

# The Benefits and Challenges of SAE for All and FFA Affiliation Adoption

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## Abstract

*Even with measurable benefits of all three School-Based Agricultural Education (SBAE) components, implementation of each component widely varies. Not all SBAE students experience the benefits of FFA and SAE, resulting in young adults who may not be fully prepared for their careers or to enter the workforce. FFA Affiliation and SAE for All are two approaches designed to reprioritize FFA and SAE as integral. As part of a federally funded grant, we used a descriptive case study approach and Diffusion of Innovations theory (Rogers, 2003) to explore the challenges, limitations, and benefits experienced when teachers adopted FFA Affiliation and SAE for All. We found that the stigma of agriculture, student buy-in, limited resources, SBAE jargon, and long-term financial feasibility were challenges for teachers. Teachers described many benefits including increased access, removing barriers, and increased participation. To make adoption easier, teachers wanted additional resources, networking, best practices, and time for problem-solving. Participants' primary concern was FFA Affiliation's long-term viability, given the pricing model. We recommend national organizations develop additional resources and provide professional development to support FFA Affiliation and SAE for All and that National FFA reevaluate the FFA Affiliation fee structure.*

## Introduction and Theoretical Framework

For most of its history, School-Based Agricultural Education (SBAE) has promoted an integrated, three-component instructional model. The integrated three components are important as they teach students crucial career and industry skills such as communications, teamwork, problem solving, entrepreneurship, adaptability, digital literacy, and work ethics, which are some of the most in-demand skills employers say new graduates are missing (Crawford et al., 2011; Dondi et al., 2021). Unfortunately, implementation of all

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three components widely varies, and not all students experience the full benefits of the model, resulting in young adults who may not be fully prepared for their careers or to enter the workforce.

Together, the Smith-Hughes Act (1917) and Public Law 81-740 (Future Farmers of America Incorporation Act, 1950) helped to legally establish the three components that now compose the SBAE model: (a) classroom and laboratory instruction (rigorous, cognitive knowledge), (b) Supervised Agricultural Experience (SAE) which provides work-based learning (WBL) and experiential learning (relevant, psychomotor skills), and (c) the National FFA Organization (FFA) which provides social-emotional learning (SEL) and leadership development (relational, affective dispositions). SEL skills include communication, teamwork, leadership, and problem solving, which are highly valued by employers and industry (Crawford et al., 2011). FFA often teaches these skills through youth leadership opportunities, conferences, Career Development Events, service learning, and more. WBL includes internships/placement, entrepreneurship, research, service learning, and simulated school-based enterprises, and provides learners with industry-specific skills, processes, and use of tools (Kreifels, 2021). New Perkins V legislation and national SAE renewal efforts clarify that all WBL is SAE, but not all SAE meets the definition of WBL (Deimler et al., 2021; Sheehan, 2021). SAE for All defined SAE experiences that fully meet the federal definitions of WBL as *Immersion SAE*, while pre-WBL experiences of career exploration, financial management, workplace safety, employability skills, and agricultural literacy were conceptualized as *Foundational SAE* (Kreifels, 2021; Sheehan, 2021). WBL—including immersion SAE—is a key component of Perkins V as industry leaders place a strong emphasis on practical experience, technical skills, and the application of classroom academic knowledge within industry (Deimler et al., 2021). Students who participate in the SBAE program with all three components are more likely to pursue careers in agriculture as the model increases career and college readiness (National Research Council, 2000, 2009) and provides personal, occupational, and educational benefits (Dyer & Williams, 1997). Further, SAE provides authentic experiences that enable students to apply academic and technical learning to real-world settings (National Council for Agricultural Education [NCAE], 2020). SBAE graduates who “participated heavily in FFA” are more likely to enter careers in agriculture (Fraze & Briers, 1987, p. 24), potentially up to four times more likely than non-members (Adedokun & Balschweid, 2008). FFA 100% membership efforts can even improve equity and diversity in SBAE (Falwell & Guffey, 2023; Roberts et al., 2009; Sheehan et al., 2023). Each component of the SBAE model has some level of demonstrated benefit to students.

Even with measurable benefits of the three SBAE components, participation often varies. While the intent of the SBAE model was for students to engage in each component (Case, 2010; Croom, 2008), educational expectations and legislative reforms have caused variation in how and what is prioritized (Hoover & Scanlon, 1991; Retallick & Martin, 2008; Talbert & Balschweid, 2004). Teachers struggle to balance classroom, SAE, and FFA (Shoulders & Toland, 2017; Wilson & Moore, 2007), which may lead teachers to reduce or eliminate SAE or FFA (Sheehan, 2021). Despite increased SBAE enrollment, “fewer students received the benefit of a complete program... as evidenced by the growing gap between students enrolled in [SBAE] and students who also participated in SAE and/or FFA programs” (Retallick & Martin, 2008, p. 35). The contrast between the philosophical ideal and realistic SBAE experience is concerning.

*FFA Affiliation* and *SAE for All* are two approaches designed to reprioritize these components as integral to SBAE. Both initiatives provide all students in an SBAE program with access to FFA and SAE, with a goal of removing barriers to access and centering leadership, social-emotional skills, WBL, and technical-skill development within the SBAE program (Sheehan, 2021). Despite signs of progress, SAE for All and FFA Affiliation are relatively new and complex innovations that are expensive to trial, which often limits adoption.

SAE for All is an emerging program. NCAE launched SAE for All as a renewal initiative in 2010 (Kreifels, 2021; Womochil, 2019). During the next ten years, NCAE adopted guiding principles, training

materials, and prepared for the official launch in 2019, but efforts stalled because of COVID-19, and are now unclear, resulting in fractured practice (Kreifels, 2021; Pastir & Thiel, 2023). There is limited-to-no existing research on SAE for All, potentially in part because SAE participation can often be harder to track than SBAE enrollment and FFA membership. Evidence demonstrates that SAE remains the most minimized part of SBAE, with just half of SBAE students nationwide having an SAE (Hanagriff, 2021; Shoulders & Toland, 2017). In some regions, participation in SAE is declining even while SBAE enrollment and FFA membership grows (Barrick et al., 1991; Rank & Retallick, 2016; Womochil, 2019). While there is a renewed focus in SAE for All—and on WBL in Perkins V—teachers describe a need for more professional development and support (Hainline & Smalley, 2023). Greater focus on and analysis of SAE for All may help teachers better implement SAE.

