

# Student Motivation for Involvement in Supervised Agricultural Experiences: An Historical Perspective

William A. Bird

*University of Nebraska-Lincoln*

Michael J. Martin

Jon C. Simonsen

*University of Missouri*

*The purpose of this study was to examine student motivation for SAEs through the lens of the Self-Determination Theory. Self-Determination Theory proposed that human beings are more genuinely motivated when driven by internal factors as opposed to external factors. We used historical research and general qualitative interpretative methods to develop an explanation of student motivation for SAEs. We examined historical magazines, documents, and books for detailed cases of SAE participation. Three specific time periods were examined: 1928-1934, 1947-1953, and 1966-1973. We found that student motivation for SAEs has been a prevailing topic since the 1920s. SAEs have typically been initiated by utilizing extrinsic motivating forces through mandating, awards, class requirements, or collaborative school projects. Although extrinsic motivation was not ideal, half of the cases studied ended with a developed internal locus of causality. This demonstrated that student motivation to participate in SAEs could be established by external motivators and later sustained by internal stimulus. We recommend that agricultural education practitioners use caution when assigning external rewards. Overuse of external rewards such as money, trophies, or recognition could potentially distort a student's acquisition of the "true" SAE values of enhanced learning and career exploration.*

Keywords: SAE, school-based agricultural education, student motivation, self-determination theory

Supervised agricultural experiences (SAEs) are intended to be an experiential learning tool for students enrolled in school-based agricultural education programs. SAEs constitute one-third of the agricultural education model and are critical to the mission of agricultural education (Moore, 1988; Phipps, Osborne, Dyer, & Ball, 2008). Through SAEs, students apply concepts learned in the classroom to real world applications (Dyer & Osborne, 1995; Dyer & Williams, 1997; Phipps et al., 2008; Talbert, Vaughn, & Croom, 2005). Agriculture teachers value the concept of SAEs but often fail to successfully implement SAEs within their programs (Dyer & Osborne, 1995; Retallick, 2010). Furthermore, student participation in SAEs has consistently declined throughout the past few decades (Dyer & Osborne, 1995; Retallick & Martin, 2005; Steele, 1997). However, the reasons for declining student participation in SAEs have not been

well examined. Considering the long history and purported value of SAEs, an examination of students' motivation over the years for SAE participation could help educators understand the trend of declining SAE participation.

Student participation in SAEs has historically been a concern of agricultural educators. To address this problem, agricultural education professionals have required agriculture students to engage in a SAE. During the early years of the agricultural education profession, federal and state governing agencies mandated student participation in SAEs (Moore, 2003; Wilson & Moore, 2007). Though SAEs are no longer federally mandated, many teachers require all students to have a SAE or maintain SAE records as a component of the curriculum (Dyer & Osborne, 1995; Retallick, 2010). Although the teacher's intentions of requiring student SAE participation may be well intended, research in-

icates that students can potentially develop negative attitudes towards SAEs if they are perceived as just a requirement (Schunk, Pintrich, & Meece, 2008).

Researchers have suggested declining SAE involvement is partly attributed to a lack of student motivation for SAE participation (Dyer & Osborne, 1995; Osborne, 1988). The National FFA Organization (FFA) has provided awards to stimulate student interest and participation in SAEs. By the 1940s, B. L. Bible (1941) described how the FFA degree system motivated students' participation in SAEs. "The opportunity for degree advancement provides the single strongest drive for the boy to develop a strong supervised farm practice program.... if he works hard enough to build a record of scholarship and leadership and a long-time farming program" (p. 117). Teachers still attempt to stimulate and maintain student participation in SAEs using FFA Proficiency Award, FFA Degrees, and American Star Award programs (Bender, Taylor, Hansen, & Newcomb, 1979; National FFA Organization, 2012; Retallick, 2010; Tenney, 1977; Wilson & Moore, 2007). However, current motivational theories suggest that excessive extrinsic awards are not always an effective strategy to motivate students (Deci & Ryan, 1985a; Schunk, 2009).

Agricultural education professionals have utilized mandates and awards to stimulate and motivate student participation in SAEs. However, the problem may not be a lack of motivation—the problem could be a lack of effective motivational strategies. Existing research related to SAEs has primarily focused on the teacher's motivation for implementing SAEs (Jenkins & Kitchel, 2009; Retallick, 2010; Robinson & Haynes, 2011; Wilson & Moore, 2007). Limited research exists to examine motivational approaches used in SAE programs and subsequent behaviors of students resulting from those motivational approaches. The continued decrease in SAE participation constitutes a problem that may be alleviated by examining how agriculture students have been effectively or ineffectively motivated to begin and continue participation in SAEs.

## **Purpose of the Study**

We conducted a review of historical SAE literature to better understand how student motivation to initiate and participate in SAEs evolved during the first 60 years of vocational agriculture. The purpose of this study was to examine student motivation for SAEs through the lens of the Self-Determination Theory (Deci & Ryan, 1985a). Specifically, SAEs were analyzed according to the two central concepts of Self-Determination Theory: (a) regulatory styles and (b) perceived locus of causality (Ryan & Deci, 2000). This study aligns to Priority 5 of the National Research Agenda to develop highly effective agricultural education programs (Doerfert, 2011).

## **Theoretical Framework**

Motivation is the "means to be moved to do something" (Ryan & Deci, 2000, p. 54). According to Self-Determination Theory, human behaviors are a result of motivating forces that fluctuate on a continuum. On one end of the continuum is intrinsic motivation, or being motivated by internal forces, and on the other end is extrinsic motivation, or being motivated by external forces (Schunk, Pintrich, & Meece, 2008). Self-Determination Theory proposes that human behavior is contingent on the level of choice an individual has before and during an activity. An individual will have a higher level of motivation for an activity if they believe the activity is self-directed (Deci & Ryan, 1985a). The motivating forces continuum can be further differentiated by two categories of when motivating forces can fluctuate: (a) regulatory styles and (b) perceived locus of causality (Ryan & Deci, 2000).

