in agricultural education

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classes (Croom, 2008). SAE has been an agriculturally related project completed by students that required time outside of the school day, thorough recordkeeping, and supervision from the SBAE teacher (Stimson, 1919; Talbert et al., 2014). SAE has been known to positively impact students through financial literacy, personal motivation, relationships, and skill development (Rubenstein & Thoron, 2014; The Council, n.d.).

SAE expectations and categories have evolved since Stimson's (1919) home project to maintain relevance in the changing landscape of agriculture and demographics of SBAE students. In 1993, Moore and Flowers proposed a model for SAE, which was accepted as guidelines for SAE for over 20 years (Moore & Flowers, 1993). The Moore and Flowers SAE model had SBAE students engaging in SAEs outside of class time that developed agricultural literacy or agricultural college and career preparation (Moore & Flowers, 1993). During this time, SBAE teachers continued to indicate barriers to implementation, like lack of time and resources, and SAE was reportedly not being implemented to its fullest extent (Lewis et al., 2012; Retallick, 2010; Shoulders & Toland, 2017; Wilson & Moore, 2007).

Recordkeeping has been a major component of SAEs but varies greatly between states and individual programs (AET, n.d. -a). In 2007, The Agricultural Experience Tracker (AET) was created, establishing an online record book for SBAE (AET, n.d. -a). Today, AET has been made available to 78% of all SBAE programs (Hanagriff, n.d.). AET must be purchased, which can be done by individual SBAE programs, or as part of a group or state subscription (AET, n.d.-b). If utilized, this resource can maintain student SAE records and many other programmatic records (AET, n.d.-a). Unfortunately, many SBAE teachers perceive AET as complex and choose to not use it even if they have been provided access (Aviles, 2017; Ford & Lambert, 2023).

An issue that has been acknowledged throughout research pertaining to SAE was the lack of a consistent definition and guidelines for SAE (Doss & Rayfield, 2019; Dyer & Osborne, 1995; Retallick, 2010; Wilson & Moore, 2007). Some of the only nationally recognized SAE guidelines were those connected to FFA Degrees and FFA Agricultural Proficiency Awards. According to the Official FFA Manual (National FFA Organization, 2023a), FFA Degrees have SAE requirements for students to complete to be eligible for the awards. The Discovery Degree is available to middle school students and requires them to have knowledge of agriculturally related careers, then the first degree available to high school students is the Greenhand Degree which requires students to plan for their SAE (National FFA Organization, 2023a). Students are then required to implement their SAE by earning and investing at least \$150, spending 45 hours in their SAE, or a combination of the two to earn the Chapter Degree (National FFA Organization, 2023a). To earn a State Degree, the funds earned and invested jumps to \$1,000 while time invested is 300 hours, while still allowing students the flexibility of funds or time or a combination of the two (National FFA Organization, 2023a). The highest degree available, the American Degree requires students to have earned at least \$2,000 and worked a minimum of 2,250 hours (National FFA Organization, 2023a). While FFA Proficiency Awards are not designed to limit student SAEs (National FFA Organization, 2023b) they only recognize SAEs completed in certain areas of agriculture and clearly align with specific SAE categories, which limits award opportunities for students. While Proficiency Awards primarily align with Placement, Entrepreneurship, and Research SAEs (National FFA Organization, 2023b), the research category has not been utilized as often as others, potentially due to opportunities from the SBAE teacher (Ford et al., 2025; Thiel & Marx, 2021).

The many barriers to implementation of SAE inspired a need for SAE to be investigated and reinvigorated, leading The National Council for Agricultural Education (The Council) to establish a committee that created SAE for All (see Figure 1) in 2015 (The Council, 2015). SAE for All created Foundational SAEs, which include five career-preparation components that every student in SBAE can accomplish and benefit from that can lead to an Immersion SAE to deepen the learning experience for students (The Council, 2017a). Foundational SAEs engage students in activities which develop skills in (1) career exploration and planning, (2) employability skills for college and career readiness, (3) personal

financial management and planning, (4) workplace safety, and (5) agricultural literacy (The Council, 2017a).

