

Why Pursue a Career in Teaching Agriculture?: Application of Self-Determination Theory and the Theory of Planned Behavior

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Abstract

Given the shortage of agriculture teachers across the country, understanding individuals' motivation to pursue a career in teaching agricultural education is critical to developing strategies for teacher recruitment and teacher education. Several studies have investigated factors that motivate preservice and in-service agriculture teachers to pursue a career teaching agricultural education based on the Factors Influencing Teaching Choice (FIT-Choice) model. However, little research investigated the topic using different theoretical lenses or a mixed-methods approach, which could provide new perspectives on individuals' motivation to teach. To address the knowledge gap, we investigated Florida preservice teacher recruitment program participants' motivation to teach agricultural education using a mixed-methods approach from the self-determination theory and the theory of planned behavior theoretical lens. We found that individuals' intention to become agriculture teachers was statistically significantly explained by two predictors: attitude toward behavior and perceived behavioral control regarding a career in teaching agriculture. When choosing a career in teaching agriculture, the score for more self-determined motivation was substantially higher than that for less self-determined motivation. Furthermore, inspiring agriculture teachers, positive experiences with SBAE programs, a passion for teaching and agriculture, and paying it forward to students were the main factors that motivated them to pursue a career in teaching agricultural education. Based on the theoretical frameworks and the results, a model for understanding factors influencing individuals to pursue a career in teaching agriculture was proposed to broaden our understanding of the multidimensional nature of individuals' motivation to teach agriculture.

Introduction

Agriculture teacher shortages across the country have been an ongoing issue for school-based agricultural education programs (Foster et al., 2020). To sustain and develop school-based agricultural

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education programs, teacher recruitment and retention are essential (Lawver & Torres, 2012; Marx et al., 2017; Moser & Mckim, 2020). In particular, understanding individuals' motivation to teach agriculture is important to develop strategies for teacher recruitment and teacher education (Watt & Richardson, 2007). Given the shortage of agriculture teachers across the country, it is imperative for stakeholders of agricultural education to fully understand what motivates individuals to pursue a teaching career (Ball & Torres, 2010).

Several studies have investigated various factors that motivated individuals to pursue a career in teaching agriculture. Multiple factors have been shown to influence individuals' decisions to teach agricultural education, including School-Based Agricultural Education (SBAE) factors (i.e., agricultural education courses, FFA) (Eck et al., 2021; Ingram et al., 2018; Lawver & Torres, 2012), intrinsic factors (Ismail & Miller, 2021; Smith et al., 2020), extrinsic factors (Ismail & Miller, 2021; Smith et al., 2020), prior teaching and learning experiences (Marx et al., 2017), working with adolescents (Lawver & Torres, 2011), and job security (Lawver & Torres, 2011).

Previous studies mainly used either a qualitative approach (Cannon et al., 2022; Eck et al., 2021; Frost & Rayfield, 2020; Ingram et al., 2018; Marx et al., 2017; Smith et al., 2020) or a quantitative approach (Ismail & Miller, 2021; Lawver & Torres, 2012) to understand why people choose to pursue a career teaching agriculture. Few research efforts investigated individuals' motivation to teach agriculture using a mixed-methods approach, which could provide a holistic understanding of a research topic and minimize the limitations of both qualitative and quantitative methods (Creswell & Creswell, 2018).

Furthermore, previous research (Cannon et al., 2022; Ingram et al., 2018; Lawver & Torres, 2012; Smith et al., 2020) investigated individuals' motivation to teach mainly based on the Factors Influencing Teaching Choice (FIT-Choice) model (Watt & Richardson, 2007) as a theoretical lens. While the FIT-Choice model offers a valuable framework, it is important to utilize different theoretical lenses in order to provide new perspectives on individuals' motivation to teach agricultural education. Self-determination theory (SDT) (Deci & Ryan, 1985) and the theory of planned behavior (TPB) (Ajzen, 1991) have been widely used in understanding individuals' motivation and behavioral intention. However, these theories are rarely used in the agricultural education context to understand why people choose to become agriculture teachers. In the agricultural education literature, only a few recent studies (Eck et al., 2021; Ismail & Miller, 2021) used either TPB or SDT to understand individuals' motivation to teach. There is a need to acquire more empirical evidence to validate such theories and develop agriculture teacher recruitment strategies. Given that individuals' decision to teach involves various cognitive and motivational factors, this study utilized TPB and SDT to better understand individuals' decision-making processes and motivation to teach agricultural education.

Furthermore, the primary samples of previous studies included preservice agriculture teachers (Eck et al., 2021; Ingram et al., 2018; Lawver & Torres, 2012; Marx et al., 2017; Smith et al., 2020) and in-service agriculture teachers (Cannon et al., 2022; Ismail & Miller, 2021) in different states in the U.S. However, few research studies exist that looked at individuals' motivation to teach agricultural education in Florida. To address the knowledge gap, we investigated Florida preservice teacher recruitment program participants' motivation to teach agricultural education using a mixed-methods approach based on the SDT and TPB theoretical lens. This approach would offer a broader view of the significant factors influencing individuals' decisions to pursue a career in teaching agriculture.

Theoretical Framework

The theoretical frameworks for this study were based on self-determination theory (SDT) (Deci & Ryan, 1985) and the theory of planned behavior (TPB) (Ajzen, 1991). These theories provided a valuable lens to understand what motivates individuals to pursue a career teaching agriculture and how motivational and cognitive factors relate to individuals' intention to teach agricultural education. First, SDT elaborates on motivation using three broad types: intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation concerns behavior performed to experience pleasure and inherent satisfaction (Dörnyei & Ushioda, 2013). On the other hand, extrinsic motivation includes a behavior undertaken with reasons other than an inherent interest in the behavior, such as receiving external rewards (Dörnyei & Ushioda, 2013). Lastly, amotivation presents the lack of any motivation (Dörnyei & Ushioda, 2013), which involves "being neither intrinsically nor extrinsically motivated" (Fernet et al., 2008, p. 258).

In particular, extrinsic motivation is categorized into integrated regulation, identified regulation, introjected regulation, and external regulation (Deci & Ryan, 1985). Integrated regulation describes those behaviors performed because they believe it is worthwhile rather than for intrinsic pleasure (Spittle et al., 2009). Previous studies (Abós et al., 2018; Fernet et al., 2008) suggest that integrated regulation is difficult to differentiate from identified regulation using a self-administered questionnaire and recommended not using this construct. Moving down the continuum, identified regulation describes those behaviors carried out because they believe it is important (Abós et al., 2018). Introjected regulation concerns those behaviors performed to avoid feelings of blame (Abós et al., 2018). External regulation regards carrying out behaviors to gain rewards or to avoid punishment (Abós et al., 2018).

