

Pre-service Teachers' Motivation to Pursue a Career as an Agricultural Education Teacher

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Abstract

With agricultural education teachers continually leaving the teaching profession, it is up to schools and administrators to assist in retaining teachers. People are motivated differently based on their experiences and goals for their futures. Both intrinsic and altruistic motivators are highly involved when one decides to become a teacher. The expectancy-value model of achievement was utilized as the framework. The purpose of this descriptive quantitative study was to determine what pre-service agricultural education teachers' motivations attending Iowa State University to pursue a career as an agricultural education teacher. Respondents indicated one of the most important motivating factors for their desire to teach was that they wanted to help adolescents learn. Within the study, respondents were asked about their perceptions and the highest-ranking statement was respondents think teaching is a highly-skilled occupation. Providing pre-service teachers with opportunities to teach or assist with local FFA chapters, Boys and Girls Clubs, and 4-H clubs may help in keeping pre-service agricultural education teachers motivated throughout their undergraduate experience, and assist with teacher recruitment efforts. Future research should be conducted with a larger population to see how motivations differ among pre-service teachers at different institutions.

Introduction

The shortage of teachers in public schools has increased not only from an increasing population in America, but due to retirements and teachers leaving the profession (Flynt & Morton, 2009). According to Ingersoll and Smith (2003), new teachers are leaving the profession because of staffing actions, family, to pursue other opportunities, and because they are dissatisfied. New teachers can be dissatisfied for many reasons, but a main reason was due to the salary and their ability to manage students. Solely recruiting more teachers will not fix the gap in teacher shortages due to the quick turnaround rate of teachers as something within the school system will need to change (Ingersoll & Smith, 2003).

Schools and administration need to be willing to assist in implementing strategies to retain teachers. Increasing support from not only administrators but assisting teachers to find mentors within the school has shown to be helpful (Ingersoll & Smith, 2003). Schools and institutions are enticing industry professionals to enter the teaching profession by creating alternative ways to become certified as a teacher (Hirsch et al., 2001). Teachers cannot only become alternatively certified, but states are becoming more cooperative with each other when it comes to allowing licenses to transfer from state to state (Hirsch et al., 2001). Many states are doing their part to support educators through some of the key barriers they may face in becoming a teacher so that individuals who become motivated to teach later in their professional career are able to do

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so. However, the ultimate decision and motivation to become a teacher is driven greatly by the individual person.

People are motivated differently based on their experiences and goals for their futures, and there are different factors which motivate people to become teachers (Bruinsma & Jansen, 2010). Both intrinsic and altruistic motivators are highly involved when one decides to become a teacher (Klassen et al., 2011; Landrum et al., 2017). Prior research has indicated that top motivators for pursuing a career in the education field include job stability, liking the subject matter, and being able to work with children (Bruinsma & Jansen, 2010; Swortzel, 1998). Other motivators include how the individual sees the career fitting with their goals, personal life, and finances (Landrum et al., 2017; Richardson & Watt, 2005).

Deciding on a career does not happen overnight, as it is an integral process involving many people and making many decisions. The career exploration process truly begins before individuals are in high school; agricultural education is one facet of the high school curriculum where students can fully experience different aspects of the industry (Thieman et al., 2016). Factors affecting a student's decision to pursue a career in agricultural education include parental support and their high school agricultural teacher. Once students have made the decision to continue to pursue post-secondary education, several factors influence their decision to continue to pursue education in their desired career (Thieman et al., 2016), which include job security, being intellectually challenged, contributing to society, being in a respectable career, and high earnings (Elfers et al., 2008). When choosing a career in teaching, students tend to place less emphasis on financials and are more concerned with the career providing intellectual challenges and teaching being a rewarding experience (Elfers et al., 2008). Therefore, a teacher preparation program must provide opportunities for pre-service teachers to see that they will be able to meet these desires within a career in agricultural education in order for them to want to accept a teaching position, and experiences should be offered in all three areas of the agricultural education model in order to ensure adequate preparation of a pre-service teacher (Croom, 2010; Myers & Dyer, 2004; Roberts & Dyer, 2004).

There is research on undergraduate and high school students' views and motivations of choosing teaching as a career (Elfers et al., 2008; Thieman et al., 2016). Many of the motivations of choosing to teach as a career remain the same between high school students and undergraduate students, but there are some differences, such as career value, the influence of teachers or university faculty, intrinsic and extrinsic interests, and more (Landrum et al., 2017; Marx et al., 2017; Richardson & Watt, 2005; Thieman et al., 2016). With that said, the purpose of this descriptive study was to determine what motivates pre-service agricultural education teachers attending Iowa State University to pursue a career as an agricultural education teacher.