Figure 1

Overview of the SAE for All model



Note. Adapted from the “SAE for All Teacher Guide” (The Council, 2017a).

The SAE for All model not only established the Foundational category, but it also edited and added categories of Immersion SAEs. While Foundational SAEs are designed to be completed by every student in SBAE and revisited in each SBAE course taken, Immersion SAEs take a student’s learning experience another step, allowing for more hands-on experiential learning, but does not necessarily have to be completed by every student (The Council, 2017a). There are nine types of Immersion SAEs which fit into five categories: (1) Placement/Internship, (2) Ownership/Entrepreneurship, (3) Research: Experimental, Analysis, or Invention, (4) School-Based Enterprise, and (5) Service Learning (The Council, 2017a). Additionally, SAEs can now occur during the school day (The Council, 2015), shifting a philosophical

understanding that teachers have had for years. In fact, in a 2025 study by Switzer and Barry, 28% of teachers defined SAE as needing to occur outside of the school day despite the SAE for All shift.

Tangible implementation guides for both teachers and students (The Council, 2017a, 2017b) were published two years after the adoption of SAE for All. Since 2017, additional resources have been created for SAE for All implementation and are available through the SAE for All website (SAE for All, n.d.) and the National FFA website (National FFA Organization, 2024). For such a dramatic change in one of the three components of SBAE, there has been little empirical research conducted regarding SAE for All. The few studies focusing on this shift in philosophy have established that understanding and implementation has been slow (Doss & Rayfield, 2019; Ford & Lambert, 2025b) while very recent studies have shown that SAE for All is starting to be adopted with Thiel et al. (2025) reporting 18% of teachers indicated 100% of their students engaged in SAE. To continue to strive to make SAE for All available to all SBAE students, there is a need to understand how SAE for All is being implemented.

Theoretical Framework

Rogers' (2003) diffusion of innovations theory guided this study. Diffusion of innovations posits there are four main elements of diffusion: (1) an innovation, (2) communication channels, (3) time, and (4) a social system (Rogers, 2003). In this study, the innovation within focus is SAE for All, which has been communicated through mass media communication channels in the form of initiatives and resources from The Council (n.d., 2017a, 2017b) as well as interpersonal communication channels including current SBAE teachers and state SBAE leaders. The guiding philosophy for SAE for All was first adopted in 2015 (The Council, 2015), allowing for multiple years in which SBAE teachers and state SBAE leaders within the SBAE social system could engage with Rogers' (2003) innovation-decision process. Rogers (2003) suggests there are five stages a person will move through over time as they decide to adopt or reject an innovation. The five stages include (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation (Rogers, 2003). Within the innovation-decision process, members of the social system are determining whether to adopt or reject the innovation (Rogers, 2003). SBAE teachers considering SAE for All need to recognize the compatibility of the innovation and whether it fits with their values and beliefs, needs and their indigenous knowledge systems (Rogers, 2003). Not only does this study highlight how SBAE teachers are adopting SAE for All but also investigates the current state of SAE resources and recordkeeping, highlighting the needs and knowledge systems in place within SBAE programs. Investigating diffusion of innovations and the innovation-diffusion process as it relates to SAE for All can inform stakeholders of the current use of SAE for All throughout the United States.

Purpose and Objectives

The purpose of this study was to understand how SAE is being implemented in SBAE classrooms. This study investigated which SAE categories SBAE students are actively engaged in, the resources SBAE teachers have available for SAE, and what recordkeeping systems are being utilized for SAE. This study is part of a larger study investigating SAE across the United States (Ford, 2024). The research questions guiding this study include:

1. How are SBAE teachers implementing Foundational SAE in their programs, overall and by AAAE region?
2. How are SBAE teachers implementing Immersion SAE in their programs?
3. What resources are available to SBAE teachers for SAE, overall and by AAAE region?
4. How are SBAE teachers having students keep SAE records, overall and by AAAE region?