Conversely, the gap between SBAE enrollment and FFA membership has narrowed in the last 10-15 years, yet research and information on the program remains inadequate. Affiliated membership has contributed to the largest FFA membership increase since the 1977 Farm Crisis (Sheehan & Moore, 2019). In 2019, while less than 30% of the 8,500 FFA chapters were affiliated, they represented half of the total membership (Sheehan & Moore, 2019). As of the 2023 National FFA Convention, 55% of FFA chapters nationally were affiliated (45% used dues), and 77% of students obtained membership through FFA Affiliation (23% paid individual dues), according to National FFA (2023c). In 2023, 945,988 of the estimated 1,378,771 SBAE students were FFA members (i.e., 69%), up from 63% in 2016 (Carter, 2016; National FFA Organization, 2023d). Since 2009, FFA membership has grown by more than 30% (Sheehan & Moore, 2019). Research on FFA Affiliation—like SAE for All research—is far too limited. Still, early studies with small samples describe a strengthened SBAE model and increased access and participation, but also identify new challenges, specifically concerns about complexity of the fees, burden of the fee on the chapter, and increased teacher workload without compensation (Falwell & Guffey, 2023; Sheehan et al., 2023). National FFA is exploring a simpler dues and fee structure, such as a fee per number of teachers, rather than per student (National FFA Organization, 2023c). National FFA research reports show membership dues and fees represent just 7% of the national organization's \$50 million annual budget (\$3,500,000), with around \$1 million (29%) supporting the national magazine (2023a). Delegates at the 2022 National Convention discussed and even attempted to eliminate membership fees altogether (National FFA Organization, 2023b).

FFA Affiliation and SAE for All are complicated reforms that require SBAE teachers to think and act differently. Challenges experienced during adoption can provide insights into how to provide a potentially stronger SBAE experience. National FFA has a goal for 100% of SBAE students to have access to FFA by 2028, the 100-year anniversary of FFA's founding (Deimler et al., 2021). In line with the Smith-Hughes Act and the ideals of the three-component model, striving for 100% SAE may soon follow, especially under Perkins V. However, because these programs are complex and data are limited, they should be investigated.

### Theoretical Framework

Diffusion of Innovations (Rogers, 2003) provides a useful framework for investigating how a novel idea is implemented by society. An innovation can be viewed as “an idea, practice, or project that is perceived as new by an individual or other unit of adoption” (Rogers, 2003, p. 12). Relative advantage, compatibility, complexity, trialability, and observability explain an innovation's diffusion (Rogers, 2003). *Relative advantage* is how much an innovation is better than its predecessor. *Compatibility* measures how well an innovation fits potential adopters' values, experiences, and needs; it reduces adopter uncertainty. *Complexity*, or how difficult an innovation is to understand and use, slows adoption. *Trialability* is the “degree to which an innovation may be experimented with on a limited basis” (Rogers, 2003, p. 232); trialability promotes adoption. *Observability* describes how visible innovation results are to others. While some discoveries are difficult to articulate, and others are obvious, increased observability boosts adoption.

These qualities can function as a framework for exploring the innovations of FFA Affiliation and SAE for All.

FFA Affiliation and SAE for All, as innovations, are complex and expensive to trial and observe. Around 30% adoption is often a tipping point when an innovation takes off and quickly grows (Rogers, 2003). Prior to this project, based on Minnesota FFA association membership data, just 7-10% of chapters in Minnesota had adopted FFA Affiliation, compared to 30% of chapters nationally (Sheehan & Moore, 2019); two years later, Minnesota was nearing its 30% adoption tipping point. SAE for All participation was unknown prior to the grant project and remains more difficult to measure. Our research was needed to explore teachers' experiences adopting the total SBAE model, specifically as Minnesota approaches a potential tipping point in adoption.

### Purpose and Objectives

Research on FFA Affiliation and SAE for All is lacking. Our study focused on teachers who participated in a federally funded research grant to fully adopt the SBAE three-component model using FFA Affiliation and SAE for All and study their experiences during adoption. Recognizing that 100% participation of every student may be unattainable, our study focused on implementing FFA Affiliation and SAE for All as interventions to provide access to all students—not expectations for all student to participate—and examining which aspects of adoption best support or prevent engagement and participation. Our research objectives included:

1. Explore the early experiences of adopting FFA Affiliation and SAE for All.
2. Define challenges and barriers that arise when adopting these innovations.
3. Describe the benefits that are experienced when these programs are implemented.
4. Determine additional support and resources needed during adoption.

### Methodology

This research was part of a federal grant project known as the *Agricultural Diversity, Leadership, and Technical Skills (ADLTS) Challenge* funded by the United States Department of Agriculture (USDA), in a partnership between the University of Minnesota, Minnesota FFA Association, and the Minnesota Department of Education. The USDA required proposals to focus on technical skill development, as well as social-emotional skills (i.e., soft-skills). The intended outcome in our ADLTS funded research project was to increase social-emotional and technical skill development by removing barriers in SBAE, specifically through an intervention of adopting FFA Affiliation and SAE for All.