According to the theory, different motivations can be understood throughout a continuum of self-determination, from the most self-determined motivation (i.e., intrinsic motivation) to the least self-determined type of motivation (i.e., amotivation) (Abós et al., 2018). In this study, based on a previous study (Abós et al., 2018), more self-determined forms of motivation referred to intrinsic motivation and identified regulation, and less self-determined forms of motivation referred to introjected regulation and external regulations.

Furthermore, the study was framed by the Theory of Planned Behavior (TPB). This theory posits that three predictors—attitude toward the behavior, subjective norms, and perceived behavioral control—collectively influence behavioral intention, which in turn leads to actual behavior (Ajzen, 1991). Attitude toward behavior is an individual's positive or negative value of performing behavior based on the person's perceptions about the probable outcomes of the behavior (Ajzen, 1991). Subjective norms involve an individual's perceptions of the social pressure put on them to engage in a particular behavior (Ajzen, 1991). Perceived behavioral control is an individual's belief about whether they have the ability to perform a given behavior (Ajzen, 1991). Intention is considered the best predictor of behavior. If an individual has a strong intention to implement behavior, the individual is more likely to engage in the behavior (Ajzen, 1991).

In the context of this study, the behavior was conceptualized as pursuing a career in teaching agricultural education. Positive attitude toward behavior, favorable subjective norms, and high perceived behavioral control regarding teaching agriculture would predict individuals' intention to teach agricultural education. Thus, it is hypothesized that if individuals think a career in teaching agriculture is worthwhile, their significant others expect them to teach agriculture, and individuals believe they have the ability to become agriculture teachers, they are more likely to have the intention to pursue a career in teaching agriculture.

Purpose and Objectives

This study aimed to identify factors influencing individuals' decision to pursue a career in teaching agricultural education. Three primary research objectives guided this study:

1. Identify factors that influence individuals to pursue a career in teaching agricultural education based on the theory of planned behavior.
2. Describe individuals' different types of motivations for teaching agricultural education according to self-determination theory.
3. Investigate factors that motivated individuals to pursue a career in teaching agriculture.

Methodology

Research Approach

We used an explanatory sequential mixed method approach. We began with the quantitative phase, followed by the qualitative phase to explain or expand on the quantitative results (Creswell & Plano Clark, 2018). The quantitative phase aimed to identify factors that influenced individuals to pursue a career in teaching agriculture based on the TPB and describe different types of motivations that influenced their decision to pursue a career in teaching agriculture according to the SDT. Then, the data from the qualitative phase helped elaborate those quantitative results by identifying how different factors affected them to pursue a career in teaching agriculture and how those variables related to each other.

Target Population

The target population of this study was Florida SBAE students who participated in the Agricultural Education Institute (AEI), a year-long preservice teacher recruitment program. When in the program, participants would have been high school or early college-aged, and not yet admitted to the teacher preparation program. In an effort to address the state's issues of recruitment and retention of agriculture teachers, the AEI was developed within the Department of Agricultural Education and Communication at the University of Florida. The focus of the AEI is to develop SBAE students' interest in becoming agriculture teachers, which aligns with the National Teach Ag Campaign to meet the demand for agriculture teachers. The program began each summer at the Florida FFA State Convention and continued with sessions in both the fall and spring. During the summer kickoff, faculty mentors joined their student mentees and FFA advisors for a signing of a letter of intent to teach agriculture. The AEI fall and spring sessions offer insights into the admission process of the UF AEC department, pathways to becoming an agriculture teacher, the transfer process, and scholarship opportunities within the college and department. Moreover, the program provides participants with individualized mentoring by agricultural education faculty from the AEC department, fostering meaningful mentor-mentee relationships.

Data collection was conducted through a purposive and nonprobability sampling approach. From 2013 to 2020 (excluding 2014 due to an unavailable participant roster), a total of 330 individuals participated in the AEI. However, during the program's initial five years, certain participants' contact information was inaccessible, leaving the contact information of only 276 out of the 330 participants available. From the pool of 276, 38 individuals, who were listed with school email addresses but now graduated, were classified as cases of unknown eligibility. This classification applies to cases where it is unclear whether an online survey invitation was successfully delivered to the intended individuals (The American Association for Public Opinion Research, 2023). To ensure accurate calculation of the online survey response rate, these cases of unknown eligibility were excluded from the total population to prevent potential response rate deflation. Furthermore, the total population was adjusted to account for 29 bounced-back emails, reducing the accessible population to 209.

Quantitative Phase

Quantitative Study Participants

From the accessible population of 209 individuals, 78 initiated the survey. We excluded 14 individuals based on age (under 18 years old), leaving 195 eligible respondents. Of these, 42 completed the assessment, resulting in a survey response rate of 21.5%. This study encompasses all program participants from 2013 to 2020. It is important to note that early participants' contact information might be outdated, potentially influencing the response rate. This study aims to identify factors influencing individuals' decisions to pursue a career in teaching agricultural education. Out of the 42 total survey respondents, only those who indicated they were considering a career in teaching agriculture ($n = 31$) were selected for analysis.

Regarding respondent status, of the three high school students surveyed, two aimed for post-secondary agricultural education, with the third considering applying to a major related to agricultural and life sciences. All eight two-year college students considered applying to post-secondary agricultural education programs, showing unanimous interest. Among ten university students, nine were already enrolled in agricultural education programs, and one studied an agricultural and life sciences major. Of the two graduate students, one was in an agricultural education program, and the other pursued an agricultural and life sciences field. Overall, the sample demographic reflected a strong inclination towards or engagement in agricultural education or closely related fields. Table 1 presents the selected characteristics of survey respondents.

Table 1

Selected Characteristics of the Survey Respondents ($n = 31$)

Variables	Categories	<i>n</i>	%
Sex	Male	5	16.1
	Female	26	83.9
Race	White	1	3.2
	Black or African American	15	48.4
	Not disclosed	15	48.4
Status	12 th grade in high school (over 18 years old)	3	9.7
	Two-year college student	8	25.8
	Four-year university student	10	32.3
	Graduate student	2	6.5
	Agriculture teacher	3	9.7
	Not disclosed	5	16.1

To examine potential nonresponse errors, we compared early to late respondents (Ary et al., 2014; Lindner et al., 2001). Respondents were divided into two groups: the early respondent group, consisting of the initial half of the respondents ($n = 16$), and the late respondent group, comprising the latter half of the respondents ($n = 15$). An independent t-test was utilized to compare the intention to teach agricultural

education scores between these two groups. The result showed that there was no statistically significant difference in scores between the early ($M = 4.50$, $SD = .82$) and late respondents ($M = 4.33$, $SD = .90$), $t(29) = .54$, $p = .42$, $d = .19$. The results indicated an absence of nonresponse bias within the sample, denoting the respondents as unbiased (Ary et al., 2014; Lindner et al., 2001). The selected characteristics of the survey respondents are shown in Table 1.

