

# A Profile of Exemplary Rural Agricultural Entrepreneurship Education Programs

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## Abstract

*Entrepreneurship in rural areas has been seen as a potential tool to mitigate rural outmigration. Entrepreneurship has long been a part of the comprehensive model for school based agricultural programs in the United States, often emphasized through Supervised Agricultural Experience Programs (SAEP). Using case study methodologies, this study sought to identify programmatic characteristics of exemplary rural agricultural entrepreneurship education programs. Results revealed: (a) entrepreneurship was taught Primarily through SAEP and (b) entrepreneurship was taught a limited amount through coursework. Results also showed that experiential learning related to entrepreneurship was seen primarily through four examples: SAEP, written business plans, scenarios, and Shark Tank type presentations. Recommendations for practice and future research are provided.*

**Keywords:** entrepreneurship; agricultural education; rural; experiential learning

## Introduction

A sustainable agricultural workforce is contingent on youth engagement in agriculture, however many youth in rural areas show a lack of interest in agricultural careers. (Bennell, 2010; FAO, 2010; USDA, 2015). Agricultural entrepreneurship may provide an enticing career option for rural youth. Agricultural entrepreneurship education programs have existed for some time (Acker & Gasperini, 2009; Phipps, Osborne, Dyer, & Ball, 2008), however, little is known about the characteristics of effective programming for this unique type of education.

School based agricultural education (SBAE) programs in the U.S. have a long tradition of engaging rural youth in a balanced program consisting of classroom/laboratory instruction, Supervised Agricultural Experience (SAE), and leadership development/competition (FFA) (Phipps et al., 2008). SAE has provided students with a range of opportunities for career exploration and career development, with one kind of program focusing specifically on entrepreneurship (Phipps et al., 2008). Much of the previous research on agricultural entrepreneurship in the discipline has focused exclusively on SAE (Guthrie, 2013; Hanagriff, Murphy, Roberts, Briers, & Lindner, 2010). However, little attention has focused on a comprehensive entrepreneurship program that spans classroom, SAE, and FFA. This study begins to explore this topic.

Valerio, Parton, and Robb (2014) examined entrepreneurship education programs around the world and concluded these programs can help develop entrepreneurial thinking skills. Additional research looked at youth entrepreneurship programs and concluded co-curricular and extracurricular activities can also enhance entrepreneurship education (Daniel & Kent, 2005;

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Morris, Kuratko, & Cornwall, 2013). However, little research has specifically examined exemplary rural youth agricultural entrepreneurship education programs. This study begins to fill this gap. This study aligns with Research Priority Areas 3 and 6 of the *AAAE National Research Agenda* (Roberts, Harder, & Brashears, 2016).

### Conceptual Framework

This study was guided by a conceptual model (see Figure 1) adapted from the work of Valerio et al. (2014). The model shows participants, program characteristics, and intended outcomes, all bound within the local context. Previous research (Heinert & Roberts, 2017) examined the teacher characteristics. The current study examined program characteristics.

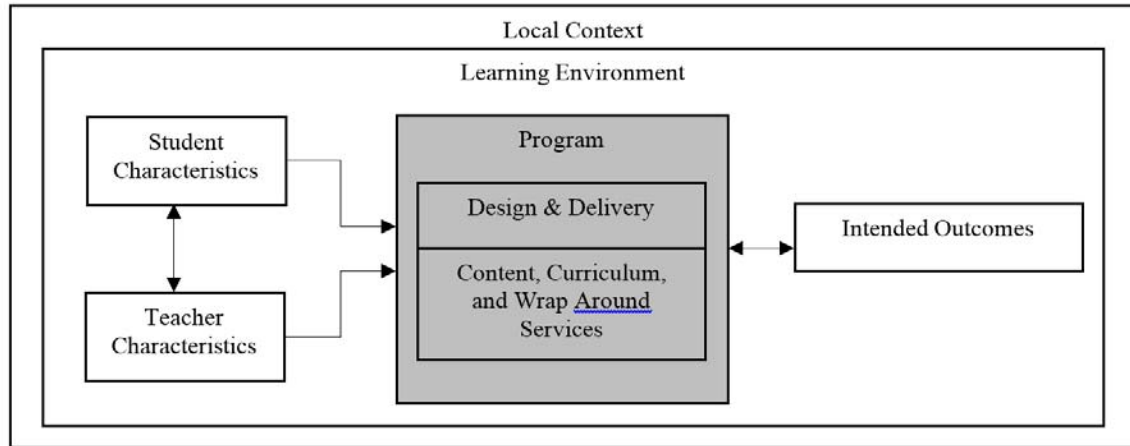


Figure 1. Conceptual model to study rural agricultural entrepreneurship education.

SBAE programs have a long history of providing hands-on, experiential learning opportunities for students (Phipps et al., 2008). Valero et al.'s (2014) discussion of entrepreneurship education emphasized the importance of providing a variety of learning experiences for students. Roberts (2006) proposed a model of experiential learning contexts to allow description of different kinds of experiential learning. This lens will provide a mechanism to examine the total entrepreneurship program.

Much of the existing research on rural youth agricultural entrepreneurship is focused on only one aspect of the total program, SAE. Hanagriff et al. (2010) sought to evaluate the economic return on SAE to the state of Texas. They found traditional entrepreneurship SAE programs in Texas – market swine, goats, and beef to be the most prevalent (Hanagriff et al., 2010). Additionally, each school had invested an average of over \$93,000 into SAE projects (Hanagriff et al., 2010). They also found \$189 million in economic impact from SAE to Texas.

Marx, Simonsen, and Kitchel (2014) sought to describe secondary student's career decision self-efficacy and career decision influences. They found involvement in supervised agriculture experience programs did not highly influence respondent's career decisions; however involvement in career development events had a high influence (Marx et al., 2014). Further, they found parents and the agriculture teacher influenced career decisions (Marx et al., 2014).