### Reflexivity Statement

Multiple authors contributed to this study. The primary author, who led data collection and analysis, was a state SBAE staff member and leader of the state SBAE teacher mentoring program. This rapport helped participants feel comfortable sharing their lived experiences and examples in a way that best expressed their feelings and thoughts. Two authors interpreted the findings—one with SBAE teaching experience and another without. Three researchers held state-level SBAE leadership positions, and three were SBAE teacher educators. While we intended to remain neutral and minimize bias (Yin, 2009), the purpose of the grant was to implement FFA Affiliation and SAE for All, which likely integrated elements of constructivism (Merriam, 2009) and may have impacted how we perceived our findings. As several researchers on the project held SBAE state level leadership positions, we encouraged participants to be candid and transparent when describing their experiences and to avoid trying to “please or otherwise cater to [us]” (Yin, 2016, pg. 146) as state staff. Engaging in reflexive practice was crucial for developing trustworthiness and our qualitative interpretations (Flick, 2017). We recognize the value of examining our

experiences related to the phenomenon and our methods describe further strategies to maintain trustworthiness and rigor.

### Study Design

The grant proposal required participant districts to have (a) a minimum of 10% persons of color, (b) at least 30% students from socioeconomically disadvantaged environments, or (c) be situated in a community with at least 10,000 people. While we encouraged many programs to apply, participation was optional, and teachers self-selected to participate. We did not preference selection for teachers who were community leaders or held influence within the profession. Thirty-one schools inquired about the program and 23 schools (in 14 school districts) applied.

In alignment with the requirements of the grant, we used purposeful sampling to select schools that could enhance technical skill development through SAE and social-emotional dispositions through FFA. In the summer 2020, we accepted 17 schools, including 28 teachers, which met both the grant requirements and sampling criteria. One district withdrew before implementation due to pandemic challenges. At the end of year two (2021-2022), due to a range of factors, including teacher changes and COVID-19, 14 schools and 24 teachers who had begun the program remained. Table 1 describes characterizes of each district and teacher demographics.

**Table 1**

*Summary of Participating School District Demographics and Teacher Demographics*

District	Grades	# Students	F&R	BISOC	Teacher Demographics	Pseudonym
Chester	9-12	1,200	67%	80.5%	2 years teaching; male	Manuel
Clinton	7-12	560	39%	34.1%	9 years teaching; female	Rachel
Fairview	7-12	1,900	44%	46.1%	4 years teaching; female	Sally
Franklin	7-12	1,900	14%	14.0%	18 years teaching; male	Matt
					13 years teaching; female	Patrick
					3 years teaching; male	Phillip
					11 years teaching; male	Tammy
					17 years teaching; female	Wanda
Greenville	9-12	1,100	24%	13.0%	20 years teaching; male	Larry
Groton	9-12	290	33%	18.5%	4 years teaching; female	Olivia
Hampton	9-12	1,400	44%	64.0%	3 years teaching; female	Bailey
Hartford	9-12	1,100	89%	95.4%	8 years teaching; male	Adam
					12 years teaching; female	Nicole
					7 years teaching; male	Nick
Lakefield	7-12	320	40%	23.8%	4 years teaching; female	Chloe
Madison	7-12	270	65%	88.7%	9 years teaching; female	Beth
					3 years teaching; male	Ford
Milton	7-12	2,500	25%	75.0%	3 years teaching; male	Daniel
					13 years teaching; male	Wyatt
Oakland	9-12	1,500	29%	14.6%	18 years teaching; female	Grace
					27 years teaching; female	Trish
Pontiac	9-12	460	36%	17.2%	12 years teaching; male	Forrest
					12 years teaching; female	Sadie
Salem	7-12	250	32%	39.1%	27 years teaching; female	Heidi

*Note: F&R = free and reduced lunch program. BISOC = Black, Indigenous, and students of color.*

In this study we used a qualitative research methodology. We carefully planned the study in alignment with the goals of USDA grant. While the grant period included multiple years of adoption, the 2021-2022 academic year was the sole case in this specific study. We used a descriptive case study approach to investigate our research questions, which provided depth and meaning to describe the case in its real-world context (Yin, 2017). Our goal was to remain objective to maximize the validity and reliability of our study, while exploring the phenomena of FFA Affiliation and SAE for All in their natural context (Yin, 2017); though our experiences as state FFA leaders and SBAE teacher educators, as well as implementing a grant designed to strengthen FFA Affiliation and SAE for All adoption, likely impacted our interpretation (Merriam, 2009). This qualitative approach afforded the generalization of descriptions and explanations (Creswell & Clark, 2017) related to the adoption of FFA Affiliation and SAE for All from teacher participants. The case study approach allowed for a rich description of the innovation and narratives of the challenges and benefits teachers experienced during adoption.

To participate in the grant and research, SBAE programs and teachers adopted SAE for All and FFA Affiliation. To prepare for the intervention of adopting the two innovations, we provided teachers with technical training and professional development about SAE for All and FFA Affiliation. We, as state staff, trained teachers at the beginning of the grant on these program models and provided resources and instructional materials to help them (e.g., SAE for All training, program handbooks). Teachers met at least quarterly during FFA events, teacher professional association conferences, and virtual meetings to share insights, challenges, and ideas. We provided as-needed coaching to teachers when they requested additional support. Teachers collaborated in teams to create shared resources to aid one another in adoption. To defray costs of implementation—such as affiliation fees, record-keeping software, travel—schools received an annual participant support stipend from the grant.

### **Data Sources**

Our primary data source in this study was mid-intervention interviews with 24 teacher participants from 14 schools during the 2021-2022 academic year, in addition to direct and participant observations, our reflexive notes, and artifact analysis. Five instructors began teaching at the participating schools during the 2021-2022 academic year but were not included in these data, as we conducted a separate analysis of mid-study participants.

We used a flexible interview protocol as our main line of inquiry. Interviews lasted between 20 and 45 minutes, were conducted via video conferencing software, and included semi-structured questions supplemented by follow-up questions, probes, and clarifying comments (Merriam, 2009; Yin, 2009). Our initial interview schedule included questions about the process of starting the grant project and adoption, benefits to students, barriers and challenges, resources needed, and future planning (see Appendix). We designed questions to elicit teachers' experiences adopting FFA Affiliation and SAE for All, with particular attention to the common themes related to diffusion of innovations theory (Rogers, 2003). We then asked follow-up questions to elaborate and fully flesh out themes we observed. We probed for any strategies or resources that worked, for further support they needed, and for changes to teacher philosophy and practice. Finally, we asked clarifying questions to ensure accuracy.