Quantitative Study Instrument

The quantitative study instrument included (a) items based on TPB, (b) items based on SDT, (c) items related to motivation to teach, and (d) demographic questions. A panel of experts, including three faculty members and three graduate students in agricultural education, determined the instrument's face and content validity. Additionally, two other agriculture teacher educators served as expert reviewers to enhance the clarity and validity of the questionnaire.

Items based on TPB. The instrument's first section, grounded in the Theory of Planned Behavior (TPB), encompassed four constructs: attitude toward behavior, subjective norms, perceived behavioral control, and intention to teach agricultural education. Each of the three antecedents to intentions—attitude toward behavior, subjective norms, and perceived behavioral control—was measured by three items, while the intention to pursue a career in teaching agriculture was assessed through a single item. These items were measured using a five-point Likert-type scale, from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha revealed that attitude toward behavior (.75) and perceived behavioral control (.70) had good or acceptable internal consistency reliability, but subjective norms (.40) exhibited poor reliability, suggesting its items may not relate well to each other.

In addition, since the item related to the intention to teach agricultural education consisted of single-item measures, the reliability of the items could not be measured (Wanous et al., 1997). While single-item measures are vulnerable to random measurement errors (Hoepfner et al., 2011), if the item of interest is clear to respondents, using single-item measures is appropriate (Ginns & Barrie, 2004; Wanous et al., 1997). In our study, we contended that the intention item "I intend to become an agriculture teacher" was sufficiently clear for our respondents to understand. However, we recognize that utilizing multiple items generally provides a more robust measure of complex latent variables, such as the intention to teach agriculture. We acknowledge this as a limitation of our study.

Items based on Self-Determined Theory. The second section measured participants' types of motivation to teach agriculture. We developed the items based on previously validated instruments that measured teachers' motivation for teaching (Abós et al., 2018) and work tasks (Fernet et al., 2008). The instrument consisted of five constructs regarding motivation for teaching: (a) intrinsic motivation, (b) identified regulations, (c) introjected regulations, (d) external regulations, and (e) amotivation. Each construct had three items, rated using five-point Likert-type scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants were asked to indicate the extent to which they agreed with the 15 different statements regarding motivation to teach. Cronbach's alpha of all constructs except for external regulations indicated excellent or acceptable internal consistency reliability ranging from .73 to .87 (George & Mallery, 2019). However, Cronbach's alpha of external regulations was .59, which indicated poor internal consistency reliability.

Items Related to Motivation to Teach and Demographic Questions. The survey respondents were also asked to describe their motivation to pursue a career teaching agricultural education in an open-ended question. In the last section of the instrument, survey respondents were asked about demographic information, including sex, race, and current status (See Table 1).

Quantitative Data Collection & Analysis

We used Dillman’s Tailored Design Method to encourage survey responses and ensure data quality (Dillman et al., 2014). The data were collected between March and May 2021. The AEI program director sent the first survey invitation email with the survey link to all AEI participants in March 2021. The director sent participants reminder emails after two, four, and eight weeks to enhance the response rate (Dillman et al., 2014). To promote participation in the survey, we offered \$25 Amazon gift cards to the first four participants who completed the survey in its entirety. Furthermore, the data were analyzed using the Statistical Package for the Social Sciences (SPSS) to run descriptive statistics and multiple regression analysis.

Qualitative Phase

The quantitative findings guided the qualitative phase development (Creswell & Plano Clark, 2018). The quantitative results indicated that their positive relationship with agriculture teachers and favorable SBAE experiences positively influenced their decision to teach agricultural education. To elaborate on the quantitative results, in the qualitative phase, we used focus group interviews and asked participants about their relationship with their agriculture teachers and experience with the SBAE program, along with their motivation to teach agriculture.

Qualitative Study Participants

Upon completing the quantitative survey, respondents were asked if they would be willing to participate in a follow-up focus group. A total of 27 respondents indicated a willingness to participate, but due to scheduling conflicts and other unspecified reasons, only eight individuals participated in the focus groups. Based on their status, three separate focus group categories were developed: (a) lower-level undergraduate student group, (b) upper-level undergraduate student group, and (c) professional group (i.e., post-undergraduate). To maintain confidentiality, all focus group participants were assigned a code (i.e., P1, P2, P3, and so forth). The selected characteristics of the focus group participants are shown in Table 2.

Table 2

Selected Characteristics of the Focus Group Interview Participants (n = 8)

ID	Sex	Race	Status	SBAE Experience
P1	Female	White	Lower-level undergrad in Ag Ed	Yes
P2	Male	Non-White	Lower-level undergrad in Ag Ed	Yes
P3	Female	White	Upper-level undergrad in Ag Ed	Yes
P4	Female	White	Upper-level undergrad in Ag Ed	Yes
P5	Male	White	Upper-level undergrad in Ag Ed	Yes
P6	Female	White	Professional (Ag Ed graduate student)	Yes
P7	Male	White	Professional (Agriculture teacher)	Yes
P8	Female	White	Professional (Agriculture teacher)	Yes

Qualitative Study Instrument

The focus group interview questionnaire was developed to acquire more in-depth information about participants’ motivation to teach agricultural education. The instrument consisted of three main sections: (a) career choice, (b) major choice, and (c) experience with the SBAE program and relationship with agriculture teachers (Table 3). A panel of experts, including three faculty members and three graduate students in agricultural education, determined the instrument’s face and content validity.

Table 3

Focus Group Questions Regarding Motivation to Teach Agricultural Education

Categories	Groups	Questions
Career Choice	Lower-level/Upper-level Undergrads	<ul style="list-style-type: none"> • Are you considering a career teaching agriculture? If yes, what motivated you to become an agriculture teacher?
	Professionals	<ul style="list-style-type: none"> • What motivated you to pursue your career?
Major Choice	Lower-level undergrads	<ul style="list-style-type: none"> • Do you plan on enrolling in the AEC department at UF to pursue a career teaching agriculture? If yes, what encourages you to enroll in the department?
	Upper-level undergrads	<ul style="list-style-type: none"> • What is your major? What motivated you to pursue your current major?
	Professionals	<ul style="list-style-type: none"> • What was your major? What motivated you to pursue that major?
Experience with the SBAE Program and Relationship with agriculture teachers	All groups	<ul style="list-style-type: none"> • How did your experience with SBAE program components impact your decision to teach agriculture? • Please describe your relationship with your ag teacher(s) during your secondary education.