### **Regulatory Motivating Styles**

Regulatory styles are the reasons or choices for beginning an action. Regulatory styles can fluctuate between highly controlled by the individual to highly uncontrolled by the individual. Regulatory styles are classified as being amotivational, extrinsic, or intrinsic to the individual (Ryan & Deci, 2000).

### **Amotivational regulatory styles**

The antithesis of being motivated is amotivation. An individual may become amotivated when forced to participate in an activity rather than having a choice to participate in the activity. An individual may be provided with little if any decision making opportunities throughout the activity and will often maintain a low value for the activity (Schunk, Pintrich, & Meece, 2008). Amotivation regulation styles can be harmful to an individual's emotions related to the activity at hand (Abramson, Seligman, & Teasdale, 1978; Deci & Ryan, 1985a; Ryan, 1995). An individual who experiences an amotivational regulatory style is likely to develop negative feelings towards the activity as well as other persons or institutions associated with the activity (Ryan & Deci, 2000).

### **Extrinsic regulatory styles**

An individual is classified as being externally motivated when they are persuaded, coerced, or enticed to choose participation in an activity (Vallerand & Bissonnette, 1992). This could include an individual participating in an activity primarily to receive extrinsic rewards or to avoid extrinsic punishments. Although the individual did in fact have a choice concerning participation, the individual was externally pressured enough to lose the feeling of self-directedness (Schunk, Pintrich, & Meece, 2008). The individual may not necessarily desire to participate but is ultimately persuaded to participate based upon external consequences (Ryan & Deci, 2000). An individual will be compliant simply to receive the reward or avoid the punishment; thus, the individual's internal value for the activity may be diminished (Schunk, Pintrich, & Meece, 2008).

### **Intrinsic regulatory styles**

An individual is intrinsically motivated when their actions are chosen based upon their internal aspirations (Deci, 1971) that have little or no external reward or consequence (Deci & Ryan, 1987; White, 1959). Actions driven by intrinsic regulations are often used to satisfy one or more of three needs influencing human be-

haviors: competence, a person's need to feel a level of confidence in themselves and their abilities; relatedness, the feeling that one belongs to a group or community; and autonomy, one's ability to feel control, choice, or direction (Deci & Ryan, 1985a; Ryan & Deci, 2002). Intrinsic motivation is looked upon as the most powerful and fulfilling regulatory style. The individual's decision and/or consequences of participation are based solely on that individual; the internal meaningfulness before, during, and after the activity is what causes an individual to participate (Schunk, 2009).

### **Perceived Locus of Causality**

The second category of fluctuating motivational factors is the perceived locus of causality (Ryan & Deci, 2000). Locus of causality describes how an individual chose to continue participating in an activity independent of the initial regulatory style. Locus of causality is classified as impersonal, external, or internal according to Self-Determination Theory (Ryan & Deci, 2000).

#### **Impersonal causality**

Impersonal locus of causality represents the least self-directed and least motivated level of causation for continuance of an activity. An individual will view the activity as being beyond their ability to control decisions and/or outcomes. An individual who experiences an impersonal locus of causality is likely to react to an activity in a submissive or passive manner (Schunk, Pintrich, & Meece, 2008). The result is an individual reluctant to continue the activity and will often become disengaged from that activity (Deci & Ryan, 1985b).

#### **External causality**

An individual can experience external causality if some level of self-directedness occurs during the activity. However, a distinctive difference is the individual feels compelled by an external force to continue participation in the activity. An individual may choose to continue to participate in an activity to gain an external reward, avoid some type of loss, or avoid a pun-

ishment (Schunk, Pintrich, & Meece, 2008). Although the individual has chosen to participate, the individual is less likely to continue the activity in the future because the choice to continue participation was derived from an external pressure (Ryan & Connell, 1989).

**Internal causality**

An individual may choose to continue a task if the task is inherently valuable (Vallerand & Bissonnette, 1992). In other words, the individual’s locus of causality is derived mostly from the interest held for the activity (Ryan & Connell, 1989). Although internal drive is ideal, an individual may not fully realize the internal meaningfulness of an event or activity unless they were first drawn to it through external means. An example would be someone who began an activity for only financial gain, but later found a high level of internal satisfaction from the experience. The individual may continue participation in similar future activities because of high internal meaningfulness and not

for financial gain (Schunk, Pintrich, & Meece, 2008).

Self-Determination Theory proposes that human beings are more effectively motivated when allowed to be self-directed as opposed to being externally-directed during a given activity (Deci & Ryan, 1985a). In other words, human behaviors are more effectively initiated and sustained when an individual has an element of decision-making before and during an event or activity. An individual’s behaviors can be motivated by a variety of regulatory styles and perceived locus of causality combinations (Deci & Ryan, 2000). For instance, an individual can potentially begin an activity with an internal directedness, but later develop a more external or impersonal locus of causality towards the activity due to high levels of external directedness. Similarly, an individual could potentially be forced to begin an activity but later develop internal meaningfulness from a level of self-directedness. Figure 1 provides an overview of the taxonomy of human motivation proposed by Self-Determination Theory (Ryan & Deci, 2000).