To supplement and support our interview protocol, we gathered additional data using observations, artifact analysis, and researcher notes. Using multiple additional sources of data allowed us to establish triangulation (Creswell, 2018). We kept research memos and reflexive journals throughout the study, specifically during participant training and coaching of teachers on adoption of FFA Affiliation and SAE for All. As teachers shared resources and developed project materials and handouts as outputs of the grant, we analyzed these artifacts as additional data in the case. Finally, we documented our observations, both direct observations of programs at FFA and SAE events, and participant observations. Our data collection resulted in 24 interviews, researcher reflexive journals, and dozens of artifacts which we then analyzed.

### Data Analyses

The primary author conducted the interviews virtually and transcribed the interviews verbatim, while additional authors supported and assisted with coding and analysis. Constant comparative analysis and consistent communication between coders allowed for a comprehensive and cohesive understanding of the identified categories and relationships (Glaser & Strauss, 1967). The primary researcher wrote analytic field notes summarizing the content during the interviews. The interview analysis involved applying deductive and inductive methods, conducted through iterative coding cycles—using a blend of inductive and deductive methods can yield more robust results than one method alone (Creswell & Clark, 2017; Saldaña, 2015). Our guiding interview questions surrounding experiences, challenges, and benefits were rooted in deductive coding. We developed a collaborative coding framework to create a shared understanding of codes and themes, ensuring inter-coder reliability through regular meetings. Through comprehensive and line-by-line examination using the Dedoose qualitative coding software to improve data analysis reliability, the analysis revealed recurring patterns within and between interviews. We used selective coding to focus data related to early experiences, challenges and barriers, and successes implementing the innovations into central themes, which we mapped to the diffusion of innovations theory (Rogers, 2003) categories of relative advantage, compatibility, complexity, trialability, and observability. It also indicated areas of disagreement across individual experiences, which shed insight on other topics for further investigation. The procedures in this study involved consolidating the data and extracting meaningful quotes that represented the prevailing themes.

To ensure our findings' trustworthiness (i.e., credibility, transferability, dependability, and confirmability; Lincoln & Guba, 1985), we kept a chain of evidence (Yin, 2009) and careful audit trail of our work. To bolster our findings, we engaged in multiple iterative coding cycles and careful confirmation of their trustworthiness. We employed triangulation by cross-referencing the coded themes with our documentation, including research memos and reflexive journals created throughout interviews (Creswell, 2018). Participants in the grant developed shared resources and products to support adoption of these innovations, which we also analyzed. As a team, we scrutinized any indications of bias stemming from our unique positionality as researchers and the sole instruments in this study (Yin, 2009). We used this approach to ensure our results achieved greater validity and trustworthiness.

Our chosen methodology presented limitations to our findings as well. The COVID-19 pandemic certainly altered our intended intervention and would be difficult to replicate again in a future study. We also observed that other programs in the state adopted FFA Affiliation and SAE for All in correlation with the launch of our grant as observability of the two innovations increased (Rogers, 2003). We chose to exclude from our research any data from programs not in the grant. Including these programs may have contributed insights for our study but would have also impacted reliability and our ability to measure the specific impact of the grant. Our results therefore only captured the experiences of those adopting these programs within our specific sample of teachers and are only generalizable to those in the funded research project. Further research including new and larger samples may lead to more generalizable results and findings.

### Results

We used our research questions and diffusion of innovations theory (Rogers, 2003) to organize our results. We categorized these themes by *relative advantage*, *compatibility*, *complexity*, *trialability*, and *observability*, which each have a different impact on diffusion and implementation of a novel idea during adoption. The themes represent numerous benefits and challenges teachers observed during adoption of FFA Affiliation and SAE for All.

**Theme One: SAE and FFA are Beneficial for Students (i.e., Relative Advantages)**

Nearly every teacher discussed how integrating SAE for All and FFA Affiliation was beneficial for students and presented relative advantages over the previous models.

***Doing More by Changing Expectations of SAE and FFA***

A crucial theme was that teachers' perspectives of SAE, WBL, FFA, and leadership shifted, expanding beyond just FFA and SAE awards and degree programs. Many teachers discussed how for years they thought of SAE in terms of winning a proficiency award and state degrees, and FFA within the realm of Career and Leadership Development Events, officers, and state and national conferences. SAE for All and FFA Affiliation often alter that perception. Most teachers returned to the basics of SAE and FFA, focusing on foundational skills that all students can learn, rather than capstone, high achieving experiences like winning a state award.

**Foundational SAE.**

SAE integration goals for teachers included career readiness, career exploration, and reflection on classroom and experiential learning. "There are so many jobs [students] have not been exposed to yet," Sally said. Olivia described how each of her classes studied careers and really enjoyed it. SAE for All helped expose students to career options in agriculture and build basic, foundational career readiness that better prepared them for more intense, immersion experiences. Many teachers discussed shifting their focus from promoting SAE with traditional examples to starting students with foundational projects and then slowly building to immersion. Teachers realized that SAE experiences could happen in the classroom through career exploration, school-based enterprises (e.g., school greenhouses, apiaries, orchards, manufacturing businesses), and guest speakers, as well as outside the classroom through job shadowing, internships, research, and student-run businesses. Patrick said teachers with a more limited or traditional view of SAE might be surprised by some of his student's projects, but added, "You have to be flexible and have students buy into it and be excited about what they are doing."