Guthrie (2013) shed insight on the link between SAE and rural outmigration. She used case study methodology to describe the geography and careers of American degree recipients in Arizona from the 1990's. While most were previously engaged in entrepreneurship SAE as a portion or whole of their SAE program, most had moved away from rural to urban areas (Guthrie,

2013). Ninety-one percent agreed strongly or generally that their advisor influenced their decision to participate in engaging in an entrepreneurial venture (Guthrie, 2013). Record keeping, public speaking and officer responsibilities positively impacted respondents' success in their current careers (Guthrie, 2013). Most agreed that participation in a career development event, CDE, influenced their decision to participate in entrepreneurial ventures (Guthrie, 2013).

School based agricultural education (SBAE) has had a tradition of developing international partnerships. Leger, Burnett, and Johnson (2005) reported on the International FFA School to School Linkage Program (SSLP) – a program that linked U.S. high school agriculture students with their counterparts in the former Soviet Union to promote cultural awareness and small-scale agriculture entrepreneurial ventures. In a qualitative case study conducted in 2003, Leger et al. (2005) described how six students and two adults from Louisiana traveled to Russia for a three-week study abroad in 1997-98. The study reported that participants found their lives, and their immediate families lives had changed by several major themes: intellectual development/career guidance choices; developed an international perspective; changed in perception of host country; personal/family development; and a heightened sense of community (Leger et al., 2005).

The importance of wrap around services has also been examined, although not much in the U.S. Owualah (1999) evaluated the Nigerian youth loan scheme, which had been developed by the Nigerian government, to determine if the use of a loan scheme developed self-employment by Nigerian youth. Owualah (1999) concluded that the loan scheme appeared to help develop self-employment in agriculture and other jobs and in rural areas.

Entrepreneurship education programs around the world vary widely in terms of design and delivery as well as content, curriculum, and available wrap around services. Programs are offered at all levels of education and in a variety of settings with, generally, more literature available on university level and training programs. SBAE has a long history of entrepreneurship education through formal curricula as well as supervised agricultural education programs. This model, to varying degrees, has been adopted around the world as a platform for teaching systematic instruction in agricultural education as well as entrepreneurship education in an agricultural context (Okiror, Matsiko, & Oonyu, 2011; Phipps et al., 2008).

### **Purpose**

This study was part of a larger inquiry examining exemplary rural youth agricultural entrepreneurship education programs. This study specifically focusing on identifying the programmatic characteristics of these programs. Two objectives guided this inquiry: (a) describe key program characteristics and (b) describe the extent to which experiential learning is implemented into program design and delivery.

### **Methodology**

A case study design was used achieve the research purpose (Cresswell, 2013). A case study provides “intensive descriptions and analyses of a single unit or bounded systems such as an individual, program, event, group, intervention, or community” (Merriam, 1998, p. 19). Three exemplary rural youth agricultural entrepreneurship education programs were selected as cases from across the United States. Based on the purpose of this research, a collective case study approach was chosen (Merriam, 1998), allowing us to examine the subject at multiple locations. Focus groups, interviews, and observations were used to collect data necessary to address the objectives.

## **Case Selection**

The first step was to identify states in which to select cases. This process was initiated by reaching out to a wide variety of key informants which included representatives from the National FFA organization Local Program Success, the National 4-H Council, leaders of non-profit organizations focused on rural youth engagement, faculty at universities, and state FFA staff. These key informants were asked to identify states with well-developed rural entrepreneurship education programs. Based on (a) geographic diversity, (b) a variety of total state populations, and (c) diversity of perspectives, the states of Nebraska, North Carolina, and Texas. State agricultural education leaders in these states were asked to nominate ten programs that met the following criteria: (a) program focuses on youth between the ages of 15-24; (b) agriculture is the context for entrepreneurship; (c) most students live in rural communities (less than 2,500 people; USDA, 2013); (d) students are full time students with the option for co-curricular or extracurricular activities; (e) at least 75% of students are engaged in entrepreneurial activities; and (f) the instructor is actively teaching entrepreneurship. Next, the lead researcher conducted a phone interview with each of the program teachers to verify they met the criteria and had interest in participating. Ultimately, three programs (one from each state) were selected as cases. The programs and teachers were given pseudonyms to protect their anonymity.

## **Data Collection and Analysis**

Data were collected face-to-face by the lead researcher on three-day site visits to each program. Data included (a) semi-structured interviews with the teachers in each program; (b) semi-structured focus groups with students in the program, and (c) participant observation captured through field notes, memos, and artifacts. Data for this study were analyzed using a basic thematic analysis (Lincoln & Guba, 1985) guided by our theoretical framework (Roberts, 2006; Valero et al., 2014). Data were analyzed line-by-line with open coding to identify initial themes (Charmaz, 2006; Glaser, 1978). Next, we categorized our themes and organized them within our theoretical framework (Grbich, 2007; Strauss & Corbin, 1990). All research activities were approved by the University of Florida IRB office.

## **Trust and Rigor**

Multiple steps were initiated to ensure trust and rigor in this study (Merriam, 1998). Data were triangulated through multiple sources. Next, the lead researcher spent three days on site at each case to provide a deeper, more accurate interpretation of the local context. Reflexivity was overcome through frequent memoing between the lead researcher on site and the secondary researcher off site. Finally, multiple layers of member checking were used with research participants. First, initial interpretations from each interview and focus group were immediately shared with participants for instant feedback. Second, a debrief was held with the teacher at the end of the three-day visit was held to share initial findings. Finally, a draft of the final report for each case study was sent to the teachers for confirmation of accuracy.

## **Subjectivity Statement**

During the implementation of this research I was a PhD student at the University of Florida and a former agricultural education teacher. My personal history has led to a pro-entrepreneurship bias. I was raised on a cattle ranch and my uncle established his own niche market for show cattle and genetics. My sister and I also partnered on our own herd of cattle. My father also established his own construction business while I was in high school. My personal beliefs are undoubtedly influenced by my family's long tradition of entrepreneurship.