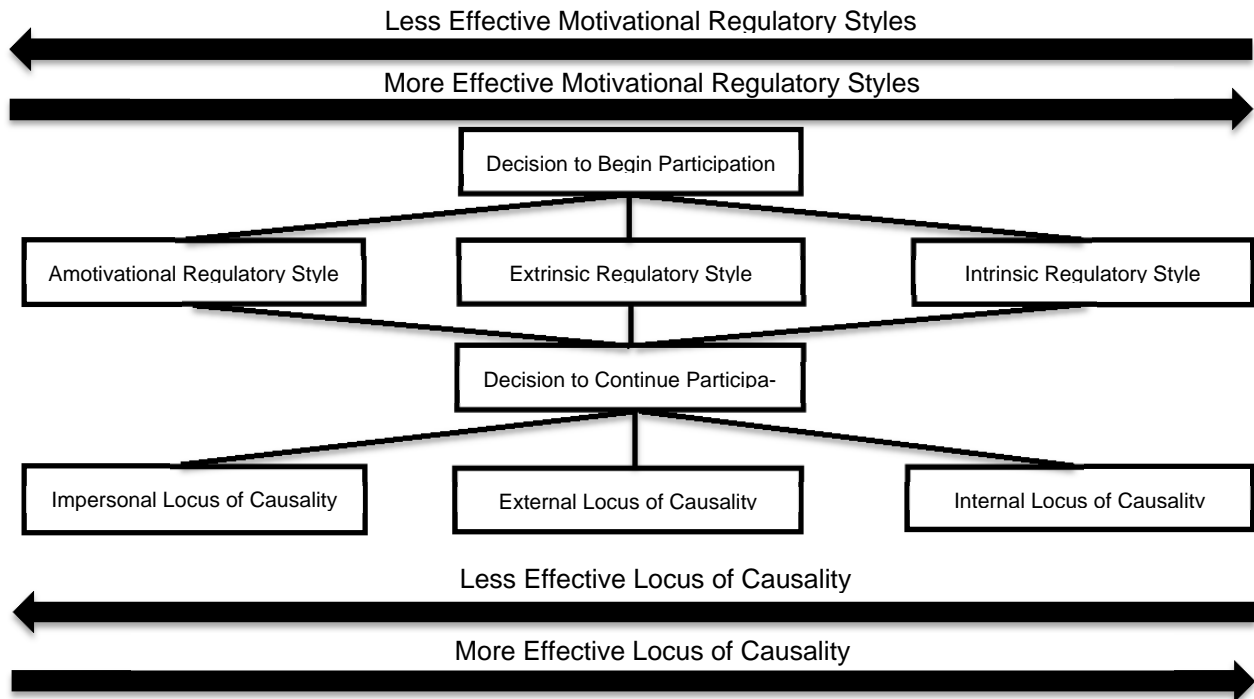


Figure 1. Taxonomy of human motivation in self-determination theory. Adapted and reprinted with permission from Ryan and Deci (2000), Academic Press.

## Methods

We used historical and qualitative interpretative research methods to develop an interpretation of student motivation for SAEs. We were interested in understanding the context and the evolution of SAE motivation through time. The variation of cases and time frames ensured a more detailed depiction of the historical development of SAEs (Rampolla, 2007; Spalding & Parker, 2007). We understood the contextual changes that occurred in agriculture, which affected school-based agricultural education and SAEs: including the changing nature of production agriculture, communities where agricultural education occurred, and the development of the SAE awards system (Boone, Doerfert, & Elliot, 1987; Moore & Borne, 1986; Retallick, 2010; Wilson & Moore, 2007). Thus, We identified primary and secondary sources covering a range of SAE practices and eras in agricultural education. Primary sources included interviews with former agriculture students (Gall, Gall, & Borg, 2007). The interviews were either found in the literature or conducted by us. There were two types of secondary sources utilized in this study.

One type of secondary source was written by agriculture teachers about their students' SAEs. The student's motivations were interpreted from how the teacher described the formation and continuance of student's SAEs; the teachers were assumed to provide credible and accurate depictions of how students became involved and continued their SAE projects. The biases of the teachers were reduced by interpreting the requirements that the teachers set for students while they engaged in SAEs and the student responses that the teacher witnessed. The teacher's personal opinions were not interpreted.

The second type of secondary sources was written by agricultural education professionals about the SAE practices of agriculture teachers and students. The student's motivations were interpreted from how the agricultural education professionals described the formation and continuance of student's SAEs; the agricultural education professionals were assumed to provide credible and accurate depictions of how students became involved and continued their SAE projects.

We examined historical magazines, documents, and books covering school-based agriculture for detailed cases of SAE participation. Three time periods were chosen based on the number of available sources of SAEs information and manuscript space restrictions. Examining cases from three different time periods allowed for historical trends to emerge. We did not interview current students because a contemporary time period analysis would have shifted the focus away from historical methods. We analyzed *The Agricultural Education Magazine* and 12 texts from 1928-1934; the time frame of 1947-1953 included the *The Agricultural Education Magazine*, *Better Farming Magazine*, and 21 texts; and We analyzed the *The Agricultural Education Magazine* and 9 texts from 1966-1973. While numerous cases emerged from the different time periods, especially during the time periods of 1928-1934 and 1947-1953, the page limitations of this manuscript limited the number of cases that could be described from each time period. Cases were chosen to highlight the variety of different types of SAEs within each time period. We also interviewed former FFA members that had in SAEs during the time frame of 1966-1973. The decision to include interviews was based on the number of cases that emerged from the literature during the time frame of 1966-1973. The third time period had fewer detailed cases of SAEs to analyze compared to the other two time periods. The pool of possible interviewees was collected from a list of six people generated by a state department of education staff. The interviewees were selected based on their level of engagement in FFA and their SAE. We utilized two of the three interviews conducted based on the limited space of the manuscript. First, a female was chosen to represent the unique, but growing population of agriculture students during the early 1970s. Second, a male was chosen who lived on a family farm, worked on the farm for his SAE, but then left the farm after graduating high school. We felt that these students were not recognized in the sources and were part of a growing number of agriculture students during the 1970s.