Methods

This study utilized a cross-sectional quantitative survey design with the questionnaire in Qualtrics administered via email to participants. Survey research was selected for this study because it “provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of the population” (Creswell & Creswell, 2018, p. 12). To encourage participation in this study, it was incentivized with a drawing for one of four Amazon gift cards, funded by the Department of Agricultural and Human Sciences at North Carolina State University (Dillman et al., 2014).

Participants

The population of interest for this study is all SBAE teachers in the United States. According to the 2021 National Supply and Demand Study, there are 13,349 agriculture teachers across the country (Smith et al., 2022). A pilot study was conducted in September-November 2023, utilizing a random sample acquired from the National FFA Organization FFA Advisor population. Over the course of four rounds of survey administration, following approved IRB contacts, the pilot study utilized 350 emails, garnering only 27 completed surveys for a response rate of 7.71%. Due to the low response rate, we decided to instead collect a convenience sample to increase survey participation. The convenience sample was accessed by requesting state SBAE leaders to share the survey within their respective states. After an approved amendment to our IRB application, emails with an invitation to participate were sent to one SBAE leader in forty-six states in December 2023. SBAE leaders could not be identified for Hawaii, Massachusetts, Maine, or Vermont. SBAE leaders were identified through the membership roster found on the National Association of Supervisors of Agricultural Education (NASAE) website. Two current NASAE members from North Carolina and one faculty member from North Carolina State University offered recommendations for which SBAE leader to contact in states with multiple NASAE members.

SBAE leaders of 32 states agreed to distribute the survey to their teachers. The number of SBAE teachers in the participating states totals 11,034 (Smith et al., 2022). Between December 2023 and January 2024, SBAE leaders were asked to share the questionnaire three times, in alignment with guidance from Dillman et al. (2014). More than 500 ($n = 505$) usable responses were received (see Table 1) from 28 states.

Table 1*Participant demographic characteristics (n = 505)*

Demographic Characteristics	<i>f</i>	%
Gender		
Female	311	61.6
Male	190	37.6
Non-binary/3 rd gender	2	0.4
Prefer not to say	1	0.2
Did not answer	1	0.2
Community		
Rural	339	67.1
Suburban	108	21.4
Urban	57	11.3
Did not answer	1	0.2
Educational Background		
Traditional agricultural education college preparation program	366	72.5
Lateral Entry from a non-teaching, technical agriculture profession	76	15.0
Other	26	5.1
College preparation in teaching, but not agricultural education	23	4.6
Lateral entry from non-teaching, non-agriculture profession	14	2.8
SAE Lead or Co-Lead in SBAE Program		
Yes	444	87.9
No	60	11.9
Did not answer	1	0.2
Age		
20-29	166	32.9
30-39	125	24.8
40-49	101	20.0
50-59	78	15.5
60-69	27	5.4
Did not answer	8	1.6
Years of SBAE Teaching Experience		
0-5	183	36.2
6-10	99	19.6
11-15	74	14.7
16-20	62	12.3
21-25	34	6.7
26-30	28	5.5
31-35	15	3.0
36+	8	1.6
Did not answer	2	0.4

Instrumentation and Data Analysis

A questionnaire was designed for the study. The questionnaire consisted of multiple sections related to the diffusion of SAE for All. Within the questionnaire, the items related to SAE for All implementation, resource availability, and recordkeeping are included in this study. The items related to implementation of SAE were inspired by Wilson and Moore's (2007) study and were updated to align with SAE for All by specifying individual SAE categories. This question asked participants to identify what percentage of their students were completing each of the 10 SAE for All categories including Foundational SAEs and the nine

Immersion SAEs. Both questions about resources and recordkeeping allowed participants to select all that applied to their programs and included an open-ended *other* option.