Qualitative Data Collection and Analysis

Three separate focus groups were conducted via Zoom, recorded on video, and transcribed verbatim. Each focus group was moderated by a researcher experienced in teaching agriculture, with another researcher tasked with taking observational notes. The duration of these sessions ranged from 45 minutes to an hour. Data analysis followed the constant comparative method (Corbin & Strauss, 2008), involving open, axial, and selective coding phases. Initially, each transcription was reviewed line-by-line during the open coding process, and a descriptive coding procedure was employed to analyze the data (Corbin & Strauss, 2008). Open codes were then combined into main and subcategories during axial coding (Ary et al., 2014), followed by relationship determination between categories via selective coding (Ary et al., 2014).

To ensure trustworthiness in qualitative research (Lincoln & Guba, 1985), encompassing credibility, dependability, confirmability, and transferability, various methods were employed. The lead researcher engaged in peer debriefing sessions with a team member to ensure data credibility. Peer reviewers assessed the reasonableness of researchers' interpretations by examining interview transcripts

(Ary et al., 2014). Dependability was ensured through intrarater and interrater agreements (Ary et al., 2014). Transcripts from all focus groups were coded by the lead researcher and respective focus group facilitators, with coding differences resolved through consensus (Syed & Nelson, 2015). Confirmability was established via an audit trail documenting decisions and justifications, while transferability was achieved by providing detailed contextual and participant descriptions (Ary et al., 2014).

Results

Objective 1. Identify Factors that Influenced Participants to Pursue a Career in Teaching Agricultural Education based on the Theory of Planned Behavior

The mean scores and standard deviation for each construct were the following: attitudes toward behavior ($M = 4.73, SD = 0.51$), subjective norm ($M = 3.58; SD = 0.87$), perceived behavioral control ($M = 4.68; SD = 0.52$), and intention regarding teaching agriculture ($M = 4.42; SD = 0.85$) (see Table 4).

Table 4

Descriptive Statistics of Key Variables of Theory of Planned Behavior (n = 31)

Constructs	Items	n	M	SD
Attitude toward behavior	I value a career in teaching agriculture.	31	4.94	0.25
	A career in teaching agriculture is beneficial to me.	31	4.61	0.62
	Teaching agriculture is a fulfilling job.	31	4.65	0.66
Subjective Norms	People around me (e.g., family, teachers, friends, etc.) expect me to become an agriculture teacher.	31	4.00	0.78
	Most of my close friends are planning to pursue a career in teaching agriculture.	31	2.68	0.98
	People view agriculture teachers with respect.	31	4.06	0.85
Perceived Behavioral Control	I am confident that I can be an agriculture teacher.	31	4.65	0.66
	Becoming an agriculture teacher is up to me.	31	4.87	0.34
	I can overcome any obstacles to becoming an agriculture teacher	31	4.52	0.57
Intention	I intend to become an agriculture teacher	31	4.42	0.85

Note. Strongly disagree = 1, Somewhat disagree = 2, Neither agree nor disagree = 3, Somewhat agree = 4, Strongly agree = 5.

The study employed a multiple regression analysis to assess the predictive influence of independent variables on participants' intention to teach agriculture. The independent variables integrated into the regression model were attitude towards behavior and perceived behavioral control. The subjective norms construct was not incorporated into the analysis due to its inadequate reliability. The results indicated that the two independent variables statistically significantly predicted participants' intention to teach agriculture, $F(2, 28) = 7.788, p < .05, R^2 = .455$. The findings showed that the TPB model accounts for 45.5 % of the variance in participants' intention to teach agricultural education. Both attitude toward

behavior ($\beta = .39, p < .05$) and perceived behavioral control ($\beta = .39, p < .05$) were statistically significant predictors of their intention to become agriculture teachers.

Objective 2. Describe Participants’ Different Types of Motivations to Pursue a Career in Teaching Agriculture According to Self-Determination Theory

All 31 respondents who considered a career in teaching agriculture were asked about their motivation to teach agriculture using the items based on the SDT. The results indicated that the identified regulation mean ($M = 4.57; SD = 0.45$) was the highest-rated motivation on the choice of a career in teaching agricultural education, followed by intrinsic motivation ($M = 4.34; SD = 0.61$), introjected regulation ($M = 2.63; SD = 0.89$), external regulation ($M = 1.80; SD = .59$), and amotivation ($M = 1.45; SD = 0.68$) (Table 5). The results showed that more self-determined forms of motivation (intrinsic motivation, identified regulation) greatly influenced participants to pursue a career in teaching agriculture. While less self-determined motivation also influenced them to teach, the level of agreement of those constructs was substantially lower than that of more self-determined motivation.

Table 5

Descriptive Statistics of Key Constructs of Self-Determination Theory (n = 31)

Categories	Items	M	SD
Intrinsic motivation	Because teaching is a pleasant activity.	4.06	0.81
	Because I find teaching interesting to do	4.45	0.72
	Because I like teaching.	4.52	0.63
Identified regulation	Because teaching is an important personal choice for me	4.52	0.63
	Because teaching allows me to learn new things that I consider important.	4.48	0.57
	Because I find teaching important for the academic success of students	4.71	0.46
Introjected regulation	Because if I don’t teach, I would feel bad.	2.55	1.09
	Because I would feel guilty not doing it.	2.32	1.01
	Because I want to give others the impression that I am a good teacher.	3.03	1.08
External regulation	Because I am expected to teach	2.13	0.92
	Because others place pressure on me to teach	1.77	0.72
	Because I am forced to do so by others.	1.48	0.72
Amotivation	I don’t know; I don’t always see the value of teaching.	1.55	0.89
	I don’t know; sometimes, I don’t see its purpose.	1.42	0.67
	I don’t know; I don’t think making an effort in teaching is worthwhile.	1.39	0.72

Note. Strongly disagree = 1, Somewhat disagree = 2, Neither agree nor disagree = 3, Somewhat agree = 4, Strongly agree = 5.

Objective 3. Investigate Factors that Motivated Participants to Pursue a Career in Teaching Agricultural Education

The findings regarding Objective 3 were presented based on participants’ responses to the survey open-ended question and the focus group interview questions regarding factors that motivated participants to teach agriculture. First, among the survey respondents, a total of 28 respondents provided comments on the open-ended question asking their motivations for teaching agriculture. The responses were grouped into six categories. The most commonly mentioned motivating factors were inspiring agriculture teachers ($n = 16$), followed by paying it forward to students/future generations ($n = 10$), positive experience with SBAE programs ($n = 9$), passion for teaching and agriculture ($n = 7$), family in agriculture ($n = 3$), and importance of agriculture ($n = 3$). Table 6 describes the category, frequency of each category, and example quotes that support categories.