The data analysis occurred in a collaborative setting and the cases were analyzed for their defining characteristic, regulatory style, and locus

of control. We categorized the cases by a defining characteristic that best represented the student's motivation for conducting the SAE. We identified the characteristics to ensure a variety of cases were represented. The defining characteristics were not grounded in agricultural education literature. The characteristics were subjectively chosen by us and peer-reviewed with other agricultural education faculty for accuracy. The characteristics included (class) mandate, student interest/owned, collaboration, experiential learning opportunity, and awards. We then analyzed the cases for their regulatory style and locus of control. The interpretations were grounded in peer-reviewed researched definitions (Ryan & Deci, 2000) and examples provided by a campus professor with expertise in student motivation. Each case was analyzed and compared to the established definitions of regulatory style and locus of causality; cases were labeled with the regulatory style and locus of causality that most accurately represented the characteristics provided in the case. Although the available cases may have had missing information related to the regulatory style and locus of causality, We assumed the available case information to be holistically supportive of making regulatory style and locus of causality characterization interpretation. Each time period had a synopsis of the analysis of cases from that time period.

Trustworthiness and rigor of the research was maintained through research techniques that emphasized creditability, confirmability, and dependability. First, credibility was developed by utilizing consensus and peer-review techniques during the data analysis. An expert in motivational theory was consulted during the consensus process. Primary and secondary historical sources were exposed to external criticism to ensure credibility of the research. Bias was controlled by framing the interpretations in the cases to the case itself and through collabo-

orative debriefing to ensure confirmability. Dependability was built through the inclusion of varying SAE examples and keeping an audit trail. Finally, We developed creditability by finding a variety of SAE cases to ensure a multitude of interpretations (Ary, Jacobs, Razavieh, & Sorensen, 2006; Gall, Gall, & Borg, 2007).

### **Findings**

The findings were divided into three different subsections representing the three time periods included in the analysis. SAE projects were first individually described with a synopsis. Next, each time period case analysis was put into a table format to organize the findings. Then, we developed a description of each individual case.

#### **SAEs from 1928 to 1934**

We examined four SAE cases representing the time period from 1928 to 1934. The four defining characteristics of the SAE projects were found to be mandated production project, student interest/student owned project, collaborative project, and awards driven project. Two projects were found to have extrinsic regulatory styles; one project had an amotivational regulatory style, and one project had an intrinsic regulatory style. Three projects were found to have an internal locus of causality while one project had an impersonal locus of causality. The internal locus of causality to continue participation developed through either student-to-student competition or the desire to achieve high levels of accomplishment via FFA awards. The mandated SAE projects were interpreted to have an impersonal effect of student's locus of causality because students viewed them as a negative component of vocational agriculture. The case descriptions for the time period of 1928-1934 are displayed in Table 1.

Table 1  
*Interpretive Analysis of SAE Motivators from 1928 to 1934*

SAE Data and Cases	Defining Characteristic	Categories of Motivation	
		Regulatory Style	Locus of Causality
Mandated SAEs	Mandated Production Project	Amotivational	Impersonal
Martin's poultry SAE	Student Interest/ Student Owned Project	Intrinsic	Internal
Lebanon's class SAE	Collaborative Projects	Extrinsic	Internal
SAE Awards	Award Driven Project	Extrinsic	Internal

**The SAE mandate.** The requirement of the Smith-Hughes Act of 1917 for all students to have a SAE was quickly adopted. In 1921-22, 79% of all agriculture students across the nation had a SAE (True, 1929) and this rose to about 90% by 1930 (Maltby, 1931). But, just because most students had a SAE did not mean that all students valued their SAE. Schmidt (1928) illustrated this situation quite well:

In too many instances the project has been regarded as something that must be done because it has been made a requirement. In a school where such an attitude prevails, many of the boys who are studying vocational agriculture regard the projects as a six-month sentence at hard work to be served as a result of selecting the training course in vocational agriculture (p. 260).

**Martin's poultry SAE.** As the special editor of the supervised practice section of *The Agricultural Education Magazine*, G. A. Schmidt reported about SAEs. One such report was a short article about the poultry flock of Martin Rand (1930). As a sophomore Martin wanted to raise a poultry flock of 500 hens on his farm, despite his father's reluctance. His father initially suggested 50-100 hens, but Martin persisted and eventually his father gave in. Martin built the brooder houses, started a flock, and by the first year made almost \$1,000. Martin's father was so impressed that he encouraged his son to increase the poultry business, invited his other son into a family partnership, and together raised 2,400 baby chicks by year three (Schmidt, 1930).

**Lebanon's class SAE.** F. A. Blauer (1930), agriculture teacher of Lebanon, Kansas, conducted a class poultry operation for seventeen

students who did not live on a farm. He shared the results of this class SAE in an *Agricultural Education Magazine* article. The students built the poultry house, cared for the laying hens, and conducted experiments. The results of the production experiments were shared with the community, as well as the products the students' produced. Blauer reported that students were highly interested in the collaborative project. "A contest spirit prevails among the boys. Such questions as 'Whose pullets laid the most eggs this week?', 'How many eggs today?', and 'How are the birds doing?' are often heard" (p. 54).

**SAE awards.** The first student awards established for the National Organization FFA were the FFA degrees. The varying levels of degrees were awarded partially based on the students' SAE. The degree system was designed to recognize students at the local chapter, state association, and national organization level. Nominations for an American farmer degree were privileges that went to the top students in each state (Groseclose, 1929). For instance, James Neal was nominated for the America farmer degree from Oregon in 1931. His biography included:

Neal has been actively identified with the Oregon association and served the organization as its first president. He is a leading character in the Oregon Future Farmer motion picture film made by Southern Pacific Railway during the annual Smith-Hughes Week-end at Oregon Agricultural College, to explain the work of vocational agriculture as carried on in Oregon. James was also the president of his local chapter (Crabtree, 1931, p. 192).