Many programs used choice boards, which provided a variety of options and allowed for varying levels of student commitment. Most teachers agreed SAE, and even FFA, should be graded and embedded into every course, although grading requirements often differed by school. Franklin teachers identified the key skills they wanted all students to gain from the SAE project but emphasized student interest and choice for how to demonstrate those skills; "they get choices in what they want to do, and they get to pick," said Tammy. Teachers acknowledged that while some SAE experiences may not earn an FFA degree or award, they are likely the more appropriate place to start, and can often lead to those immersion experiences later. "It gives every student a chance to be successful at something in school, because they are using what they have learned outside of school," described Sadie. From there, teachers found building toward immersion SAE and true WBL to be easier.

**Foundational FFA.**

Most teachers found the benefits of removing barriers like paying dues or needing to sign up before participating to be impactful, and for several programs, noticeably improved student participation. Heidi explained, "Nobody feels like they cannot attend [anymore]; it is up to them if they want to participate." Rather than needing to convince students to join first and pay a fee, teachers could focus on what students would be interested in doing and how to best engage each person. Several teachers said the conversation changed from "do you want to join FFA?" to "what do you want to do in FFA?" Membership dues may seem like a small dollar amount, but it can be what stops a student from participating. Beth added, "One thing I like about the affiliate option is that students always have that door open." Since all students could participate freely, teachers felt like they could genuinely promote events to their entire class. Beth shared that students did not understand how easy it was to participate and get involved prior to FFA Affiliation. "It is your decision how you use your membership; whether you are going to use it to the fullest of your abilities or not," Olivia told students. To provide experiences for all, some teachers took entire classes to one-day leadership conferences and entry level competitions relevant to the course. Teachers said

participation in meetings, service projects, and local events increased after adopting FFA Affiliation. “It is easier when every time, [the event] includes every student,” Heidi said. Promoting leadership broadly in the program, instead of exclusively only to paid members, can be easier and have benefits for students.

Like the philosophical change in SAE from immersion projects and awards to foundational experiences, teachers also shifted how they viewed FFA participation. While the concepts of *Foundational FFA* and *Immersion FFA* did not formally exist like with SAE, teachers found it easier to get students to participate if they introduced FFA to them through shorter, exploratory activities like one-time events or class trips rather than committing to an overnight conference, becoming an officer, or joining a Career Development Event team.

In summary, several teachers discussed how integrating Foundational SAE/agricultural experience projects and Foundational FFA/leadership experiences broadly within their program, rather than treating them as extracurricular or optional, had advantages and helped to shift the culture of the program. Sadie felt teachers should not shy away from these opportunities, “because we have mentioned it in class, it seems a little bit less scary.” Forrest reflected how the life-changing moments for students in his program are often not in the classroom but during SAE and FFA experiences. He shared, “The more [students] we can get into FFA and SAE the better... not all students will take a seat at the table, but they have all certainly been offered.” Creating an inclusive, welcoming culture, and embedding these opportunities, or even requiring some level of basic SAE and FFA exploration, can help expose students to these programs, especially students who might not otherwise have chosen to opt in. “I used to think every student had access to FFA; all they had to do was join. I wasn’t excluding anyone. But now I know they really do have access and all are welcome because all students are members and I promote opportunities to each student in every one of my classes, without them needing to first pay a fee or fill out an application,” reflected Heidi. Not all students will become deeply committed to FFA or SAE, but at least they were given an equal opportunity.

## **Theme Two: Shifting the Culture of an SBAE Program (i.e., Compatibility)**

### ***Traditional Terminology***

A specific challenge teachers noted was the traditional terminology of FFA and SAE. Several programs found that students, parents, and administrators understood WBL or an “agricultural experience” better than the specialized phrasing of SAE. Beth explained, “I could use SAE terms, but when I said work-based examples, students understood that better.” Forrest shared, “All students fit under the WBL umbrella... it is a more inclusive language, and that is why it has been better for us.” Further, he added, “We have them do their WBL checkpoints; that is the language that we have tried to use. And it has been met with less resistance than using SAE.” Rachel said her administration understood WBL better than SAE because WBL is used and understood more often in CTE overall. There were similar experiences with FFA; several teachers graded FFA as components of their classes but referred to the assignments as “leadership projects.” Students still attended FFA events, both locally and above the chapter level, but teachers used the more inclusive term of leadership instead of FFA. Adopting these terms allowed teachers to use more foundational concepts of experiential learning (i.e., pre-WBL) and leadership development to introduce students to SAE and FFA prior to the high-commitment, intensive, and sustained experiences students often associated with FFA and SAE, such as officer roles, multi-day conferences and conventions, and long-term SAE projects.

### ***Stigma and Buy-in***

Multiple teachers spoke of how the stigma of agriculture and FFA discouraged some students from participating. Patrick shared, “As soon as [some students] see an FFA jacket, they think, ‘No, I am not doing this.’ The emblem is important to our organization, but...if we are trying to [include all students], do not put that at the forefront.” Some students even changed their classes when they learned enrollment also meant membership in FFA. Wyatt added, “Our urban students, they do not know what it is... [except] that it is what country kids do... that it is for people who are on farms. They do not understand the scope of

agriculture.” Matt stressed the need to reconsider traditions. For example, his students like parliamentary procedure, but he felt using it too much could limit buy-in from new students. He described how parliamentary procedure is important but rigid rules at the forefront of meetings can be intimidating for new students unfamiliar with these rules and even cause some to feel excluded. Matt shared, “There is a place for [strict] parliamentary procedure, but maybe not the main focus [at every meeting].”