Table 6

Factors that Motivated Participants to Pursue a Career in Teaching Agricultural Education

Categories	Frequency	Examples of Quotes
Inspiring agriculture teachers	16	<ul style="list-style-type: none"> • “My Ag teacher has been my biggest influencer on why I want to teach Ag.” • “My personal experiences with my agriculture teachers inspire me to pass on to future generations.”
Paying it forward to students/future generations	10	<ul style="list-style-type: none"> • “I want to be that role model and motivating teacher to my own students that my agriculture teachers were for me.” • “I was given many opportunities to succeed and become a better me, and I, in return, want to give the same opportunity to others.”
Positive experience with SBAE programs	9	<ul style="list-style-type: none"> • “My first year at the state convention in middle school is what influenced me to become an agriculture teacher.” • “My own educational experiences with agriculture classes have influenced me to consider becoming an ag teacher.”
Passion for teaching and agriculture	7	<ul style="list-style-type: none"> • “It combines two of my passions, teaching and agriculture.” • “Always had a passion for teaching and love for the outdoors and animals.”
Family in agriculture	3	<ul style="list-style-type: none"> • “My grandfather was an Ag teacher.”
Importance of agriculture	3	<ul style="list-style-type: none"> • “I want to teach students topics that impact the real world every day.”

Second, among those who completed the online questionnaire, eight respondents participated in the focus group interviews. When asked about their motivation to teach agriculture, participants’ responses were categorized into six themes: (a) inspiring agriculture teachers, (b) passion for agriculture and teaching, (c) positive experience with SBAE programs, (d) paying it forward to future generations and society, (e) student teaching experience, and (f) positive job prospect.

Inspiring agriculture teachers. Several participants (P1, P3, P7, P8) shared their stories about how their agriculture teachers inspired them to pursue a career in teaching agriculture. P1 said it best when they said:

She is one of the driving forces and makes me want to be an agriculture teacher. Because she put her whole heart and soul into it, I just love that. Because she cared so much about the kids and their success, I just wish I could be like half the agriculture teacher she is.

Along the same line, P3 and P8 shared how their agriculture teachers helped them throughout their lives and inspired them to follow in their footsteps. P3 noted, “She definitely was a mentor...She helped me in every way possible.” Furthermore, P3 articulated:

Even if she did not know the answers, she would find me resources. I definitely think that helped, and I want to mirror that. So, even if I do not know something, I am still going to try my best to help my students in any way possible.

Similarly, P8 mentioned that “They (previous agriculture teachers) both pushed me as far as I could and were a very, very positive influence on my life. . . I want to follow in their footsteps.” Interestingly, one of the participants (P7) mentioned that they are currently teaching at the school where they graduated from and working with their previous agriculture teacher, who positively influenced them to become an agriculture teacher. Although a few said that some of their previous agriculture teachers were not very supportive of their engagement in agricultural education, all participants stated that they had at least one inspiring agriculture teacher who influenced their lives positively and motivated them to pursue a career teaching agriculture.

Passion for Agriculture and Teaching. Participants (P1, P8) mentioned that their passion for agriculture and teaching motivated them to pursue a career in teaching agriculture. For example, P1 noted, “I chose this one specifically because I really like agriculture, and I really like education, so combining the two is perfect.” Furthermore, P8, a first-year agriculture teacher, mentioned that their love for teaching is one of the factors that motivated them to become an agriculture teacher, sharing, “I truly love teaching. . . I really enjoy what I am doing. I can see myself doing this the rest of my life and being happy.”

Their passion for agriculture and teaching was derived from their own learning experiences (involvement in SBAE programs) along with social influences from their agriculture teachers and family members (e.g., grandfather and parents). For example, P8 mentioned that one of their family members who was an agriculture teacher influenced their decision to become an agriculture teacher. P8 shared:

I am passionate about agriculture, and now I am super passionate about teaching. . . My granddaddy was an agriculture teacher, and he went to [Institution name], so I was like, well, that is what I am going to do. I just kind of exactly followed in his footsteps.

Similarly, P6 shared how their family members influenced their passion for agriculture and teaching. P6 said, “My mom is a second-grade teacher. I have an aunt and a cousin who were both high school math teachers. . . I also have a very strong agricultural background on my dad's side of the family.”

Positive Experience with SBAE programs. Several participants (P1, P2, P7) mentioned that their involvement in SBAE programs (i.e., agriculture courses, FFA, and Ag Ed CDE) impacted their decision to pursue a career teaching agriculture. Two participants (P1, P7) shared that they initially desired to be a teacher and did not know what to teach. After taking agriculture courses and being involved in FFA, they found their passion for teaching agriculture. For example, P1, a greenhouse manager during their high school senior year, shared how agriculture courses helped them find a passion

for teaching agriculture. They noted, "I always wanted to be a teacher and just did not know what kind. After being in agriculture classes, I am like, that is the kind of teacher I want to be." The results showed that their positive experiences with SBAE influenced them to pursue a career teaching agriculture. In particular, several participants mentioned that their positive learning experience from FFA involvement encouraged them to become agriculture teachers and increased their desire to share those positive experiences with their students.

Paying it Forward to Future Generations and Society. Multiple participants (P1, P2, P3, P4, P8) saw teaching agriculture as a means to positively influence students' lives and society as their high school teachers did. For example, participants (P2, P3) mentioned that their experiences with SBAE and its positive impact on their lives encouraged them to give their future students the same positive experience they had through SBAE programs. For instance, P3 shared their desire to pass on the valuable experience to their students: "I wanted to give my students what I had been given." In addition, P2 said it best when they noted:

I want to replicate the same experiences and impact that I got from agricultural education onto student... FFA and agriculture education were just such a space for me to explore the sciences and meet new people I never thought I would meet before.

In addition, the positive impact on society was also another reason they wanted to become agriculture teachers. For example, P4 noted, "I really do believe wholeheartedly that teachers have a huge impact on the future of our society... I think it is a wonderful career, and being a teacher, in general, is a pretty noble cause."

Student Teaching Experience. Positive student teaching experience was also one of the factors that influenced their decision to become an agriculture teacher. One participant (P6) mentioned that their student teaching experience strengthened their motivation to teach agriculture and their desire to work with students. P6 shared:

The biggest, most recent thing that really kind of kept me in was my student teaching. . . I miss being able to go to school and see the kids every day. . . Looking forward to the day I get to go on an FFA trip and be with students all hours of the day.

Positive Job Prospect. While the majority mentioned more self-determined forms of motivation when asked about their motivation to teach agriculture, one participant (P3) noted that a good job prospect of an agriculture teacher was one of the reasons they decided to become an agriculture teacher. P3 stated that while they thought about entering into another career, given a nationwide need for agriculture teachers and positive job prospects of a career in teaching, they decided to become an agriculture teacher. P3 shared:

I was like [another career option] . . . What is the outcome of me actually getting a good job, like a sustainable job? Whereas Ag Ed, I knew there would be options for me everywhere, and I would not have difficulty getting a job. So that's why I really honed in on that.