## Findings

Findings are presented for each case and then cross-case comparisons are drawn in the conclusions section of this article. Within each case, data is presented using our theoretical framework to include: (a) the total program [classroom/laboratory instruction, FFA, and SAE], (b) wrap around services, and (c) experiential learning. Emergent themes within each case allowed us to express some of the unique attributes of each program.

### Case 1 – Clarkstown, TX

**Frequency, duration, and timing of courses.** The comprehensive curriculum was delivered systematically over the course of a 12-month calendar year. Courses were taught daily in 45-minute periods for a semester. Class size ranged from six to 22 students. In 2015, there were 212 FFA members in grades 7-12. SAEP was introduced to students briefly in middle school and students more formally in classroom instruction during their freshman year (Artifact 3; Field Notes, day 1). This instruction included a differentiation between different types of SAEP, one of which was entrepreneurship. It was at this time that most students began developing their SAEP. Individual students' SAEP were conducted at home. Students were allowed to keep track of hours on their SAEP through an online digital record book called the Agriculture Experience Tracker, AET (Field Notes, day 2). There appeared to be a constant thread of FFA related activities happening at all times (Personal Observation). FFA activities happened throughout the day and into the evenings and over weekends. Students prepared for career development events (CDE) over their study hall, before and after school.

**Content in classroom/laboratory settings.** Content for classroom instruction for the Clarkstown agricultural education program was ultimately guided by the Texas Essential Knowledge and Skills, or TEKS; the state standards for Texas students (Texas Education Association, 2015). The TEKS offers the scope of courses, which may be taught in Career and Technical Education, as well as the specific knowledge and skills students are to gain from taking the respective courses. For the 2015-16 academic year, the Clarkstown program opted to offer: from Ms. Johnson - Principles of Agriculture, Food, and Natural Resources (AFNR) (3 sections), Food Technology (1 section), Radio Broadcasting (1 section), Professional Standards in Agriculture (1 section), Entrepreneurship (1 section); from Ms. Brown - Agriculture Business Management (1 section), Co-Op (1 section), Food Processing (4 sections), Middle School Agriculture (1 section); and from Mr. Williams - Middle School Agriculture (1 section), Floral 1(1 section), Floral / Horticulture (1 section), Wildlife Management (1 section), Ag Mechanics (1 section), Agricultural Power Systems (1 section), and Agricultural Design and Fabrication (1 section) (Artifact 4).

Direct entrepreneurship content was offered, to varying degrees, through a variety of courses. Through the principles of AFNR course, taught by Ms. Johnson, students learned about types of SAE including entrepreneurship (Field Notes, day 1). This course was primarily offered to freshman and the unit focusing on SAE lasted a few weeks. The entrepreneurship course, again taught by Ms. Johnson, focused on developing students' communication skills through computer applications. Speaking about the entrepreneurship course, Ms. Johnson said, "Because, prior to that [the revision] we were, we just did the Microsoft office suite. And, felt we needed to, you know, increase the rigor, so we added to Adobe and InDesign and Photoshop." Students' output from these computer applications was primarily in the form of marketing pieces, such as flyers, advertising for the meat market. In the second semester, students then were asked to develop a mock business, and develop the creative materials for the business.

**FFA.** Clarkstown had 100% FFA membership of those who were enrolled in an agricultural course (Ms. Johnson, Personal Interview). Generally, there was a lot of enthusiasm around the LDE's and proficiency awards (Memo). There was a strong culture of success and winning that ran throughout the program (Personal Observation).

**Culture of winning.** The walls of every classroom and laboratory facility were positively lined with plaques, banners, and other awards from student achievements in career and leadership development events at the district, state, and national level (Personal Observation; Artifact 1). The focus on competition was a common theme running throughout many aspects of the program.

**Placement focus in SAE.** In addition to classroom instruction, entrepreneurship concepts were taught or reinforced through students' individual SAEP. Several students stated they had ownership type SAEP, which is considered entrepreneurship from the National FFA Organization's description of SAE types (FFA, 2012). Students raised or purchased animals, such as cattle and sheep, for the purposes of raising them to show in a competitive environment. All students tracked their SAEP through the online record keeping system, Agriculture Experience Tracker, or AET, which was done in class on a bi-weekly basis.

More peripheral entrepreneurship content, such as business and business management skills, were taught through a variety of avenues. Management of the meats market, for example, was the responsibility of students enrolled in the agriculture business management course (Field Notes, day 2). Students were expected to fulfill all parts of running the store front, such as running the cash register, dealing with customer complaints, and maintaining an inventory on the retail cuts of meat. Students described feeling pressure to perform tasks in the meat market. One female participant from the second focus group said,

Oh, it's kind of a little bit intimidating...because that's [the meat] sold to the public. So, if you mess it up, you've kind of messed up profit for the school and the department. So, that's a lot of pressure. But, they prepare us pretty well through that food tech class. (Focus Group 2, female participant)

Overall, courses were taught using a very hands-on approach. Instructors worked to make instruction individualized and could often be seen coaching small groups of three and four students at a time. Students were trained using equipment that simulated industry conditions (Field Notes, day 2).

**Wrap around services.** Wrap around services existed at the individual level. There was a strong emphasis on higher education and several counseling platforms existed at the school wide level such as the Co-Op class, Community in Schools, and when students would travel to college campuses for CDEs or LSEs. Speaking about the college preparation offered through the program, Joe, a senior, said,

I like that I've been getting an idea of what the college atmosphere is like, what everything is about, on top of the dual credit classes I'm taking. So, I wouldn't really have that big of an opportunity or have that big of a chance to get that interested in higher education or to push myself to get there if it wasn't for them pushing or all of the things they encourage. (Personal Interview)

There was no evidence of programs that provided student access to finances to support entrepreneurial activities, nor were there formal mentoring programs in place.