Validity of the survey was established through a panel of experts between August and September 2023. The panel of experts consisted of five agricultural education university faculty and staff from multiple universities with an extensive knowledge of SAE for All and/or survey design. Suggested changes from the panel of experts were applied to the survey prior to pilot testing ($n = 27$). Data was collected through Qualtrics and analyzed using SPSS statistical software to calculate descriptive statistics. Data are reported overall and, to parse for regional differences, by American Association for Agricultural Education (AAAE) Regions as defined in the organization’s standing rules.

Limitations

We recognize that the choice to collect a convenience sample instead of a simple random sample is a limitation to this study. Due to the nature of the sampling method, the findings should not be generalized to the population of all SBAE teachers; however, the findings can provide valuable information to those involved in the dissemination and implementation of SAE for All.

Findings

Research Question 1: How are SBAE teachers implementing Foundational SAE in their programs, overall and by AAAE region?

Participants identified Foundational SAEs as one of the only categories that is engaging all students in an SBAE program (11.7%) (see Table 2). In the SAE for All model, Foundational SAEs are expected of every SBAE student, and these teachers are implementing the adoption of this new model. Less than one-fifth of participants (18.9%) are not engaging students in Foundational SAEs at all, while the remaining 69.5% have some portion of their students engaged in Foundational SAEs. When looking by region, teachers in the Southern region were most likely to report having 100% of their students involved in a Foundational SAE as intended by the model. The North Central region teachers were most likely to report not engaging their students in Foundational SAEs ($f = 42, 26.1\%$).

Table 2

Frequency of students engaged in Foundational SAEs overall and by region

Group	Percent of Students with Foundational SAE												<i>n</i>
	0		1-24		25-50		51-75		76-99		100		
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
Overall	92	18.9	128	26.3	73	15.0	68	14.0	69	14.2	57	11.7	487
North Central Region	42	26.1	48	29.8	21	13.0	12	7.5	16	9.9	22	13.7	166
Southern Region	23	12.2	33	17.5	31	16.4	38	20.1	35	18.5	27	14.3	189
Western Region	18	19.8	28	30.8	15	16.5	11	12.1	13	14.3	6	6.6	91

Note. Some respondents did not indicate their state and therefore could not be included in regional data

Research Question 2: How are SBAE teachers implementing Immersion SAE in their programs?

The two most traditional categories of SAE were implemented at the highest rates, with 90.7% ($f=447$) of participants reporting students involved in Placement SAEs and 85.1% ($f=416$) with students involved in Entrepreneurship SAEs (Table 3). The categories introduced through SAE for All that align with Placement and Entrepreneurship SAEs appear to be utilized less frequently. Participants indicated some of their students had Ownership SAEs (75.7%, $f=368$), which can grow into an Entrepreneurship SAE following the establishment of a business plan. Internship SAEs were being conducted by students of 54.1% ($f=257$) of participants. While Internship SAEs are similar to Placement SAEs in that a student is working for someone else, the learning goals of an Internship SAE are determined by the student and agreed upon with the employer or supervisor.

Table 3

Students engaged in Immersion SAE categories ordered from highest engagement level to lowest