The results indicated that along with more self-determined forms of motivation, less self-determined forms of motivation also affected a participant's decision to pursue a career teaching agricultural education.

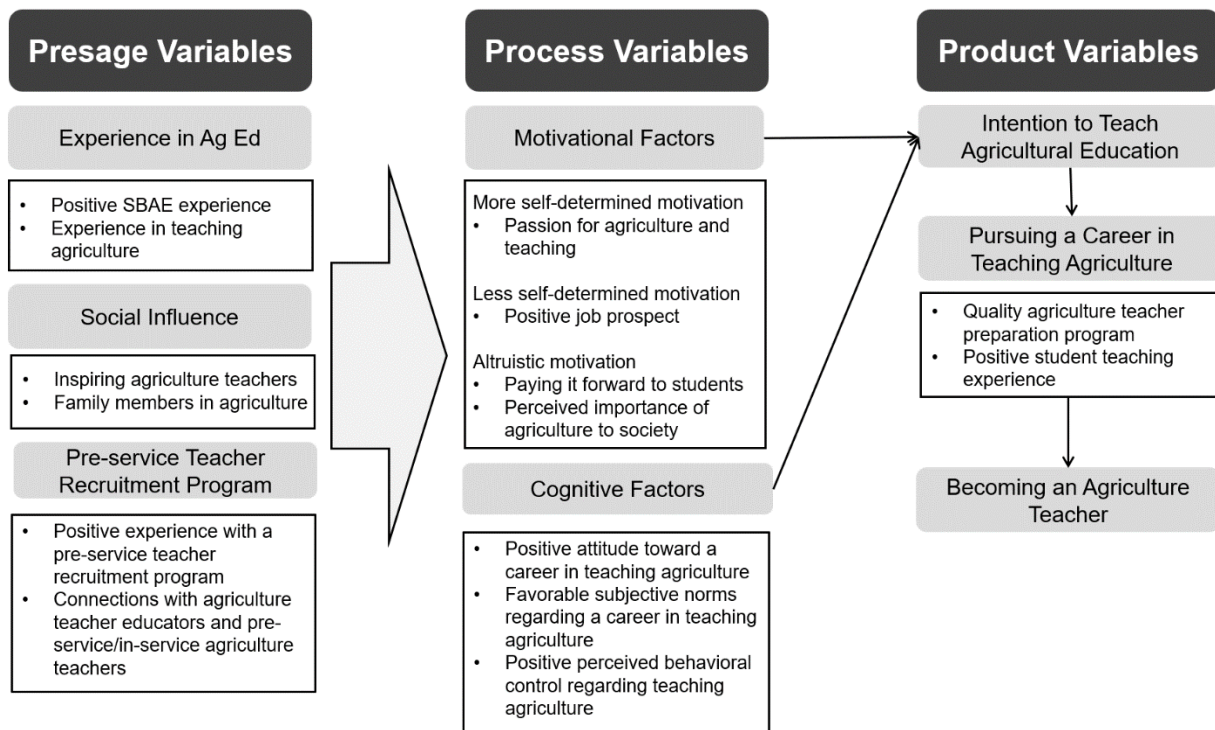
Conclusions

This mixed methods study sought to identify individuals’ motivation for teaching agricultural education and the factors influencing their decisions to become agriculture teachers. We acknowledge that the generalizability of our findings is limited because we used a non-randomized sampling method, and the sample was restricted to participants in the AEI program that is designed for SBAE students. Additionally, the limitation of this study is that while it contributes to our understanding of the factors influencing individuals' decisions to pursue a career in teaching agriculture, it does not ascertain whether these individuals will actually become agriculture teachers. This is beyond our study's scope, primarily due to the limitations associated with using cross-sectional data.

The study demonstrated the value of the TPB (Ajzen, 1991) and the SDT (Deci & Ryan, 1985) in understanding individuals’ motivation to pursue a career in teaching agriculture. Based on the theoretical frameworks and the results, a model for understanding factors influencing individuals to pursue a career in teaching agriculture was proposed. The model provides a holistic picture of the factors that motivate individuals to pursue a career in teaching agriculture and the interrelationships among these factors. The key variables were grouped into presage, process, and product variables based on relationships among variables (see Figure 1). The conclusions of the study were discussed based on this model.

Figure 1

A Model for Understanding Factors Influencing Individuals to Pursue a Career in Teaching Agriculture



First, the presage variables in the model include (a) experience in Ag Ed (i.e., positive SBAE experience, positive experience in teaching agriculture), (b) social influence (i.e., inspiring agriculture teachers, family members in agriculture), and (c) a preservice teacher recruitment program. When asked about factors that motivated them to pursue a career in teaching agriculture, we found that multiple factors influenced participants’ motivation to teach agricultural education. The prominent factors included

inspiring agriculture teachers, positive experiences with SBAE, passion for teaching/agriculture, and paying it forward to students.

In particular, participants' positive involvement in SBAE programs (e.g., agriculture classes, FFA) helped enhance their confidence regarding teaching agriculture by developing their knowledge and experience in agricultural education. Similarly, previous studies (Eck et al., 2021; Ingram et al., 2018; Lawver & Torres, 2012) reported that involvement in SBAE programs influenced preservice teachers' decisions to teach agricultural education. Additionally, social influences (i.e., inspiring agriculture teachers and family members in agriculture) positively affected their perception of a career in teaching agriculture. In particular, previous agriculture teachers significantly influenced participants' decisions to teach agriculture, which was aligned with other studies that found agriculture teachers influenced students' career decisions through encouragement (Ingram et al., 2018), their instruction in the classroom, and interactions with students (Park & Rudd, 2005). The results showed that the presage factors were catalysts that sparked participants' passion for agriculture and teaching and positively shaped their perception of a career in teaching agriculture. We noted that this study was part of a larger study. While we also identified the impact of a preservice teacher recruitment program on participants' motivation to teach agriculture, this was beyond the scope of this study. Thus, we described the findings of the impact of a preservice teacher recruitment program on individuals' motivation to teach agriculture in another manuscript that was published in *Journal of Agricultural Education* (Hur et al., 2023).

Next, the process variables include individuals' motivational factors and cognitive factors, which influence the product variables, such as individuals' intentions to teach agricultural education, pursuing a career teaching agriculture, and becoming an agriculture teacher. We found that individuals' motivational and cognitive factors influenced their intention to teach agricultural education. In detail, motivational factors involve three types: more self-determined motivation, less self-determined motivation, and altruistic motivation. While respondents had both intrinsic and extrinsic motivation to pursue a career in teaching, the scores for more self-determined motivation (intrinsic motivation and identified regulation) were substantially higher than those for less self-determined motivation. The results aligned with previous studies that found that most student teachers (Bergmark et al., 2018; Sinclair, 2008) and agriculture teachers (Ismail & Miller, 2021) entered teacher preparation programs due to intrinsic motivations rather than extrinsic motivations.