**Experiential learning.** There were many examples of experiential learning, but only a few relevant to entrepreneurship. The entrepreneurship course culminated in a "Shark Tank" type capstone experience, based on the popular television show, where students had to pitch their business ideas, using the collateral pieces they developed, to local business leaders. Doug described the experience as,

We had to make like our whole portfolio, with the budget, and like what building we would rent and how much we would charge for everything. Then at the very end of the year for our final project we had to like pitch it to people. Which that class was very good because it taught us like Photoshop and InDesign and other useful skills which could get you jobs like graphic designers or something.  
(Personal Interview)

Shark tank businesses could be real or contrived. The primary emphasis for the course was on the effectiveness of the communication pieces the students put together. However, the relevance of the business was a consideration for the competition (Field Notes, day 2).

## Case 2 – Prairie View, Nebraska

**Frequency, duration, timing of courses.** The comprehensive curriculum was where delivered systematically over the course of a 9 month academic year, with twenty days of extended contract dedicated over the summer months for FFA activities (Field Notes, day 1). Courses were taught daily in 45-minute periods for a semester. Class size ranged from ten to fifteen students. In 2015, there were 39 FFA members in grades 7-12. SAEP was introduced to students briefly in junior high and then again their freshman year. This instruction included a differentiation between different types of SAEP, one of which was entrepreneurship. Many students entered their freshman year knowing what their SAEP would be. Individual students' SAEP were conducted at home, with the exception of the chicken cooperative that had been conducted at Mr. Reed's home. Students were allowed to keep track of hours on their SAEP through an online digital record book called the Agriculture Experience Tracker, AET. FFA was integrated into classroom instruction. CDE and LSE practices were held for one hour before or after school, and occasionally during breaks throughout the day.

**Content in classroom/laboratory setting.** Content for classroom instruction for the Prairie View agricultural education program was ultimately guided by programs of study for the agriculture, food, and natural resources career field from the Nebraska Career Education standards (Nebraska Education Association, 2016). For the 2015-16 academic year, the Prairie View program elected to offer one section of agriscience explorations to the 7th graders; one section of plant science/ entrepreneurship and ag sales; one section of agriculture, food, and natural resources (AFNR); one section of welding; and two sections of agribusiness.

While entrepreneurship was taught mainly through students individual SAEP, coursework that covered concepts on the topic of entrepreneurship, as well as skills relevant to entrepreneurs, was primarily offered through AFNR; plant science/ entrepreneurship and ag sales; and agribusiness. According to the Agribusiness Curriculum Guide (Artifact 2), the course was designed to teach about financial management and personal finance. Topics covered were record keeping, financial analysis, budget analysis, cost and return analysis, cash flow, marketing, business organization, and communications (Artifact 2).

**Concepts and skills.** Many relevant concepts and skills were taught through the classroom setting relevant to entrepreneurship. Students said the AFNR class was useful for differentiating

between SAE types, specifically entrepreneurship/ownership and other types. Additionally, the agribusiness class helped students learn concepts such as: “net worth...current assets and liabilities...how to figure book value and cash flow statements are and...what the different statements mean” (male participant, Focus Group 2). Mr. Reed added,

We start looking at a marketing plan. Those type projects, all of those that are more project based in the spring so they kind of understand that, you know, to run a business, to operate a business, you can't just go to the bank and say, “Hey, I need some money.” (Personal Interview)

Record keeping was another skill many students felt they had learned. Students used the Agriculture Experience Tracker, or AET, program that allowed them to see their net worth. A female from the second focus group commented that, “...on the AET when you go to enter a paycheck, it's always helpful to know what your net worth is and like your grosses...I feel like we learn a lot about it during the AET for our record books.”

Other concepts and skills cited, especially through participation in the chicken cooperative, were responsibility (male participant, Focus Group 1), calculating profit (Female participant, focus group 1), advertising, and processing (male participant, Focus Group 1). A female from the first focus group who had participated in the cooperative said, “Like cost and knowing how to make a profit instead of not making a profit and knowing how much you can buy and how much you can't buy and how much you can handle.” No doubt there were other concepts and skills learned through students' respective SAEP (Personal Observation).

**Pods.** Basically pods were a form of mentorship, chapter officers to younger members. So each officer was assigned a group of students and then they apply social pressure for them to sign up for events or participate or show up to activities. Mr. Reed had been doing this for several years and said that it is really an effective system (Field Notes, day 1).

Specific to entrepreneurship education, Mr. Reed commented in his personal interview that integrating entrepreneurship into the curriculum was difficult. He thought that the best way may be through integrating it into all courses, rather than have a standalone course (Mr. Reed, Personal Interview). He said,

You know, it's kind of like teaching leadership. Sometimes that's that fluffy, warm, fuzzy, you know how do you really teach leadership? Or, I think leadership, I'd tie a leadership component into all of my classes. I used to have an ag leadership class. But, it was very hard to keep kids focused and to keep kids kind of on task because it was, you know, it was just one of those things that, leadership is very important. But, can you break it out and put it by itself. So, the entrepreneurship, how do you do that? I think it's got to be through SAE. (Personal Interview)

Entrepreneurship was, by in large, taught and reinforced through SAEP, even though some concepts were taught through the classroom and laboratory instruction.

**FFA.** Prairie View had 100% FFA membership of those who were enrolled in an agricultural course (Mr. Reed, Personal Interview). Generally, there was a lot of enthusiasm around the LSE's, proficiency awards (Memo). There was a strong culture of success and winning that ran throughout the program (Personal Observation).



**CDE/LSE.** Leadership Skills Events, such as parliamentary procedure and speaking were very popular at Prairie View FFA. Mr. Reed said,

When I got here, Prairie View was basically a new chapter. It had kind of started coming along and, you know, they found some success in leadership skills events. And, I guess, when I got here, we just kind of took the ball and ran with it. We're going to, this is going to be something that's important to our chapter. This is something we always want to be good at. ... We'll have a lot of practice. We'll work hard. But, the benefit there will be the reward at the end. (Personal Interview)

Ms. Collins added, "They have always been so successful when we go to LSE's whether it's speaking contests, parliamentary procedure. Our kids just kind of eat that up." The students had won the district LSE's for the past decade, and there was a palpable need to continue that legacy (Personal Observation).