SAE for All Immersion Category	Percent of Students with SAE in Immersion Category						<i>n</i>
	0	1-24	25-50	51-75	76-99	100	
Placement	46 (9.3%)	179 (36.3%)	130 (26.4%)	89 (18.1%)	48 (9.7%)	1 (0.2%)	493
Entrepreneurship	73 (14.9%)	288 (58.9%)	79 (16.2%)	30 (6.1%)	19 (3.9%)	0 (0.0%)	489
Ownership	118 (24.3%)	255 (52.5%)	66 (13.6%)	31 (6.4%)	15 (3.1%)	1 (0.2%)	486
School-Based Enterprise	164 (34.0%)	214 (44.4%)	47 (9.8%)	23 (4.8%)	19 (3.9%)	15 (3.1%)	482
Service Learning	198 (41.3%)	223 (46.5%)	35 (7.3%)	14 (2.9%)	8 (1.7%)	2 (0.4%)	480
Internship	218 (45.9%)	205 (43.2%)	32 (6.7%)	15 (3.2%)	4 (0.8%)	1 (0.2%)	475
Experimental Research	284 (59.0%)	165 (34.3%)	15 (3.1%)	11 (2.3%)	6 (1.2%)	0 (0.0%)	481
Analytical Research	400 (84.2%)	65 (13.7%)	5 (1.1%)	3 (0.6%)	1 (0.2%)	1 (0.2%)	475
Invention Research	413 (88.2%)	47 (10.0%)	5 (1.1%)	3 (0.6%)	0 (0.0%)	0 (0.0%)	468

Note. Individual students can have multiple Immersion SAEs, or none at all, which is reflected in the percentages above.

Research SAEs were the least utilized Immersion SAE category. Of the three categories of research, Experimental Research is utilized the most (41.0%, $f=197$), compared to Analytical Research (15.8%, $f=75$) and Invention Research (11.8%, $f=55$). Of the two newest stand-alone Immersion categories, both School-Based Enterprise and Service Learning appear to be adopted by more students than the research categories. Some participants (66.0%, $f=318$) indicated that they had students completing School-Based Enterprise SAEs, including 3.1% ($f=15$) who had every student in their program engaged in this type of SAE. School-Based Enterprise was the only Immersion SAE category to have more than one or two programs indicate 100% student engagement. Over half of participants (58.7%, $f=282$) indicated that their students were completing Service Learning SAEs. The design of these categories lends itself to engage large numbers of students in a single SAE, potentially influencing the adoption of School-Based Enterprise and Service Learning on a larger scale.

Research Question 3: What resources are available to SBAE teachers for SAE, overall and by AAAE region?

When asked to identify all sources of support and resources for SAE implementation, participants identified 1,800 resources total, averaging 3.7 resources per participant (see Table 4). Over half of all participants indicated they had SAE resources in their school facilities ($f = 369$, 75.0%) and time allotted during their contract time ($f = 280$, 56.9%). Community ($f = 238$, 48.4%) and parental ($f = 207$, 42.1%) support were also included often as support and resources available for SAE. SBAE teachers in the Western region were most likely to report use of a school vehicle (68.7%) and contract time (70.7%) to complete SAE. Teachers in the North Central region were mostly likely to have community support (50.6%) and mileage reimbursement (28.9%). Teachers in the Southern region were most likely to report having school facilities for SAE (80.8%).

Table 4

Resources available to support SBAE teachers with integrating SAE (n = 492)

Support and Resources	Overall		North Central Region (n = 166)		Southern Region (n = 193)		Western Region (n = 99)	
	f	%	f	%	f	%	f	%
School Facilities	369	75.0	103	62.0	156	80.8	78	78.8
Teacher Contract Time	280	56.9	85	51.2	108	56.0	70	70.7
Community Support – Job Placements, Mentorship	238	48.4	84	50.6	84	43.5	48	48.5
Parental support – Financial, Placement, Time	207	42.1	70	42.2	76	39.4	50	50.5
School Vehicle to use	203	41.3	64	38.6	52	26.9	68	68.7
State Requirements	163	33.1	29	17.5	76	39.4	42	42.4
Mileage Reimbursement	128	26.0	48	28.9	45	23.3	20	20.2
School Requirements align with SAE projects	121	24.6	36	21.7	40	20.7	37	37.4
Project funding from school or county	74	15.0	12	7.2	25	13.0	29	29.3
Other	17	<0.1	8	4.8	5	2.6	2	2.02

Note. Some respondents did not indicate their state and therefore could not be included in regional data

Additional resources identified through the open-ended *other* option referenced funding from sources such as grants or stipends. Some participants acknowledged support staff for SAE such as a state staff member leading the efforts within the state or a teaching partner with a class period dedicated to SAE.