Soon after the establishment of the FFA degree award system, practitioners realized the power of SAE awards to motivate students (Bible, 1941).

**SAEs from 1947 to 1953**

We examined four SAE cases representing the time period from 1947 to 1953. The four defining characteristics of the SAE projects were found to be two required collaborative projects, one mandated placement project, and one student interest/student owned project. The required collaborative projects and mandated placement project were found to have extrinsic regulatory styles while the student inter-

est/student owned project had an intrinsic regulatory style. The two required collaborative projects both had an external locus of causality, but for different reasons; one external locus of causality was derived from money while the other was viewed as a “burden” that must be continued due to its requirement. However, the mandated placement project had an internal locus of causality due to stimulation of the student’s interest. The student interest/student owned case was initially started based on the student’s intrinsic motivation and continued to be derived from an internal locus of causality. The data and case descriptions from 1947-1953 are displayed in Table 2.

Table 2  
*Interpretive Analysis of SAE Motivators from 1947 to 1953*

SAE Data and Cases	Defining Characteristic	Categories of Motivation	
		Regulatory Style	Locus of Causality
Kalispell FFA Chapter’s SAEs	Collaborative Projects	Extrinsic	External
Joe Harris’s Family Ranch	Student Interest/ Student Owned	Intrinsic	Internal
Battle Ground School Farm	Collaborative Projects	Extrinsic	External
Urban Placement SAEs	Mandated Placement Project	Extrinsic	Internal

**Kalispell FFA chapter’s SAEs.** The following excerpt comes from G. P. Deyoe’s book, *Farming Programs in Vocational Agriculture* (1953). Deyoe’s research and writings on SAEs were the most extensive in the history of agricultural education. Deyoe included the Kalispell FFA chapter in his section about chapter-wide SAEs:

The supervised farming programs of 112 individual boys in a recent year included an average of three improvement projects as well as the ownership projects. The chapter operates a farm of 100 acres on which is demonstrated the restoration of fertility, the reduction of alkalinity, and the control of weeds.... The mem-

bers are paid dividends on shares which they own in the chapter farm (Deyoe, 1953, p. 218).

**Joe Harris’s family ranch.** The following excerpt also comes from Deyoe’s *Farming Programs in Vocational Agriculture* (1953) text. This text, along with the early edition of the same text (Deyoe, 1947), contained a multitude of detailed examples of SAEs. Deyoe’s presented this example within his section entitled accomplishments of individuals in their farming programs:

When Joe [Harris] was in the fourth grade, his father died. Joe, and older brother Sam, and his mother agreed to



keep the 3,800 acre ranch going, and each brother was promised a one-third partnership upon graduation from high school. They developed an extensive cattle enterprise. To aid in hay-making on a large scale, they constructed buck rakes and hay stackers. When Sam was called into the armed forces, Joe became manager of the ranch and the herd of 700 cattle. A major development was the construction of a reservoir for impounding water from a spring; this increased the irrigation potential from 20 acres to 300 acres (Deyoe, 1953, p. 221).

**Battle Ground's school farm.** B. Brown (1949), the agricultural supervisor from Olympia, Washington, reported on his program's school farm in *The Agricultural Education Magazine*. Brown described how he managed labor and instruction of the 51 acre school farm:

The class program is kept flexible so that, if weather permits, a class can go to the farm on short notice. Lockers are provided in which each boy keeps farm work clothes and shoes. Acreage of each crop is rather small so that the labor does not become monotonous. A boy learns to prune raspberries in one or two hours. A week of it would have little or no educational value. Experience driving tractors, plowing, and disking, is possible for all boys in the department (p. 62).

The profits were used to finance the program and students were paid a wage for their work.

#### **Urban placement SAEs.**

Jamaica Plains and East Weymouth High Schools of Massachusetts, both near Boston, had to adapt to the SAE requirements to fit the placement experiences available to their students. Most of the students did not live on farms (Deyoe, 1947; Nelson, 1950). Over a four year program, students of Jamaica Plains and East Weymouth agricultural programs were expected to spend their summers working with a variety of different local agricultural businesses. Students gained experience in the fields of marketing garden produce, poultry farming, dairy production, and greenhouse operations. This variety of experiences would be hard to duplicate in an individual student's entrepreneurial production experience, especially in an area near Boston. These types of placement experience arrangements were popular in ever increasingly metropolitan states, such as Massachusetts, because up to 90% of the students did not have the home facilities for an individual production or non-production agricultural experience (Taft, 1960).

#### **SAEs from 1966 to 1973**

We examined five SAE cases representing the time period from 1966 to 1973. The five defining characteristics of the SAE projects were found to be two mandated projects, one award driven project, one student interest/awards project, and one student interest project. All five projects were found to have extrinsic regulatory styles. Two of the five cases were interpreted to have developed an internal locus of causality originating from personal preference of the project. Three of the five cases were interpreted to have an external locus of causality derived from money, power, requirements, or seeking approval from others. The data and case descriptions from 1966-1973 are displayed in Table 3.