**Proficiency awards.** Another area of success for the chapter had been the proficiency awards. Ms. Collins shared that they had many finalists at the state and national level. She added, "But, it's really very rewarding I guess just to see those kids being rewarded for the work that they have put in, you know whether it be working on a ranch or, you know, operating their own business..." (Ms. Collins, Personal Interview). Many students began filling out proficiency awards during their freshman year, and continued the practice throughout their FFA involvement (Field Notes, day 1).

**Winning.** The culture of winning was well established at the Prairie View FFA. Mr. Reed said the younger students got engaged early on. "That's to me some of the most rewarding because you have freshmen who really don't think they have a chance...and then the last several years, we've had freshmen proficiency finalists at the state convention" (Mr. Reed, Personal Interview). Several students talked about the value they felt in having a successful program. One male from the third focus group said, "We always have teams that qualify for state and I don't know like the last three we've been the top in fruit sales and just we've always had really good people that compete in every competition." Others felt that the chapter was known around the state for their success, specifically in LSE's and proficiency awards (Focus Group 3). A female from the third focus group summarized it by saying, "... when we have our banquet, like with all the awards, it just goes on and on like everybody knows. Like then, we have so many business supporting us and donating. So, we're just well known." Students enjoyed being viewed as successful, and the instructors seemed to feel satisfied that their program was recognized for its success (Personal Observation).

**SAE.** Teachers encourage students to move to entrepreneurship SAE. Students were very involved and entrepreneurship was taught through SAEP. The emphasis that Mr. Reed placed on SAE seemed to be unique (Personal Observation). With over a decade at the Prairie View program, he said, "I see a lot more kids come in with an entrepreneurship SAE. They're raising chickens and they have their own garden, things like that" (Mr. Reed, Personal Interview). He would encourage students who had another SAE type, such as placement, to move along to an entrepreneurship SAE (Mr. Reed, Personal Interview). Both a male and a female from the second focus group said,

FEMALE PARTICIPANT: "I'd say quite a bit. If you're in a placement, he always encourages you to, it'd be a good opportunity for you to buy your own to start your own business."

MALE PARTICIPANT: “Yeah, he’s always finding ways for you to turn it into an entrepreneurship too.” This expectation for SAE started early. Mr. Reed said that he had eight graders parents already coming up with ideas for their student’s SAEP (Mr. Reed, personal interview). The expectation for SAE, and specifically entrepreneurial SAE, seemed to be well established in the program.

**Entrepreneurship encouraged through SAE.** Entrepreneurship was taught through SAE in Prairie View. One prime example of this was the chicken cooperative example that a half dozen students participated in. A female participant, talking about the initiation of the project, said, “Like, it was all part of our assignment and then we wanted to change it and make it actually happen.” (Focus Group 1). In other words, the conditions were right, as was the student motivation, to start this program. Another example showed the relationship between a student’s individual passions for the enterprise coupled with a suggestion from her advisor was shared by a female student from the second focus group. She said,

They encourage you to start your own ideas, to start your own entrepreneurship. Like for mine, when I was younger, I used to raise a dog, a Corgi, and she had puppies. Then, she got too old so she no longer has them. But, I was working at the kennel and they encouraged me to get another dog to raise more puppies. So, kind of now already having an interest in it helps a lot too. (female participant, Focus Group 2)

One student described it as Mr. Reed simply “suggesting” he sell firewood, which led to the student initiating that particular SAEP (male participant, Focus Group 2). A female participant from the second focus group shared that, “He also encourages us too because in a small town like Prairie View, you have to have those small businesses, cause you’re not close to a Wal-Mart or Sam’s club so you have to have local businesses.”

**Students were allowed to take risks.** The open and encouraging environment with SAEP provided by the advisors allowed students to take risks. Jane, had already discussed how she had been successful with the radish sauce business when she started to describe the expansion to the broom corn (Jane, Personal Interview.)

And, the broom corn kind of came along my freshman year. I was just picking out seeds for the garden in Baumgars, and I just kind of came across it and we were just kind of like “Okay, whatever, we’ll plan it, see what happens.” I Googled it, called the local greenhouse, see if they knew anything about it. They didn’t really know anything. So, I basically went off what I found on the internet. (Jane, Personal Interview)

Students were supported in their SAEP through program visits, and SAEP was discussed in class (Personal Observation). The encouraging atmosphere created by the advisors may have led to students feeling supported to take risks (Personal Observation).

**Parents and grandparents influenced student’s SAE.** Most students described the impetus for their SAEP as being from a parent or grandparent (Field Notes, day 2). When talking about the start of their SAE, students would say, “My grandmother made...”, or “Parents kind of helped you”, or “Well, my mom used to work at...”, or “Well, my dad has been a” (Focus Groups 1, 2, and 3). Parents or grandparents occupations or hobbies seemed to directly influence their respective student’s SAEP (Personal Observation).

**Passion for SAE.** Students showed a passion for their SAE. Ms. Collins described how two former members had turned the passion for their SAE into a career.

You know, we had two boys here a few years ago. ...But, both of those being state stars, I mean, just seeing though how that really developed them into their careers. But they both had, both of them, such passions for agriculture. I mean, they just loved it. ...In fact, I know both of them actually when they were interviewed at the state level. I had a couple judges come up to me afterwards and just say, you know, what a true passion for agriculture that they. It just came out that they just had that true passion. So, that's been neat to see some of that as well, how they have taken it and basically turned it into a career. (Personal Interview)

Often students would say the best part about their respective SAE was that they enjoyed spending time with it, such as raising animals or mowing lawns (Focus Group 1). One of the points of personal connection for student's SAE was sense of passion they had for it.

**Wrap around services.** Teachers served as mentors and coaches for entrepreneurship. Beyond that, there were no formal processes in place to partner students with business leaders or other mentors. In fact, Ms. Collins lamented on the lack of formal mentorship. She said, "I just think maybe we need to do a better job of connecting our young people with entrepreneurs that are out there and in our community." A male participant from the second focus group felt there was adequate access to community mentors and "plenty of people who can help."