Other participants shared that students could get credit for SAE through SBAE class honors projects or receive an elective credit for meeting SAE requirements.

Research Question 4: How are SBAE teachers having students keep SAE records, overall and by AAAE region?

When asked about all recordkeeping systems utilized this school year, participants provided 643 responses, averaging 1.3 systems per participant (see Table 5). Overwhelmingly, participants indicated their use of AET as the recordkeeping system they were requiring students to use ($f = 412$, 81.7%). Over ten percent of all participants were also utilizing self-created record books in both paper ($f = 72$, 14.3%) and digital ($f = 65$, 12.9%) formats. Even though it is the industry standard for recordkeeping, QuickBooks was the least utilized recordkeeping system ($f = 4$, <0.1%) among the participants, with all of these being reported by teachers in the North Central region. Respondents in the Western region were the most likely to use the AET (nearly 100%) while teachers in the Southern region were most likely to be using their own paper record book (19.2%).

Table 5

Recordkeeping systems being used by SBAE students for SAE (n = 504)

Recordkeeping Systems	Overall		North Central Region (n = 166)		Southern Region (n = 193)		Western Region (n = 99)	
	f	%	f	%	f	%	f	%
Agricultural Experience Tracker (AET)	412	81.7	117	70.5	158	81.9	98	98.9
Self-Created Paper Record Book	72	14.3	29	17.5	37	19.2	3	3.0
Self-Created Digital Record Book	65	12.9	33	19.9	23	11.9	2	2.0
Excel	34	6.7	18	10.8	12	6.2	1	1.0
None	23	4.6	11	6.6	10	5.2	1	1.0
State-Mandated Paper Record Book	11	2.2	3	1.8	6	3.1	1	1.0
State-Mandated Digital Record Book	11	2.2	4	2.4	4	2.1	1	1.0
Other	11	2.2	4	2.4	7	3.6	0	0.0
QuickBooks	4	<0.1	4	2.4	0	0.0	0	0.0

Note. Some respondents did not indicate their state and therefore could not be included in regional data

Open-ended responses for the *other* category referenced using the Google Suite for record keeping, including Google Docs, Google Sheets, and Google Classroom. Other digital record keeping systems included Career and College Promise (CCP) and Career and Technical Education (CTE) 360. Several teachers also identified using paper record keeping through a paper calendar, blank notebook, or specifically for Occupational Course of Study (OCS) and Exceptional Children (EC) students.

Conclusions, Implications, and Recommendations

This study found that all categories of SAEs in the SAE for All model were being conducted by students in participating SBAE programs. When considering Rogers' (2003) innovation-decision process, it appears participants are in the implementation stage and are making the decision to adopt components of the SAE for All innovation. In alignment with the SAE for All model, Foundational SAEs were reportedly being conducted in the most programs (81.1%). The frequency of Immersion SAEs being conducted varied greatly between categories. Participants recognized multiple sources of support for SAE implementation with a large portion utilizing their school facilities as resources for SAEs. AET was also the main SAE recordkeeping system participants were requiring their students to use.

The Foundational SAE is designed to be conducted by every SBAE student throughout their time in a SBAE program (The Council, 2017a). Foundational SAEs are being adopted by these teachers as an acceptable SAE in their programs. Almost one quarter of participants (25.9%) indicated that they have an overwhelming majority of their students (>75%) conducting Foundational SAEs. It appears these SBAE teachers are transitioning to supporting every student in a Foundational SAE, but perhaps the lack of 100% student completion of Foundational SAEs is due to a misconception that Foundational SAEs only need to be conducted once before beginning an Immersion SAE (Ford & Lambert, 2025b). Since 11.7% of participants have every student engaged in a Foundational SAE, it appears that this new SAE category can be achieved and does fit in SBAE programs. This phenomenon is worth further investigation to better understand how Foundational SAEs are being utilized in SBAE programs and how they are impacting students, teachers, and stakeholders.