Table 3  
*Interpretive Analysis of SAE Motivators from 1966 to 1973*

SAE Data and Cases	Defining Characteristic	Categories of Motivation	
		Regulatory Style	Locus of Causality
New SAE Awards	Award Driven Projects	Extrinsic	Internal
Outdoor Recreation SAE	Student Interest & Award Driven Project	Extrinsic	Internal
South Rowan High School's Placement SAEs	Mandated Placement Project	Extrinsic	External
Loudonville's Production SAEs	Mandated Production Project	Extrinsic	External
A Dairy Operation	Student Owned Project	Extrinsic	External

**New SAE awards.** School-based agricultural education, especially SAEs, changed after the passage of the Vocational Education Act of 1963. Agriculture curriculum had a broader perception of agricultural careers. Students began to have SAEs in broader agricultural careers as well. SAEs were no longer mandated for each student, though individual agriculture programs could still require students to have SAEs. Professionals argued for an update to the SAE award system of the FFA, including proficiency awards, to include more off-farm activities (Kantner & Bender, 1967; Selland & Vog, 1969; Sheppard, 1968). In response to the external pressures the National FFA Organization began to adapt proficiency awards starting in 1970. The changes included the addition of proficiency awards, such as outdoor recreation and forest management, and the inclusion of a placement category to many of the pre-existing proficiency areas (Seefeldt, 1970). These awards would motivate those students in these newer areas by providing them the same level of recognition as students with traditional projects.

**Outdoor recreation SAE.** The following excerpt was from an interview with a former female FFA member. She was part of a growing minority in agricultural education during that time period. The decision to start the SAE was partially grounded in the likelihood that she could win a proficiency award:

He [the FFA advisor] would do home visits to each student home and interview the family and student to determine the student interest and capability to complete the SAE. We were raising beef cattle and raised tobacco and tomatoes, yet my Advisor knew that I would not be competitive in those areas so we went with the area I was the strongest. My family had sold the dairy farm when I entered high school and bought 70 acres on which we developed a campground. I was able to compete in the outdoor recreation proficiency and won the Southern Region (personal communication, April 11, 2011).

**South Rowan High School's placement SAEs.** John W. Allison (1966) was an agriculture teacher that believed in the value of every student having a SAE. He was the agriculture teacher from South Rowan High School in China Grove, NC. The excerpt from *The Agricultural Education Magazine* was brief, but Allison provided many details about how he managed his students' SAEs, including facilitating students' placement experiences:

Out of 113 students enrolled in vo-ag we have 55 engaged in work experiences away from their homes. These work experiences include work on highly spe-

cialized horticulture farms, dairy farms, general farms and produce farms.... Our boys realize they are being graded by the farm manager as well as the teacher of agriculture. Systematic raises in pay when earned get a good effort from all students. As students get more experience and exhibit leadership, they are used as field supervisors to direct fellow workers (Allison, 1966, p. 53).

**Loudonville's production SAEs.** J. Nowels, of Loudonville, Ohio, was another agriculture teacher that required students to have a SAE, but in this case students had to have entrepreneurial, production projects. Nowels' (1973) *Agricultural Education Magazine* article also included his philosophy of a complete program of school-based agriculture:

Students in our vocational agriculture department must carry a minimum of two production projects and three improvement projects per student.... In my 25 years of teaching vocational agriculture (21 years here at Loudonville) their requirement has always been met readily by interested students regardless of whether they live on a farm or in town. One hundred per cent of our membership has always exhibited projects at our Ashland County Fair and our local Loudonville Fair... Nearly all of our students have 100 per cent ownership of their production projects (Nowels, 1973, p. 248).

**A dairy operation SAE.** The following quote is from a former FFA member in the later 1960s. His father was his FFA advisor and he eventually became an agriculture teacher himself. Interestingly, the man talked about his past experience in both the awards he won and life lessons he learned:

I was born into a dairy operation and that was the basis for my SAE. Dad gave me ownership in 2 cows as a freshman in return for milking every morning and afternoons when school or sport activities didn't interfere. I was also responsible for working the fields

raising corn and hay for feed.... My dairy operation expanded to 20 cows and replacement heifers through high school and first year of college. I placed 1<sup>st</sup> in dairy proficiency at the Middle TN regional level. I learned a lot of valuable skills related directly to dairy and crop production. Most importantly, I learned self-discipline and the importance of hard work which helped me get through college and eventually a successful teaching career (personal communication, April 11, 2011).

### **Conclusions, Implications, and Recommendations**

The purpose of this study was to examine student motivation for supervised agricultural experiences (SAEs) through the lens of Self-Determination Theory. From the cases occurring during the 1928-34 era, three of the four cases initiated participation in SAEs by means of externally motivating factors. Three of the four cases in this time period were also sustained by an internal locus of causality. Three of the four cases from 1947-1953 began based on extrinsic motivation of the student. Two of the cases had an external locus of causality while two had an internal locus of causality. All five from 1966-73 began with extrinsic motivation and three of the five cases in this time period being sustained by an external locus of causality.

A conclusion from these findings was that initiating student participation in SAE projects during the selected time periods has been driven by external motivating factors more than internal motivating factors. External motivators appeared in the form of mandating SAE participation, awards, or collaborative SAEs required at school. Internal motivators appeared in the form of student interests and/or student owned projects. These conclusions support the findings of contemporary research on teachers' facilitation of SAEs. Specifically, Wilson and Moore (2007) found that student participation in SAEs was driven by the teachers' desire for FFA awards. The FFA award system was also listed as a motivator to implement SAEs by the teachers interviewed in Retallick's (2010) study. These three conclusions are supported by exist-

ing literature stating external motivators are sometimes necessary to begin an action (Deci, Eghart, Patrick, Leone, 1994; Deci & Ryan, 1985a). Four cases in this study demonstrated SAEs could be started using external motivational strategies, but this motivation can be transitioned into students having an internal drive to continue their SAE. The findings from this study imply that the use of external motivators, though not ideal according to motivational theories, can be a means to initiate student SAE participation (Ryan & Deci, 2000).