Beyond informal mentoring offered by the agricultural teachers, no structures for networking, job counseling, or higher education counseling were mentioned formally for the program. However, there was ample evidence around the school that these services were being offered through other avenues (Personal Observation).

**Experiential learning - SAEP.** Students were engaged in personal entrepreneurial experiences through their SAEP. Mr. Reed would help them reflect on successes and failures, typically during project visits. Students were then able to reapply these reflections to further improvements on their respective projects (Field Notes, day 2).

**Experiential learning - business plan.** Another way experiential learning was used was through the development of business plans. Students were required to develop a business plan as a part of the agribusiness coursework (Mr. Reed, Personal Interview). Mr. Reed said, "Whether it's a fictitious business plan or something, or they may call it fictitious, but in the back of their mind, they may say, oh, this might be something I wouldn't mind looking into" (Mr. Reed, Personal Interview). As a result of taking the course, students had the experience of writing an entire business plan.

**Experiential learning - scenarios.** Students were engaged in experience entrepreneurship through discussing scenarios. Mr. Reed said he would pose situations for students to discuss (Personal Interview). He gave the example of minimum wage and how he would have students evaluate the issue from both the employee and the employer's side of view (Personal Interview).

### Case 3 – Beautiful Hills, NC

**Frequency, duration, timing of courses.** The comprehensive curriculum was delivered systematically over the course of a 9-month academic year, as well as over the summer. Mr. Miller and Mr. Hill were both on 12-month contracts, so they could supervise SAEP and conduct FFA

activities over the summer. Courses were taught daily in 90-minute periods for a semester. Class size ranged from twenty to thirty students. In 2015, there were 240 FFA members in grades 9-12. SAEP was introduced to students briefly as freshmen. This instruction included a differentiation between different types of SAEP, one of which was entrepreneurship. Many students entered their freshman year knowing what their SAEP would be. Students were allowed to keep track of hours on their SAEP through an online digital record book called the Agriculture Experience Tracker, AET. FFA was integrated into classroom instruction. CDE practices were held for a hour before or after school, and occasionally during breaks throughout the day.

**Guiding documents (e.g. state standards).** Content for courses offered in the Beautiful Hills agriculture program was driven by guidance from the Career and Technical Education division of the North Carolina Department of Public Instruction (North Carolina Department of Public Instruction, 2016). Mr. Turner used some of the curriculum guides produced by the department fairly extensively. He had them printed and put in a binder. He felt they had enough flexibility in the test and curriculum to teach what he wanted (Field Notes, day 3). For fall, 2015, the Beautiful Hills agriculture program elected to offer 3 sections of horticulture 1 and four sections of agriscience applications, taught by Mr. Miller; 2 sections of animal science 1 and 2 sections of vet science 1 taught by Mr. Hill; and one section of agricultural mechanics taught by Mr. Turner.

**Content.** Mr. Miller said there was no agribusiness curriculum at the state level (Field Notes, day 2). Content for courses at Beautiful Hills focused on technical agriculture in the courses being taught. In an email, Mr. Miller described the content related to entrepreneurship as,

We offer entrepreneurship instruction as a unit in class more specifically when we teach about the SAE program and options that a student can have in entrepreneurship. The "why" is twofold. First, because it is an opportunity for students to be their own boss, make their own money, assume risk, and hopefully be a happy and productive citizen. Second, it is a requirement of the NC AG Ed. curriculum that the students at least have an understanding of the terms and the options for being an entrepreneur around them. (Personal Interview)

Content related to entrepreneurship was primarily addressed during the agriscience applications course when discussing SAE types, and on an informal basis during SAEP visits and discussions.

**FFA - culture of winning.** The walls of all three classrooms were lined with plaques from regional, state, and national winning teams and individuals from the past twelve years at Beautiful Hills FFA. Mr. Miller said that proficiency awards were really where he got started and that gave him some early success. Students had been successful with a variety of career development events, as well as proficiency areas (Field Notes, day 1).

**FFA - CDE.** Career development events were a major focus for the chapter. While they had been successful in a variety of competitions, ag sales had long been one of their highlights. Students felt Mr. Miller was the main driver behind their success and that he had recently started focusing on the agriscience fair competition (female participant, Focus Group 3).

**FFA - agriscience fair.** Recently, the Beautiful Hills FFA had focused their attention on the agriscience fair competition. I observed them conducting feed trials with chicken and fertilizer trials with strawberries, both using a substance called bio-char. Mr. Miller explained that he liked the agriscience fair because it connected well with the core academic curriculum, students enjoyed it, and few other teachers in North Carolina were doing the competition. Competing in agriscience

fair would, for them, likely equate to a likely early success for his younger members (Field Notes, day 2).

**SAE.** SAE, and specifically entrepreneurship type SAE, was very strong at the Beautiful Hills FFA. A female participant in the third focus group felt SAE's were the best vehicle used to get students involved in business. Mr. Miller described it as

We have a very strong SAE program that we teach in class and monitor frequently outside of normal class time. The agriculture teacher team tries to visit each product as frequently as possible and through these interactions we try and help the student develop a plan to grow if that is there goal or a plan to divert any obstacles or challenges they see arising. (Mr. Miller, email)

One female from the first focus group described her newfound affinity for agriculture and entrepreneurship through her sheep SAE. She said, "I actually wanted to be a nurse [but] I thought about it seriously and I was like once I got the sheep, I was like, no, I want to start my own business. I want to become an entrepreneur." The conversations that happened outside of the classroom centering on SAE seemed to have the most influence on students toward entrepreneurship awareness and mindset.

**SAE Types.** Several students interviewed had livestock production type SAEP, such as beef, sheep, or dairy production. Some had placement or crop production. One worked on a research facility.