Furthermore, while SDT offers a useful framework for understanding individuals' motivation to teach, the theory does not explain altruistic motivation, which involves performing a behavior to help others with no expectation of reward (Ismail & Miller, 2021). We included altruistic motivation in the model, reflecting participants' aspirations to positively influence their students' lives and contribute to society. The qualitative results showed that while more self-determined motivation and altruistic motivation were participants' prominent motivations that led them to pursue a career in teaching agriculture, less self-determined motivation (e.g., positive job prospects) also influenced their decision to become agriculture teachers.

In addition, cognitive factors include three constructs from the TPB model: positive attitude toward a career in teaching agriculture, favorable subjective norms regarding a career in teaching agriculture, and positive perceived behavioral control regarding teaching agriculture. The results indicated that the TPB model statistically significantly explains a substantial portion of the variance in participants' intention to teach agricultural education, which were aligned with the previous study (Eck et al., 2021) that utilized TPB to investigate preservice agriculture teachers' intent to teach. The congruent results indicated that the TPB model could be used to develop recruitment strategies to motivate students to pursue a career in teaching agriculture. In addition, several participants decided to become agriculture teachers because of their positive perception of pursuing a career in teaching agriculture (attitude toward a

behavior) that was derived from positive SBAE experiences and social influences (subjective norms), such as encouragement from inspiring agriculture teachers and their family members.

Last, these motivational and cognitive factors affected participants' intentions to pursue a career in teaching agriculture, leading them to enter agriculture teacher preparation programs. The results showed that after admission to the programs, individuals' quality experiences with agriculture teacher preparation programs and positive student teaching experience were critical factors that eventually led them to enter the agricultural education profession after graduation. The results were aligned with the previous study (Doss et al., 2020) that identified the relationship between student teachers' time spent during student teaching and their decision to enter the field of agricultural education as agriculture teachers. In particular, given that student teaching has been the culminating experience for agriculture teacher education programs (Smith & Rayfield, 2017), it is critical to help preservice teachers develop positive student teaching experiences.

Overall, a model for understanding factors influencing individuals to pursue a career in teaching agriculture helped us understand the multidimensional nature of individuals' motivation to teach agriculture. Additionally, this study demonstrated that positive experiences with agriculture teachers and SBAE programs are crucial in inspiring future agricultural educators and attracting them into the agricultural education profession. This study offered various implications for SBAE programs and agriculture teacher recruitment. The findings of this study can be utilized to develop teacher recruitment strategies that help attract more students into agricultural education and encourage them to pursue a career in teaching agriculture.

Recommendations

We proposed several recommendations for practice and research based on the findings and limitations of this study. In terms of recommendations for practice, given that agriculture teachers influence their students' decision to pursue a career in teaching agriculture, teacher educators should continue to develop a strong partnership with agriculture teachers in recruiting future agricultural educators. Agriculture teachers could identify prospective students in their agricultural education programs and provide information about career pathways to becoming agriculture teachers. In addition, teachers may encourage their students to consider a career in teaching agriculture by emphasizing the significant impact of an agricultural teaching career on students and society.

In addition, this study found that participants have various motivations to teach rather than a single motivation to become agriculture teachers. While the majority mainly had self-determined motivation when choosing a career teaching agriculture, a few participants were extrinsically motivated to teach agriculture (e.g., positive job prospects). The findings suggested that stakeholders of agricultural education should consider students' different motivations and utilize various recruitment strategies to attract prospective students with different motivations.

The results indicated that positive experiences with SBAE programs and agriculture teachers were critical in inspiring future agricultural educators and attracting them into the agricultural education profession. The findings implied that strengthening SBAE programs and developing passionate agriculture teachers are essential to sustain agricultural education. Thus, agricultural education stakeholders should continue to support agriculture teachers' professional development to enhance SBAE programs so that teachers provide SBAE students with quality learning experiences. The proposed model could offer valuable insights into developing a virtuous circle of strengthening SBAE programs, inspiring SBAE students, recruiting more preservice teachers, developing quality teacher preparation programs, and entering a profession teaching agriculture. Agricultural education stakeholders and professional organizations should continue to strengthen the circle of agricultural education by supporting key

agriculture stakeholders such as SBAE students, preservice teachers, in-service teachers, and agricultural educators.

This study demonstrated that TPB is a valuable framework for understanding individuals' intention to teach agriculture. While in the quantitative study, participants' subjective norms were not statistically significant factors in students' intention to teach, the qualitative study indicated students' significant others, such as agriculture teachers and family members, influenced their decision to pursue a career in teaching agriculture. The incongruent results could be attributed to a low reliability of the subjective norm construct. It is recommended that future researchers adjust items of subjective norms and test them with broader samples to improve the reliability of the instrument.

Last, a model for understanding factors influencing individuals to pursue a career in teaching agriculture was proposed based on this study's theoretical frameworks and findings. The relationship among variables in the model was described mainly based on the qualitative data, and we did not quantitatively investigate the relationship among key constructs in the model. We encourage future researchers to identify the direct and indirect relationship among variables and test the model using rigorous quantitative methods such as structural equation modeling. In particular, considering previous studies (Qin & Tao, 2021) in another teaching context showed the relationship between constructs from TPB and SDT, it would be worthwhile to investigate the relationship between those constructs within the proposed model in the agricultural education context. We recommend that future researchers empirically test a model to develop a more comprehensive model that could help us expand our understanding of individuals' motivation to pursue a career in teaching agriculture.

References

- Abós, Á., Sevil, J., Martín-Albo, J., Aibar, A., & García-González, L. (2018). Validation evidence of the motivation for teaching scale in secondary education. *Spanish Journal of Psychology*, 2018, 1–12. <https://doi.org/10.1017/sjp.2018.11>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ary, D., Jacobs, L. C., & Sorensen, C. (2014). *Introduction to research in education* (9th ed.). Wadsworth Cengage Learning.
- Ball, A. L., & Torres, R. M. (2010). Recruiting and retaining highly qualified teachers of agriculture. In R. M. Torres, T. Kitchel, & A. L. Ball (Eds.), *Preparing and advancing teachers in agricultural education* (pp. 268-282). The Ohio State University, Curriculum Materials Service.
- Bergmark, U., Lundström, S., Manderstedt, L., & Palo, A. (2018). Why become a teacher? Student teachers' perceptions of the teaching profession and motives for career choice. *European Journal of Teacher Education*, 41(3), 266–281. <https://doi.org/10.1080/02619768.2018.1448784>
- Cannon, A., Smalley, S., & Hainline, M. (2022). Perceptions of agricultural educators entering the profession through alternative means. *Journal of Agricultural Education*, 63(2), 1–16. <https://doi.org/10.5032/jae.2022.02001>
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). SAGE Publications.

- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage publications.
- Creswell, J. W., & Plano Clark, V. L. P. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (4th ed.). John Wiley & Sons.
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and researching motivation* (2nd ed.). Pearson Education. <https://doi.org/10.4324/9781315833750>
- Doss, W., Frost, K., & Rayfield, J. (2020). The impact of time spent student teaching on the decision to enter the field: A longitudinal study. *Journal of Agricultural Education, 61*(2), 276–288. <https://doi.org/10.5032/jae.2020.02264>
- Eck, C. J., Toombs, J. M., & Robinson, J. S. (2021). Intent to teach: Perspectives from preservice agricultural education teachers. *Journal of Agricultural Education, 62*(1), 212–226. <https://doi.org/10.5032/jae.2021.01212>
- Fernet, C., Sencal, C., Guay, F., Marsh, H., & Dowson, M. (2008). The Work Tasks Motivation Scale for Teachers (WTMST). *Journal of Career Assessment, 16*(2), 256–279. <https://doi.org/10.1177/1069072707305764>
- Foster, D. D., Lawver, R. G., & Smith, A. R. (2020). *National agricultural education supply & demand study, 2019 executive summary*. <http://aaaeonline.org/Resources/Documents/NSD2019Summary.pdf>
- Frost, K. J., & Rayfield, J. (2020). Decision to enter the classroom as an agriculture teacher: An exploratory qualitative investigation. *Journal of Agricultural Education, 61*(1), 247–261. <https://doi.org/10.5032/jae.2020.01247>
- George, D., & Mallery, P. (2019). *IBM SPSS statistics 26 step by step: A simple guide and reference*. Routledge.
- Ginns, P., & Barrie, S. (2004). Reliability of single-item ratings of quality in higher education: A replication. *Psychological Reports, 95*, 1023–1030. <https://doi.org/10.2466/pr0.95.3.1023-1030>
- Harding, J. (2019). *Qualitative data analysis: From start to finish*. SAGE Publications.
- Hoepfner, B. B., Kelly, J. F., Urbanoski, K. A., & Slaymaker, V. (2011). Comparative utility of a single-item versus multiple-item measure of self-efficacy in predicting relapse among young adults. *Journal of Substance Abuse Treatment, 41*(3), 305–312. <https://doi.org/10.1016/j.jsat.2011.04.005>

- Hur, G., Barry, D. M., Jagger, C. B., Alford, K. R., & Roberts, T. G. (2023). Investigating the impacts of a preservice agriculture teacher recruitment program using Kirkpatrick's program evaluation model. *Journal of Agricultural Education, 64* (1), 184-200. <https://doi.org/10.5032/jae.v64i1.37>
- Ingram, M. L., Sorensen, T. J., Warnick, B. K., & Lawver, R. G. (2018). The influence of school-based agricultural education on preservice agriculture teachers' choice to teach. *Journal of Agricultural Education, 59*(2), 64–78. <https://doi.org/10.5032/jae.2018.02064>
- Ismail, N., & Miller, G. (2021). Factors that motivate high school agriculture teachers to Teach. *Journal of Agricultural Education, 62*(1), 331–346. <https://doi.org/10.5032/jae.2021.01331>
- Lawver, R. G., & Torres, R. M. (2012). An analysis of post-secondary agricultural education students' choice to teach. *Journal of Agricultural Education, 53*(2), 28–42. <https://doi.org/10.5032/jae.2012.02028>
- Lawver, R. G., & Torres, R. M. (2011). Determinants of preservice students' choice to teach secondary agricultural education. *Journal of Agricultural Education, 52*(1), 61–71. <https://doi.org/10.5032/jae.2011.01061>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Lindner, J. R., Murphy, T. H., & Briers, G. E. (2001). Handling nonresponse in social science research. *Journal of Agricultural Education, 42*(4), 43-53. <https://doi.org/10.5032/jae.2001.04043>
- Marx, A., Smith, A., Smalley, S., & Miller, C. (2017). Previous experience not required: Contextualizing the choice to teach school-based agricultural education. *Journal of Agricultural Education, 58*(4), 126–142. <https://doi.org/10.5032/jae.2017.04126>
- Moser, E. M., & Mckim, A. J. (2020). Teacher retention: A relational perspective. *Journal of Agricultural Education, 61*(2), 263–275. <https://doi.org/10.5032/jae.2020.02263>
- Park, T. D., & Rudd, R. (2005). A description of the characteristics attributed to students' decisions to teach agriscience. *Journal of Agricultural Education, 46*(3), 82–94. <https://doi.org/10.5032/jae.2005.03082>
- Qin, M., & Tao, D. (2021). Understanding preservice music teachers' intention to remain in the profession: An integrated model of the theory of planned behaviour and motivation theory. *International Journal of Music Education, 39*(4), 355–370. <https://doi.org/10.1177/0255761420963149>
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. The Guilford Press.
- Sinclair, C. (2008). Initial and changing student teacher motivation and commitment to teaching. *Asia-Pacific Journal of Teacher Education, 36*(2), 79–104. <https://doi.org/10.1080/13598660801971658>
- Smith, K., & Rayfield, J. (2017). Student teaching changed me: A look at Kolb's learning style inventory scores before and after the student teaching experience. *Journal of Agricultural Education, 58*(1), 102–117. <https://doi.org/10.5032/jae.2017.01102>

- Smith, C. J., Sorensen, T. J., Burrows, M., & Lawver, R. G. (2020). Pioneering Spirit: Examining the motives and experiences of non-SBAE students majoring in agricultural education. *Journal of Agricultural Education, 61*(3), 164–181. <https://doi.org/10.5032/jae.2020.03164>
- Spittle, M., Jackson, K., & Casey, M. (2009). Applying self-determination theory to understand the motivation for becoming a physical education teacher. *Teaching and Teacher Education, 25*(1), 190–197. <https://doi.org/10.1016/j.tate.2008.07.005>
- Syed, M., & Nelson, S. C. (2015). Guidelines for establishing reliability when coding narrative data. *Emerging Adulthood, 3*(6), 375–387. <https://doi.org/10.1177/2167696815587648>
- The American Association for Public Opinion Research. (2023). *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys* (10th ed.). AAPOR.
- Wanous, J., Reichers, A., & Hudy, M. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology, 82*(2), 247–252.
- Watt, H. M. G., & Richardson, P. W. (2007). Motivational factors influencing teaching as a career choice: Development and validation of the FIT-choice scale. *Journal of Experimental Education, 75*(3), 167–202. <https://doi.org/10.3200/JEXE.75.3.167-202>