Of the Immersion SAEs, the two most traditional categories, Placement and Entrepreneurship, were the two most utilized categories in the most SBAE programs. It is possible that participants do not have a complete understanding of the guidelines which distinguish the newer SAE categories from Placement and Entrepreneurship, leading participants to advise students to categorize their SAEs based on their knowledge of previous SAE categories (Doss & Rayfield, 2019; Ford & Lambert, 2025a). Perhaps the higher percentage of Placement and Entrepreneurship SAEs is due to the clearest alignment with FFA awards. Most FFA Proficiency Awards are for Placement, Entrepreneurship, and Research SAEs (National FFA Organization, 2023b), excluding all other categories. The American FFA Degree requires SAEs that earn and invest money (National FFA Organization, 2023a), which is a challenge when some categories, such as Service Learning or School-Based Enterprise, may not involve a student earning money. Even though there may not be personal income through participation in some SAE categories, there is still an opportunity for students to gain valuable skills for their futures. National FFA should reconsider the SAE requirements for FFA Degrees and Proficiency Award applications to better align with each of the SAE for All categories. Perhaps National FFA could consider removing requirements of personal income and investment through SAE for FFA awards and adding a focus on student skill development and career preparation instead. When considering support for new teachers, teacher educators should incorporate multiple opportunities for pre-service and in-service teachers to learn about and see all categories of SAE for All in practice.

Even though Research SAEs can be recognized through FFA Proficiency Awards, the FFA Star awards program, and the FFA Agriscience Fair, they are reportedly conducted the least by students in these SBAE programs. Perhaps the lack of participation in Research SAEs is due to the multi-faceted nature of research, where SBAE teachers need to support students through the scientific method, research design, implementation, research report writing, and presentation of findings. Research SAEs hold a great potential to bring the three components of SBAE together (Ford et al., 2025; Thiel & Marx, 2021). Research could be taught and conducted in class, students can gain useful skills for their futures, and receive recognition through the FFA Agriscience Fair competition. Embedding Research SAEs into classes could also address the previously indicated barrier of lack of SBAE teacher time for SAE (Retallick, 2010; Shoulders & Toland, 2017; Wilson & Moore, 2007) by limiting the amount of time necessary outside of the contract day

to supervise SAEs as a majority of the work could be accomplished during class time. Teacher educators could incorporate more research strategies into their undergraduate courses to help increase the self-efficacy of SBAE teachers regarding research. The classic Research SAEs of Analytical and Experimental have been around since the 1980s but the Invention research SAE introduced in SAE for All showed the lowest level of adoption of any immersion category. Inservice training is likely necessary to increase teacher skill in conducting and supervising Research SAE, especially as it relates to Invention SAEs.

The most interesting SAE for All category being adopted is School-Based Enterprise SAEs. It was the only Immersion SAE for All category to have more than one or two participants ($f = 15$) indicating 100% participation by their students. School-Based Enterprise SAEs were the fourth most implemented category of Immersion SAE (66.0%), with more programs indicating they had students with School-Based Enterprise SAEs than older categories like Research SAEs. It is worth considering what these teachers define as a School-Based Enterprise SAE. The SAE for All Teacher's Guide (The Council, 2017a) describes School-Based Enterprise SAEs as "student-led business enterprises that provide goods or services. They are operated from the school campus utilizing facilities, equipment and other resources provided by the agricultural education program or the school in general" (p. 20). It is possible that participants are considering any products made or services provided by the agriculture program as a School-Based Enterprise whether it is student-led or not. It is worth further investigation to determine SBAE teacher understanding of School-Based Enterprise SAEs versus school-based Placement or Entrepreneurship SAEs.