**SAEP Expectations.** There was a strong expectation that students engage in a meaningful SAEP at the Beautiful Hills program. One male participant from the first focus group said,

So, basically, everyone has to do an SAE, but they're not very, they're very easy to do cause you basically just write what you do and the amount of time you spend doing it. So everybody does one, but you know, some people they actually show, like they go all out on their SAE projects and they, you know, show a real interest in it and they liked telling you all about it and so that's where like [Mr. Hill] will take their SAE and he'll turn it into an agriscience fair project and [Mr. Miller] will take your SAE and turn it into a proficiency award. (male participant, Focus Group 1)

A male participant from the first focus group echoed previous comments about it being up to the student's own initiative as to how successful the SAEP would become. He said, "Everybody starts with one and you know, from there however much time they put into it depends on how far they can go with it." Another male from the first focus group added that the freshmen came in expecting to start their SAEP. This was a source of excitement and pride for many students (Personal Observation).

**Allowed to take risks and fail.** Students were given quite a lot of autonomy with their SAEP. One male participant of the first focus group described, in detail, the purchase and sale of several livestock enterprises such as sheep, chickens, and heifers. He talked about the experiences he had gained along the way when, for example, the chickens decided to stop laying eggs, or the sheep start lambing at the wrong time of year. He added,

But, you know, but that's where I got advice from [Mr. Miller]. He's telling me you need to do this, you need to do this, you need to make sure you're doing this.

Don't get flooded with all this stuff. So, I mean, they've [shown] it to me, they've helped me the best they could, but it just came down to my slack, slack was the reason mine didn't work. But, I mean, then again, I'll probably have animals again before too long. (male participant, Focus Group 1)

This student had earned and spent thousands of dollars trying new ventures. He had reflected on the successes and failures of the ventures. Ultimately, there was a climate through SAEP, that it was acceptable for students to take risks and fail, so long as they were learning (Personal Observation).

**Wrap around services.** The leading example of mentors and coaches, aside from CDE coaching, was through students' family members. Both males and female participants from the third focus group said their uncles had been their mentors. Several other students described being able to seek a family member for advice and counseling (Field Notes, day 2). While agriculture teachers served as mentors and coaches, it cannot be missed that family members were serving in similar capacities.

**Experiential learning.** While students were engaged in experiential learning for regular instruction in agricultural education, the primary evidence of experiential learning for entrepreneurship education was through SAEP. Students were engaged in personal entrepreneurial experiences through their SAEP. All three advisors would help students reflect on successes and failures, typically during project visits. Students were then able to reapply these reflections to further improvements on their respective projects (Field Notes, day 3).

## **Conclusions**

### **Delivery of Entrepreneurship Education Programming**

While the three cases in question had many similarities and differences across all of the different sub-constructs representing program, the two deemed most relevant to entrepreneurship education were SAEP and coursework. Several conclusions can be drawn. First, entrepreneurship was taught primarily through SAEP. Hands down, SAEP was the primary mode of engaging students in entrepreneurship education. Teachers, especially from the Prairie View case, worked to help students find entrepreneurship type SAEP. Further, this teacher challenged his students to go beyond owning a livestock and calling it entrepreneurship. Instead, he strived for innovative programs.

Our second conclusion was that entrepreneurship was taught a limited amount through coursework. Coupled with a strong emphasis on entrepreneurship SAEP was coursework that taught varying aspects of entrepreneurship. It is important to note that entrepreneurship was not taught as a standalone course, nor was it the primary focus of any of these cases. Clarkstown had a class called entrepreneurship, but the content focused mainly on agricultural communication skills. It was through courses such as agribusiness that entrepreneurial management concepts and skills were taught.

The findings of this study are consistent with traditional design of school-based agricultural education programs with three components: classroom/laboratory instruction, SAE and FFA (Phipps et al., 2008), but contradicts Valero et al.'s (2014) conceptualization of a comprehensive entrepreneurship education program. No program in this study had a robust classroom curriculum or classes focused solely on entrepreneurial outcomes. It is noteworthy that the types of SAE students noted were primarily salary-substitute and possibly lifestyle entrepreneurial firms, with

none showing the characteristics of entrepreneurial firms (Barringer & Ireland, 2012). Barringer and Ireland (2012) noted that entrepreneurial firms tend to be more innovative than the other two firm types.

### **Experiential Learning Implementation**

Experiential learning was used throughout the programs to offer comprehensive instruction in agricultural education, which is consistent with best practices for SBAE (Phipps et al., 2008). Experiential learning related to entrepreneurship was seen primarily through four examples: SAEP, written business plans, scenarios, and Shark Tank type presentations.

**SAEP.** Student run SAEP was the most universal experiential learning platform for entrepreneurship education at these schools. Students engaged with their own entrepreneurship ventures, were guided through reflection with their advisor, and applied new insights back into their enterprise. The extent to which they learned entrepreneurship concepts and skills depended on the advisor and the student.

**Business plans.** One case, Prairie View, had students write a formal business plan. While not a new example of student work in agricultural education, it is certainly still relevant for entrepreneurship education. Students experienced a real-life scenario with conditions that mimicked the plausible characteristic students' may face and took steps to create a business plan.

**Scenarios.** Scenarios were used to pose real life business situations to students to spark discussion. These were typically offered in the classroom setting.

**Shark Tank.** A mock presentation modeled after the television show Shark Tank was used to allow students to showcase the marketing pieces they put together for the mock business they developed.

While others have cited the use of experiential learning (Morris et al., 2013), the specific examples from the present study were different from previous studies. Ruskovaara and Pihkala (2013) described the use of in class discussions about current events and the use of stories. Beyond classroom exercises, SAEP is an educational tool available to agricultural education teachers (Phipps et al., 2008) to better contextualize and apply entrepreneurship principles (Valero et al., 2014).

### **Recommendations for Teachers**

Imbed entrepreneurship in practice through experiential learning across the entire program. Experiential learning has been used in a variety of contexts to facilitate engagement and learning in entrepreneurship education. Teachers within this study used classroom experiences such as having students write a business plan, pitching their business ideas in a Shark Tank style presentation, and using scenarios to think critically about real world examples of situations entrepreneurs may find themselves in. SAEP is also an experience for students and may be used as a learning tool if done properly. However, there is almost limitless opportunity to enhance instruction through experiential learning activities and practice for entrepreneurship education in a SBAE context.