We recommend agricultural education practitioners continue to utilize external motivators with caution to introduce students to SAEs. Practitioners should strive to find ways to internally motivate students to participate in SAEs. Reeve (2009) proposed a list of strategies teachers can utilize to enhance students' intrinsic motivation in learning environments. Educators could better initiate students' intrinsic motivation for SAEs by applying strategies such as focusing on students' personal interests related to SAE areas, designing SAEs that would be personally meaningful to the student, or providing rationale to students as to how and why SAEs are important to their educational and/or personal development.

Another conclusion was five SAE cases were started with external motivational approaches and the locus of causality remained external. An internal locus of causality was not evident when SAEs were deemed as only a requirement for the course or continued for money. According to motivational research (Deci & Ryan, 1985a; Ryan & Deci, 2000), the use of external motivating approaches can lead to a lowered chance of gaining an internal locus of causality for the SAE project. Reaching a point of internal locus of causality is ideal according to Self-Determination Theory. The implication from this finding is that externally rewarding students' continued participation in SAEs, either through program requirements, money, or

awards, can condition students for the award more so than the experience. This could subsequently diminish the students' internal drive for the experience.

It is recommended that agricultural education practitioners use caution when assigning external rewards for student's participation in learning activities such as SAEs. Overuse of external rewards such as money, trophies, or recognition can potentially reduce a student's acquisition of the "true" SAE values of enhanced learning and career exploration. Practitioners should strive to help students realize the value of SAEs as a means to learning knowledge and career skills within an agriculture context that can be later transferred to contexts beyond agriculture. Simply put, educators should help students find value in SAEs beyond a plaque and a paycheck.

We acknowledge the limitations of transferability of the findings. The cases included in this study were only interpreted based on what information was provided by the sources. Historical researchers need to continue identifying detailed historical SAE sources to better understand the evolution of SAEs. Future historical research should investigate the motivation of students through historical narrative methods. Historical narrative methods would focus on a couple of students and develop a more detailed historical description of SAEs. This historical analysis found that motivating students to participate in SAEs has been a concern since the 1930s, which echoes the findings of present day SAE research. Navigating the boundaries between using extrinsic rewards and developing an intrinsic drive has been a continual challenge. Considering the decreasing number of agriculture students with a SAE, further research and subsequent instructional approaches are needed to strike a balance between intrinsic and extrinsic motivating strategies to improve the implementation and continuation of valuable SAEs.

## References

- Abramson, L. Y., Seligman, M. E., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*(1), 49-74. doi: 10.1037/0021-843X.87.1.49
- Allison, J. W. (1966). Now every vo-ag student learns through supervised practice. *The Agricultural Education Magazine, 39*(3), 53.
- Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. (2006). *Introduction to research in education*. Belmont, CA: Thomson Higher Education.
- Bender, R. E., Taylor, R. E., Hansen, C. K., & Newcomb L. H. (1979). *The FFA and you: Your guide to learning*. Danville, IL: Interstate Printers and Publishers.
- Bible, B. L. (1941). The F.F.A. as an aid in improving supervised farming programs. *The Agricultural Education Magazine, 14*(6), 109, 117.
- Blauer, F. A. (1930). A class poultry project. *The Agricultural Education Magazine, 2*(4), 54.
- Boone, H. N., Doerfert, D. L., & Elliot, J. (1987). Supervised occupational experience programs: History, philosophy, current status, and future implications. *Journal of American Association of Teacher Educators in Agriculture, 28*(4), 57-64. doi: 10.5032/jaatea.1987.04057
- Brown, B. L. (1949). School farm becomes much used resource. *The Agricultural Education Magazine, 22*(3), 55, 62.
- Crabtree, W. E. (1931). James Neal, "American Farmer" of Oregon. *The Agricultural Education Magazine, 3*(12), 192-193.
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18*(1), 105-115. doi: 10.1037/h0030644
- Deci, E. L., & Ryan, R. M. (1985a). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (1985b). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality, 19*, 109-134.
- Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*(6), 1024-1037. doi: 10.1037/0022-3514.53.6.1024
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior, *Psychological Inquiry, 11*(4), 227-68. doi: 10.1207/S15327965PLI1104\_01
- Deci, E. L., Eghart, H., Patrick, B. C., & Leone, D. R. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality, 62*(1), 119-142. doi: 10.1111/1467-6494.ep9406221281
- Doerfert, D. L. (Ed.) (2011). *National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.
- Deyoe, G. P. (1947). *Supervised farming in vocational agriculture*. Danville, IL: Interstate Publishers Company.
- Deyoe, G. P. (1953). *Farming programs in vocational agriculture*. Danville, IL: Interstate Publishers Company.