Teachers were also adopting Service Learning SAEs in their programs (58.7%). In Rogers' (2003) innovation-decision process, School-Based Enterprise and Service Learning SAEs appear to be two components of SAE for All that SBAE teachers have quickly adopted within the implementation phase. Perhaps teachers are drawn to having students complete School-Based Enterprise and Service Learning SAEs because of the flexibility of the categories, ability to align the SAEs with course content, and being able to support many students through SAEs at one time. Service Learning and School-Based Enterprise SAEs both could be completed on campus and involve every student in a class, which would allow SBAE teachers to supervise during their contract time and utilize resources available at their schools.

The current School-Based Enterprise implementation guide (The Council, 2018) only directs students through the initial start-up phase of a School-Based Enterprise with no guidance for long-term success of the enterprise. It is worth exploring how to continue a student-led School-Based Enterprise as students graduate and leave the SBAE program. The Council could create a more prescriptive guide to support the annual transition of a School-Based Enterprise SAE between students so that it does not involve the SBAE teacher taking the lead on the SAE. National FFA should consider how to recognize SBAE programs and groups of students who are conducting outstanding Service Learning and School-Based Enterprise SAEs. As it stands, SBAE programs are only allowed to have one student apply for a FFA Proficiency Award in each category (National FFA Organization, 2023b), limiting recognition opportunities beyond the chapter level for all other students that may be involved in a School-Based Enterprise or Service Learning SAE. We also recommend conducting case studies to understand the implementation of SAE for All categories with a specific focus on categories embedded in SBAE classes.

Unlike previously indicated barriers (Eck & Davis, 2024; Retallick, 2010; Wilson & Moore, 2007), participants shared an impressive amount of resource availability for SAEs in their programs, identifying an average of 3.5 resources per program. The highest indicated resource availability included on-campus facilities. As students have less direct production agriculture connections, this may be the direction most programs are moving. As resources for SAE continue to be built on campuses, it is important for SBAE teachers to remember the Agricultural Education mission: "Agricultural education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber, and natural resources systems" (The Council, n.d.) and strategically improve their campus facilities to meet the needs of their students and communities. Future research could seek to identify which resources are critical to

integration of SAE into SBAE programs. Additional research could also investigate the possibility of a relationship between SAE resource availability and integration of SAE in an SBAE program. Understanding the experience of SBAE teachers, students, and parental and community resources could also provide concrete examples and recommendations to others looking to strengthen SAE.

Recordkeeping has been an important component of SAEs since Stimson's (1919) home project. Participants overwhelmingly indicated that they had students using AET for recordkeeping (81.7%). In smaller numbers, participants were also creating their own recordkeeping forms for students. The open-ended *other* responses clarified that some participants were creating their own specifically for their Occupational Course of Study (OCS) and Exceptional Children (EC) students. AET has been considered complicated (Aviles, 2017), which could be driving the decision for teachers to create a different record book for some of their students. It is once again recommended that the management team at AET create simplified versions of their recordkeeping system, possibly by allowing SBAE teachers to hide components of AET on student accounts to make entering records more accessible to students at all levels of ability (Englin, 2023; Ford & Lambert, 2023). Less than one percent of participants had their students using the common business recordkeeping system Quickbooks (Yaqub, 2024) for their SAE records. Even though AET meets the recordkeeping needs of many SBAE students and programs it is worth considering if it is the right tool for students engaged in Entrepreneurship SAEs who wish to maintain their businesses following their time in SBAE. Future research should investigate what recordkeeping system is the industry standard for agricultural businesses comparing the similarities and differences with AET.

SAE for All is catching on nationwide with Foundational SAEs reaching its intended 100% implementation in some programs. Newer SAE for All project types like School Based Enterprise and Service Learning are finding advocates. In qualitative SAE for All research (Ford & Lambert, 2025a, 2025b), teachers have indicated a need to see other teachers showing what it looks like to implement SAE for All into their program and concrete examples of resources and ways that SAE for All works. As implementation spreads, teachers have more peers from which to learn.

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