### Recommendations for Future Research

Design and implement an intervention for entrepreneurship education within the context of SBAE. This study identified two general avenues where entrepreneurship education was being offered – somewhat through the classroom, and mainly through SAEP. So, a host of interventions through these two components could be devised and implemented and measured through such dependent variables as entrepreneurial self-efficacy or entrepreneurial mindedness.

Identify ways that entrepreneurship can be incorporated into or enhanced through SAEP. Entrepreneurship/ownership is an existing category for proficiency areas within the national FFA structure. Perhaps the current structures limit the innovativeness of entrepreneurship type SAE. Future research may need to explore the most effective means for approaching the entrepreneurship domain within SAEP, as well as adjustments to SAEP that could further incentivize innovations within entrepreneurship type SAE's.

### References

- Acker, D., & Gasperini, L. (2009). *Education for rural people: The role of education, training and capacity development in poverty reduction and food security*. Rome, Italy: FAO
- Barringer, B. R., & Ireland, R. D. (2012). *Entrepreneurship: Successfully launching new ventures* (4th ed.). Upper Saddle River, NJ: Pearson.
- Bennell, P. (2010). *Investing in the future: Creating opportunities for young rural people*. Rome, Italy: IFAD.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage Publications Limited. Thousand Oaks, CA.
- Creswell, J. W. (2013). *Qualitative inquiry and research design* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Daniel, T. A., & Kent, C. A. (2005). An assessment of youth entrepreneurship programs in the United States. *The Journal of Private Enterprise*, 20(2), 126-147.
- FAO. (2010). *Promoting employment and entrepreneurship for vulnerable youths in West Bank and Gaza Strip*. Retrieved from <http://www.fao.org/docrep/012/i1450e/i1450e00.pdf>
- Glaser, B. G. (1978). *Theoretical sensitivity*. Mill Valley, CA: Sociology Press.
- Grbich, C. (2007). *Qualitative data analysis: An introduction*. Thousand Oaks, CA: Sage.
- Guthrie, M. J. (2013). *The rural youth entrepreneur project*. Unpublished thesis. University of Arizona. Retrieved from [https://aed.cals.arizona.edu/sites/aed.cals.arizona.edu/files/Mattie%20DeRose%20Guthrie\\_RYEP%20Research%20Paper\\_Complete.pdf](https://aed.cals.arizona.edu/sites/aed.cals.arizona.edu/files/Mattie%20DeRose%20Guthrie_RYEP%20Research%20Paper_Complete.pdf)
- Hanagriff, R. D., Murphy, T. H., Roberts, T. G., Briers, G. E., & Lindner, J. R. (2010). Economic Impact of Supervised Agricultural Experiences: Returns from SAE Investment Costs in Texas, 2007–2008. *Journal of Agricultural Education*, 51(4), 71-81. doi: 10.5032/jae.2010.04071



- Heinert, S. B., & Roberts, T. G. (2017). A profile of agricultural education teachers with exemplary rural agricultural entrepreneurship education programs. *Journal of Agricultural Education*, 58(4), 193-210. doi: 10.5032/jae.2017.04193
- Leger, B. A., Burnett, M. F., & Johnson, E. (2005). International FFA school to school linkage program: Case study of two families. *Proceedings of the 21st Annual Conference of AIAEE*, 563-573.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Marx, A. A., Simonsen, J. C., & Kitchel, T. (2014). Secondary agricultural education program and human influences on career decision self-efficacy. *Journal of Agricultural Education*, 55(2), 214-229. doi: 10.5032/jae.2014.02214
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.
- Morris, M. H., Kuratko, D. F., & Cornwall, J. R. (2013). *Entrepreneurship programs and the modern university*. Northampton, MA: Edward Elgar.
- National FFA Organization. (2012). *Introduction to SAE programs* [PowerPoint slides]. Retrieved from <https://www.ffa.org/About/WhoWeAre/SAE/Pages/SAEResources.aspx>
- Nebraska Education Association. (2016). *Nebraska Career Education*. Retrieved from <http://www.education.ne.gov/nce/>
- North Carolina Department of Public Instruction. (2016). *Career and Technical Education*. Retrieved from <http://www.dpi.state.nc.us/cte/>
- Okiror, J. J., Matsiko, B. F., & Oonyu, J. (2011). Just how much can school pupils learn from school gardening? A study of two supervised agricultural experience approaches in Uganda. *Journal of Agricultural Education*, 52(2), 24-35. doi: 10.5032/jae.2011.02024
- Owualah, S. I. (1999). Tackling youth unemployment through entrepreneurship. *International Small Business Journal*, 17(3), 49-59.
- Phipps, L. J., Osborne, E. W., Dyer, J. E., & Ball, A. L. (2008). *Handbook on agricultural education in public schools*. (7th ed.). Clifton Park, NY: Thomson Delmar.
- Roberts, T. G. (2006). A philosophical examination of experiential learning theory for agricultural educators. *Journal of Agricultural Education*, 47(1), 17-29. doi: 10.5032/jae.2006.01017
- Roberts, T. G., Harder, A., & Brashears, M. T. (Eds.). (2016). *American Association for Agricultural Education national research agenda: 2016-2020*. Gainesville, FL: Department of Agricultural Education and Communication.
- Ruskovaara, E., & Pihkala, T. (2013). Teachers implementing entrepreneurship education: Classroom practices. *Education + Training*, 55(2), 204-216.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.

Texas Education Association. (2015). *Texas Essential Knowledge and Skills*. Retrieved from <http://tea.texas.gov/index2.aspx?id=6148>

USDA. (2013). *Report on the definition of "rural"*. Retrieved from <http://www.rurdev.usda.gov/Reports/RDRRuralDefinitionReportFeb2013.pdf>

USDA. (2015). *Rural America at a Glance: 2015 Edition*. Retrieved from <http://www.ers.usda.gov/media/1952235/eib145.pdf>

Valerio, A., Parton, B., & Robb, A. (2014). *Entrepreneurship education and training programs around the world: Dimensions for success*. Washington, DC: The World Bank.