Daniel expanded on FFA’s cultural challenges, “There is automatically this stereotype... who is in school and who would be traveling for FFA, so that has been a problem for some students.” He added, “... going to FFA [events] and having all our students have a good experience—which has not always happened—is a bigger problem than we can solve by ourselves.” Bailey emphasized that FFA programming and messaging should be more thoughtful and inclusive, reflecting “I know there are efforts being made... but some students get bad vibes, like it is ‘not for me.’” She felt these experiences can be off-putting for students, making it hard to take students to regional, state, or national events. Reflecting on racism her students experienced at the National FFA Convention in 2021, Grace added, “We have a lot of work to do... there is absolutely no reason that any [student] should attend a conference and feel like they are different... they are being singled out... they are the focus of any hurtful things.” For FFA and SAE to be compatible for all, challenges remain. Shifting the language teachers use to describe FFA and SAE and being welcoming to students who have not historically felt welcome in these programs could help students more easily identify with these learning experiences and make SAE for All and FFA Affiliation more compatible with modern education systems.

### **Theme Three: School System Integration Can be Difficult and Slow (i.e., Complexity)**

Teachers voiced concerns with school constraints and limited resources, and outlined district and building policies and practices, such as rotating or block schedules, large classes, and mixed-grade classes, that made their implementation of SAE for All and FFA Affiliation complicated. “[One student] could be a senior, and this is their first time, and I have to explain all this stuff to them, but their classmates have been in my room since ninth grade, and they heard it 15 times,” Chloe said. Others felt it was hard to integrate SAE and FFA into the classroom, especially for all students, when teachers might not see students in class for months at a time between when they took their last class and then next.

Many programs had limited time, budget, resources, and staff. Some teachers discussed transportation issues and their inability to travel, while others raised challenges about participation limits at regional events. SBAE teachers on nine-month contracts struggled to design, implement, or integrate full programming, given that this work often extended into summer months. Trish said,

“To walk away from it in June... July... August... it is hard to leave, but without a summer contract, you cannot do FFA activities in [summer]. I tried [to get a] summer contract for years; they always said no.”

Daniel felt frustrated when integrating these innovations into a multiple-person program; while he was committed to adoption, he felt like his teaching partner was “not going to put in the time.” Adopting these new innovations into school systems with differing philosophies and expectations for students can be complex and hard to understand, especially as there is limited information for successful adoption.

### **Accessibility for Underrepresented Students**

Teachers described the need to be flexible when promoting SAE and FFA to all students. Several teachers spoke specifically about Special Education (SPED) and English-Language Learner (ELL) education. Bailey shared, “I have a lot of SPED and ELL students. It is not that they cannot do the project, but some of the ways we traditionally present the project or ask students to show their learning is difficult.” When using SAE for All and FFA Affiliation, Bailey emphasized the necessity for supportive resources for varied student needs. Sally also mentioned immigrant students’ perspectives of agriculture as another key

factor. Some students do not want to be associated with FFA or agricultural careers. “The fact that they fled their country to not have to live this lifestyle—that is the big battle,” she said. Adopting these programs often requires teachers to modify programming to be more accommodating, which is complex.

### ***Teacher Overwhelm***

While teacher flexibility is important and student accommodations should be made, teacher overwhelm is a concern. Sally expressed, “I am getting to the point of stretched too thin... we need a second person, so we can share [responsibility].” SBAE teachers—with extended duties outside of the base teaching contract—are often overworked, so adding “more” may be difficult. “Whenever you are trying something new it is going to take time, but I am also [teaching] on overload every semester,” Larry said. Austin worried about the challenge of having so much to learn as a new teacher, in addition to FFA Affiliation and SAE for All. As these innovations are complex, some teachers did not fully understand SAE for All and FFA Affiliation and tried to create immersion SAE experiences for all students and have every student in FFA participate above the local level. This is likely unrealistic and overwhelming. It is important for teachers to learn how these innovations differ from previous models.

### **Theme Four: Teachers Need Additional Support and Resources (Observability)**

FFA Affiliation and SAE for All may increase student access to the complete SBAE program, but teachers need to be able to more clearly see how these programs work, and which strategies are best practices. Bailey described the need for SAE for All resources geared toward students with exceptionalities within SPED and ELL education. She asked, “What are some accommodations that can be made for students who struggle with writing or... a presentation, [which] might benefit everyone?” Patrick shared why adapting SAE is important, “Non-traditional SAE ideas are helpful, because for a lot of students the hardest part when I talk about SAE is they have no idea what they are going to do.” Given the increasing diversity of his students and community, Matt advocated for making national FFA and SAE resources and examples more inclusive. Matt felt that while his efforts were not perfect, they could be an example for others; “we want everyone [in our program] to feel comfortable when they come to one of our FFA activities and that they have a place.” Diversity and inclusiveness benefited all students, not just underrepresented students. “It allows a different group of students to see those opportunities and experience them more front and center than before,” Matt reflected.

Teachers expressed a need for support with SAE integration and curriculum. Trish noted, “I would like more curriculum ideas. I would love to meet with more teachers and get a toolbox full of ideas of what other teachers are doing. How are they using AET... SAE... and FFA in the classroom” (AET is a recordkeeping software for SAE and FFA that is commonly used in SBAE). Several teachers agreed. Overall, teachers wanted concrete examples and methods.

During adoption, most teachers wanted even more resources and time to collaborate with others. They wanted to discuss how it looked in differing locations and see examples. Sadie stated, “We need more voices in the room, talking about what this is, what it looks like.” Bailey added, “Resources that [others] have are helpful. I would also like to see how other teachers do it.” She knows some teachers “go all out,” but wanted more realistic examples for teachers with strong work-life balance boundaries. Other teachers simply wanted time to partner with others. Tammy wanted “more time to collaborate and chat as [we] work through the same hurdles.” Some teachers wanted visits and recommendations from staff and state leadership. Grace voiced this sentiment, “[I want somebody to] come in, look at things... watch us teach... or maybe come to an FFA meeting. I think I am oblivious to some of the things that I could be doing better.” Teachers desired best-practices, collaboration, real-world applications, and integration ideas to make SAE for All and FFA Affiliation easier to observe and trial.