- Dyer, J. E., & Osborne, E. W. (1995). Participation in supervised agricultural experience programs: A synthesis of research. *Journal of Agricultural Education*, 36(1), 6–14. doi:10.5032/jae.1995.01006
- Dyer, J. E., & Williams, D. L. (1997). Supervision of supervised agricultural experience programs: A synthesis of research. *Journal of Agricultural Education*, 38(4), 59–67. doi:10.5032/jae.1997.04059
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction*. Boston: Allyn and Bacon.
- Groseclose, H. (1929). Two “American farmers”. *The Agricultural Education Magazine*, 1(6), 10.
- Jenkins, C. C. III., & Kitchel, T. (2009). Identifying quality indicators of SAE and FFA: A delphi approach. *Journal of Agricultural Education*, 50(3), 33-42. doi: 10.5032/jae.2009.03033
- Kantner, E. F., & Bender, R. E. (1967). The FFA in a changing Vo Ag program. *The Agricultural Education Magazine*, 39(11), 246-248.
- Maltby, R. D. (1931). Progress in supervised practice. *The Agricultural Education Magazine*, 3(10), 155, 164.
- Moore, G. E. (1988). The forgotten leader in agricultural education: Rufus W. Stimson. *The Journal of the American Association of Teacher Educators in Agriculture*, 29(3), 51-58. doi: 10.5032/jaatea.1988.03050
- Moore, G. E. (2003). The sixteen theorems of SAE. *The Agricultural Education Magazine*, 75(6), 20-21.
- Moore, G. E., & Borne, C. (1986). The secondary vocational agriculture curriculum from 1890 to 1980. *Journal of American Association of Teacher Educators in agriculture*, 27(3), 8-19. doi: 10.5032/jaatea.1986.03008
- National FFA Organization. (2012). *Official FFA manual*. Indianapolis, IN: National FFA Organization.
- Nelson, H. S. (1950). Summer farm placement. *The Agricultural Education Magazine*, 22(11), 247.
- Nowels, J. (1973). An ag teacher’s view: The effectiveness of supervised farming program. *The Agricultural Education Magazine*, 45(11), 248.
- Osborne, E. W. (1988). Planning and supervision strategies for SOE programs in agriculture. *The Journal of the American Association of Teacher Educators in Agriculture*, 29(4), 49-56. doi: 10.5032/jaatea.1988.04049
- Phipps, L. J., Osborne, E. W., Dyer, J. E., & Ball, A. L. (2008). *Handbook on agricultural education in public schools*. Clifton Park, NY: Thomson Learning, Inc.
- Rampolla, M. L. (2007). *A pocket guide to writing in history*. Boston: Bradford/ St. Martin’s.
- Retallick, M. A. (2010). Implementation of supervised agricultural experience programs: The agriculture teachers’ perspective. *Journal of Agricultural Education*, 51(4), 59-70. doi: 10.5032/jae.2010.04059
- Retallick, M. A., & Martin, R. A. (2005). Economic impact of supervised agricultural experience in Iowa: A trend study. *Journal of Agricultural Education*, 46(1), 44-54. doi: 10.5032/jae.2005.0104
- Reeve, J. (2009). Why teachers adopt a controlling motivating style toward students and how they can become more autonomy supportive. *Educational Psychologist*, 44(3), 159-175.
- Robinson, J. S., & Haynes, J. C. (2011). Value and expectations of supervised agricultural experiences as expressed by agriculture instructors in Oklahoma who were alternatively certified. *Journal of Agricultural Education*, 52(2), 47-57. doi: 10.5032/jae.2011.02047

- Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, 63(3), 397–427. doi: 10.1111/1467-6494.ep9510042298
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57(5), 749–761. doi: 10.1037/0022-3514.57.5.749
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new direction. *Contemporary Educational Psychology*, 25(1), 54-67. doi: 10.1006/ceps.1999.1020
- Ryan, R. M., & Deci, E. L. (2002). When awards compete with nature: The undermining of intrinsic motivation and self-regulation. In C. Sansone & J. M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The search for optimal motivation and performance* (pp. 13-54). San Diego: Academic Press.
- Seefeldt, R. A. (1970). A new look for FFA proficiency awards. *The Agricultural Education Magazine*, 43(3), 62-63.
- Selland, L., & Vog, W. M. (1969). FFA for the new concept of vocational agriculture. *The Agricultural Education Magazine*, 41(9), 208-209.
- Schmidt, G. A. (1928). *Efficiency in vocational education in agriculture*. New York: Century Company.
- Schmidt, G. A. (1930). Ohio boys nets \$1,654. *The Agricultural Education Magazine*, 2(5), 71.
- Schunk, D. H. (2009). *Learning theories: An educational perspective*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Schunk, D. H., Pintrich, P. R., & Meece, J. L. (2008). *Motivation in education: Theory, research, and applications*. Upper Saddle River, NJ: Pearson Education.
- Sheppard, N. A. (1968). Improving the image of FFA. *The Agricultural Education Magazine*, 40(10), 224.
- Spalding, R., & Parker, C. (2007). *Historiography: An introduction*. New York: Manchester University Press.
- Steele, R. (1997). Analysis of the continuing decline in use of supervised agricultural experience (SAE) in New York State. *Journal of Agricultural Education*, 38(2), 49–58. doi:10.5032/jae.1997.02049
- Taft, J. A. (1960). Placement for farm work experience. *The Agricultural Education Magazine*, 33(1), 6-8.
- Talbert, B. A., Vaughn, R., & Croom D. B. (2005). *Foundations of agricultural education*. Catlin, IL: Professional Educators Publications, Inc.
- Tenney, A. W. (1977). *The FFA at 50: A golden past, a brighter future*. Alexandria, VA: Future Farmers of America.
- True, A. C. (1929). *A history of agricultural education in the United States, 1785-1929*. Washington DC: Government Printing Office.
- Vallerand, R. J., & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality*, 60(3), 599–620. doi: 10.1111/1467-6494.ep9209210978
- White, R. W. (1959). Motivation reconsidered. *Psychological Review*, 66(5), 297–333. doi: 10.1037/h0040934

Wilson, E. B., & Moore, G. E. (2007). Exploring the paradox of supervised agricultural experience programs in agricultural education. *Journal of Agricultural Education*, 48(4), 82-92. doi: 10.5032/jae.2007.04082

WILLIAM A. BIRD is an Assistant Professor in the Department of Agricultural Leadership, Education and Communication at the University of Nebraska-Lincoln, 303A Ag Hall, Lincoln, NE 68583, wbird2@unl.edu.

MICHAEL J. MARTIN is a Graduate Student in the Department of Agricultural Education at the University of Missouri, 125 Gentry Hall, Columbia, MO 65211, mjmgg7@mail.missouri.edu.

JON C. SIMONSEN is an Assistant Professor in the Department of Agricultural Education at the University of Missouri, 121 Gentry Hall, Columbia, MO 65211, simonsenj@missouri.edu.