**Theme Five: Long-Term Financial Feasibility (i.e., Trialability)**

Most teachers worried about the project's grant funds ending and having to pay for FFA Affiliation fees or tools like AET in their SAE for All curriculum out of program budgets. The grant gave teachers the ability to trial FFA Affiliation and SAE for All in ways they might not have been able to afford otherwise financially. Most teachers felt like they could budget for SAE adoption, and tools like AET, but worried about funding FFA. Matt shared, "If I am going to be fully transparent, I am worried... if we have the dollars to support 100% access." Tammy added, "Our biggest hurdle, as we transition out of the grant, is going to be financial. How do we maintain affiliate membership?" Grace shared similarly that the grant made an enormous difference but feared paying the large FFA Affiliation fees when the grant ended expressing, "I am not gonna lie, our bill for affiliate fees/dues went through the roof because we have so many students, and I do not know how to fix that." Bailey described her reluctance to accept the grant, knowing it would expire. "I am nervous to start something, and then we will not have a consistent source of funding for it later." This can be especially difficult for FFA Affiliation adoption, as the change is essentially permanent and charging students for these fees is not an option. Adopting FFA Affiliation often requires a contract or agreement to opt in, which generally prevents reverting to the dues-based model. Further, a key philosophical component of FFA Affiliation is that students are not paying fees for access. It would not be appropriate to charge students a fee to make up for budget shortfalls. Some teachers noticed fundraising had grown now that there were more students involved, but not everyone observed this. All teachers viewed these programs as beneficial for students, but few had plans for how to sustain the changes after the grant ended.

**Summary and the Impact of COVID-19**

The pandemic hampered teachers' plans for implementing FFA Affiliation and SAE for All. Teachers were limited by online or hybrid instruction; others were prohibited from taking field trips. Changes and inconsistencies deeply impacted both teachers and students. Once in-person education resumed, teachers struggled with student engagement and recruitment. Bailey elaborated, "Students are facing a lot of barriers right now in general, both COVID and home life situations." Larry added, "[Recruiting] non-traditional students has been a little more difficult in the last couple years with COVID." After a year of distance learning, other teachers acknowledged students felt more anxious when speaking in front of others, which posed challenges when they required students to present in-class about their SAE projects.

In summary, the intervention of adopting SAE for All to enhance technical and WBL skills and FFA Affiliation to enhance leadership and SEL skills had a positive impact on teachers in our grant-funded research project, and in their view, also on their students. The case study results demonstrate that the stigma of agriculture and buy-in with students—as well as SBAE jargon, having limited resources, COVID-19, and long-term financial feasibility were challenges for teachers. Teachers described many benefits including increased access, removing barriers, and increased participation. To make adoption easier, teachers wanted additional resources, networking, best practices, and time for problem-solving. Participants' primary concern was FFA Affiliation's long-term viability, given the pricing model. As research on FFA Affiliation and SAE for All are limited—even as the National FFA Organization and federal Perkins legislation have prioritized these efforts—our findings may have important implications for SBAE.

**Conclusions**

The ADLTS grant project enabled teachers to fund and prioritize SAE and FFA in their existing curricula to further develop students' technical, leadership, and career skills. Teachers described the various conditions that aided or slowed their adoption of SAE for All and FFA Affiliation and generated new strategies and resources to implement these innovations. The ADLTS grant research project made it easier for SBAE teachers in Minnesota to adopt the complete SBAE model, while also specifically addressing

adoption conditions of *relative advantage*, *compatibility*, *complexity*, *trialability*, and *observability*. Participating programs have become visual examples in Minnesota, leading to additional programs outside of the grant and case study implementing the total SBAE model using FFA Affiliation and SAE for All because of their observations of programs within the ADLTS grant. Teachers in the grant's second implementation year felt better equipped to deliver a full experience but continued to face challenges integrating SAE for All and FFA Affiliation.

There are several challenges with FFA Affiliation and SAE for All. Most teachers described the current FFA Affiliation fee structure as unsustainable, especially in larger districts with several teachers. Many students in affiliated programs had biases and preconceived ideas about SBAE, particularly when discussing leadership and technical skill development using SBAE jargon such as SAE and FFA. SBAE teachers without extended contracts struggled with the increased work but lack of additional compensation that can be associated with FFA Affiliation and SAE for All, especially when they tried to encourage all students to have immersion experiences, rather than foundational SAE and FFA. Potential hindrances to full participation include FFA policies, a lack of accommodation services during competitions, and transportation hurdles for activities above the local level. The findings from our study support challenges observed in similar FFA Affiliation research (Sheehan et al., 2023). Though these challenges were difficult for teachers, they also created opportunities for growth and changes to their teaching philosophy.

Teachers' mental models for membership and participation grew and evolved under FFA Affiliation as language shifted from "Do you want to be in FFA?" to "What do you want to do in FFA?" Participation does not necessarily mean all students qualify for state competitions or win an award, as that is unmanageable and unrealistic (Falwell & Guffey, 2023; Sheehan et al., 2023). When embracing a new mental model, traditions changed as teachers and students adapted FFA activities to be more accessible and inclusive. That said, teachers also reported that sometimes students chose not to take SBAE courses due to the stigma of automatic FFA membership, which supports prior research (Falwell & Guffey, 2023), as well as increasing scheduling constraints. Due to a lack of transparent mental models in Minnesota, teachers continued to struggle to define what FFA Affiliated membership looks like and if it is right for them.

Teachers said early experiences with FFA Affiliation and SAE for All helped students access leadership, SEL and WBL and increased participation. However, teachers struggled to adapt assignments for diverse learners, attempt integration methods, adjust terminology to promote student and administrative understanding, and cope with the COVID-19 pandemic. Teachers requested support with resource development, networking, best practices, and problem-solving. Participants' biggest concern was the current fee structure of FFA Affiliation.

### **Recommendations/Implications**

All participating teachers emphasized the benefits of SAE for All and FFA Affiliation but also shared that funding and staff assistance from this grant were what allowed them to persevere and explore ideas they otherwise would not have attempted. Within diffusion of innovations theory (Rogers, 2003), several variables impeded the adoption of each innovation for programs within our study and should be considered to enhance adoption.

The *compatibility* of total SBAE model adoption aligns with the values and experiences of teacher participants. Teachers shared that although adoption was *complex*, the networking and tangible resources developed throughout the grant and research project made adoption more manageable. We recommend national organizations such as the National FFA Organization, the NCAE, and the National Association of Supervisors of Agricultural Education develop additional resources and professional development for FFA Affiliation and SAE for All. We found that foundational experiences of less than 40 hours for SAE (i.e., *Foundational SAE*) increase accessibility for WBL and allow students to trial SAE before selecting or committing to a more intensive immersion experience (i.e., *Immersion SAE or WBL*). Based on our findings

in this study, we propose a similar philosophical mental model for foundational and immersive leadership and SEL opportunities in FFA (i.e., *Foundational FFA*, *Immersion FFA*). A differentiation between foundational experiences such as community service, local events, and chapter meetings and immersion experiences like conferences, conventions, and competitions may increase accessibility for students and create a more manageable experience for teachers advising FFA. In both programs, leaders in the profession should advocate that students begin with foundational experiences; it is unrealistic for a teacher to have 100% of their students engaged above the local level in FFA and for all students to have state winning SAE projects. Further, teachers need resources to best support a variety of underrepresented populations.

Teachers' descriptions of the *trialability* of total SBAE model implementation varied between FFA Affiliation and SAE for All. Teachers shared how they changed their expectations for SAE each semester and sometimes in the moment. However, FFA Affiliation is more rigid; it is an annual contract and, once adopted, is essentially permanent. Such financial implications make it difficult for teachers to trial FFA Affiliation. *Observability* of these innovations remains limited, as they are difficult to trial and understand. However, some SBAE teachers have witnessed neighboring programs move to FFA Affiliation and SAE for All and find success, potentially resulting in non-project participants also moving to total SBAE model adoption. As more programs find success and benefits from the innovations, and those successes are shared, more schools may become interested in adopting the innovations themselves. In addition to recommendations for changes to the fee structure, additional resources, and professional development, we recommend national organizations promote stories of programs with successful adoption of FFA Affiliation and SAE for All to better highlight these innovations.

Finally, we view the perceived *relative advantage* of FFA Affiliation and SAE for All as the most critical predictor of future adoption, but this value is limited by several challenges, most notable FFA membership fees. Teachers found both FFA Affiliation and SAE for All to be useful and to have benefits for their students, but while SAE for All is free, they viewed FFA Affiliation to be extremely expensive. The cost of FFA Affiliation was a persistent concern, regardless of the number of teachers or students in the program, but especially for teachers in larger programs with several hundred students. Given FFA's goal of 100% membership by 2028 (Deimler et al., 2021) and how often teachers voiced concerns about the fees, we recommend evaluating and potentially eliminating national fees and dues (note that dues and affiliation fees are often a larger and more necessary part of the budget at regional and state levels). The benefits of removing this barrier for students may outweigh the relatively small percentage of funding FFA Affiliation fees and dues represent in the national organization's budget (5-7%).

It is common for organizations to calculate indirect costs they incur which cannot directly be charged to a specific program or connected to a source of revenue (i.e., facilities, utilities, indirect personnel). An alternative approach could be to set registration prices for national events based on both the direct costs of the event and the full indirect costs of running the organization (i.e., services that dues and affiliation fees have previously paid for). For example, a hypothetical \$20 increase to National Convention registration could likely generate more than half of the funds the national organization raises from dues and affiliation fees (excluding the cost of the magazine). Other options could be a rate per chapter or rate per teacher, rather than based on the number of students, but such models would come with their own unique challenges, as did FFA Affiliation. If FFA is integral to and essential within SBAE—like classroom instruction and SAE, which students receive as part of a free, public education—it may be appropriate to reconsider charging a fee simply to access the organization.

We recommend researchers in SBAE continue to study and disseminate findings about SAE for All and FFA Affiliation. SBAE has rapidly changed in the last 14 years. In 2019, Sheehan and Moore observed that FFA had reached its “tipping point” for adoption of FFA Affiliation, and that the innovation may soon take off. FFA membership has grown 30% since then and nearly doubled (509,735 members in 2010 to 945,988 members in 2023) since FFA first implemented the national affiliation membership

program in 2010 (National FFA Organization, 2023c; Sheehan & Moore, 2019). Further, most state's Perkins V priorities are laser-focused on WBL and SAE (Deimler et al., 2021). Researchers should study the impact these innovations have on teachers and student achievement. Future research, specifically longitudinal studies, should examine the long-term impact on teacher retention and efficacy. It would also be useful to compare adoption experiences of teachers transitioning a program to these innovations versus teachers starting their career at programs who have already adopted. Finally, we should evaluate how to most effectively teach leadership and SEL skills in FFA and technical, WBL skills in SAE, to ensure we are most effectively preparing students for their future careers and equipping them with the skills industry needs most (Crawford et al., 2011; Dondi et al., 2021).

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## **Appendix: Interview Protocol**

1. What prompted you to participate in the ADLTS grant professional development program?
2. Describe the process of gaining the support/approval of your school administration.
3. As a result of participating in the ADLTS grant, what, if anything, has changed within your SBAE program and the integration of classroom instruction, FFA, and SAE?
4. Describe how students in your program have benefited from your participation in [grant] and the resulting program changes.
5. As we continue the ADLTS grant, how do you intend to continue to improve/enhance your program?
6. What internal/personal barriers or challenges have you faced when embracing or implementing the integrated program model? Followed by, how did you overcome these barriers or challenges?
7. What external (e.g., school district, system) barriers or challenges have you faced when embracing or implementing the integrated program model? Followed by, how did you overcome these barriers or challenges?
8. What has been the most helpful when conceptualizing and implementing programmatic changes through the ADLTS grant?
9. To further advance your program, what resources or support is most needed?