Literature Review

An agricultural education program consists of three key components: classroom instruction, FFA and leadership development, and supervised agricultural experience and work-based learning (Croom, 2010). Because not all agricultural education students come from a formalized agricultural education experience, and to model the components of an agricultural education program, it is essential to provide opportunities for pre-service agricultural educators to develop skills in each of these areas (Rank & Smalley, 2017). These experiences can influence a teachers' ultimate decision to enter a career in agricultural education and should be scaffolded throughout the entire teacher preparation process; this is reaffirmed by research conducted by Roberts et al. (2009) and Kasperbauer and Roberts (2007), which revealed that a pre-service teacher's intent to teach or to not teach after graduation was not influenced greatly by student teaching internship. This indicates that many have made up their mind on whether teaching will be their career of choice based on the experiences they receive prior to this point, emphasizing the importance of exposure to career-related experiences throughout the entire preparation process to hopefully serve as a motivating factor (Kasperbauer & Roberts; 2007; Roberts et al., 2009). While there has not been a lot of

research done regarding the motivating factors of agricultural education pre-service teachers, the literature does reveal a strong diversity of experiences offered to undergraduate students as part of their training experiences and provides evidence of some of these experiences being more effective preparatory tools than others (Blau & Jansen, 2010; Chumbley et al., 2022; Eck et al., 2021; Ferand et al., 2020; King et al., 2019; Rice & Kitchel, 2015; Sanders et al., 2023; Smalley et al., 2020; Smalley & Hainline, 2024; Vall & Knobloch, 2005; Voges et al., 2020). It is a key responsibility for agricultural education preparation programs to provide experiences that adequately prepare teachers for each area of the agricultural education model (Myers & Dyer, 2004; Roberts & Dyer, 2004), and while each institution will go about this differently, research has shown that teachers who feel confident in what they are doing are more likely to teach, and ultimately, stay motivated to teach (Rada, 2023).

Classroom and Laboratory Instruction Experiences in Undergraduate Training

One of the key components of agricultural education is classroom instruction (Croom, 2010). Similar to how a high school agricultural education program will have a variety of different courses for elective credit, or to assist students with achieving incentives such as certifications, finishing career pathways, or other accolades (Copeland et al., 2020), the structure of a pre-service program is similar in some regards. Pre-service agricultural education teacher programs develop a framework of courses and learning experiences within the classroom to assist them in gaining a balanced understanding of agriculture, food, and natural resources (AFNR), along with pedagogy, with the ultimate goal of each pre-service teacher earning an agricultural education teaching license through their respective state licensing board (Wood et al., 2024).

Given the broad array of topics agricultural educators are expected to teach, this can be daunting or overwhelming for beginning teachers, and it would not be possible for a single agricultural education program to provide the expertise or staffing to prepare their pre-service teachers to be knowledgeable on all content areas expected to teach, ranging from agribusiness systems to power, technical and structural systems, and everything in between (Ortiz, 2023; Rice & Kitchel, 2015, 2016). However, many of the agricultural content-focused courses that are outsourced to other programs within the college or university tend to be interdisciplinary in nature and stress key issues within the agricultural, food, and natural resources industries (DiBenedetto et al., 2016; Lamm et al., 2018), allowing students to apply interconnected concepts and develop strong connections between prior experiences or other coursework. DiBenedetto and colleagues (2016) discovered that students tend to have positive attitudes regarding interdisciplinary courses such as nutrition, world health concerns, food production, and animal disease management, which are topics which should likely be taught to undergraduate students since they fall within the agriculture, food, and natural resources course framework (Ortiz, 2023).

Within STEM or science-based courses, research has found that top motivating factors, aside from grades, include career and intrinsic motivating factors, indicating students wish to learn content to better themselves and their future students (Chumbley et al., 2022). Providing educators with a broad knowledge of all topics they may be expected to teach gives them ideas for key content that they can teach in their future classroom no matter what their schedule looks like, and having conversations with pre-service teachers about what they are learning in their content-based classes can further boost their awareness of how their learning connects with their future career (Chumbley et al., 2022). As a result, this increases their confidence as they prepare to enter the classroom and could in turn be a recruitment or retention factor (Rada, 2023).

Within an agricultural education teacher preparation program, a variety of courses can be taught. The studies conducted by McLean & Camp (2000), along with Easterly et al. (2018) are the most recent studies that evaluate the types of courses taught by post-secondary pre-service agricultural education programs to obtain licensure. McLean & Camp (2000) examined the curriculum offerings in terms of topics of discussion and course names across 10 teacher preparation programs located throughout the United

States. The most common course offerings from their research included methods of teaching agriculture, program planning, and student teaching, while courses such as ethics and FFA advisement were less frequently offered. It is also worth noting that no two teacher preparation programs in their study offered the same combination of courses within their frameworks (McLean & Camp, 2000). Another interesting trend is that some agricultural education programs offered an agricultural mechanics content-based course within their program, while others did not, likely not requiring that content area within their preparation program or relying on another department to offer courses within that content area (McLean & Camp, 2000). When looking at specific topics taught across the courses, presenting micro-lessons, advisory committees, working with learners with special needs, SAE, professionalism, problem solving, and FFA were the most frequented topics taught, while topics such as teacher record keeping, community relations, equipment and facilities, and budgeting were topics that were less frequently addressed in teacher preparation programs, with only half of respondents teaching about these topics at some point within their course offerings (McLean & Camp, 2000). While these topics of discussion and course offerings have most definitely shifted with the immersion of additional technologies and teaching methodologies (King et al., 2019; Swafford, 2018), it is worth noting the types of courses and topics that are discussed in-depth at some point within the preparation process that have been made available to pre-service teachers historically in order for them to feel prepared to enter the classroom.

Easterly et al. (2018) examined agricultural education degree requirements across four key domains: professional knowledge, technical knowledge, general knowledge, and integrative studies. A total of 82 of the 92 undergraduate teacher education programs who qualified for the study participated, and among these programs an average of 125.2 semester credit hours were required of pre-service teachers, with the technical knowledge courses such as agribusiness, natural resources, plant science, power systems, and animal science being common content areas being emphasized most frequently. While these technical courses constituted an average of 42 credits of the 125.2 average semester credit hours, professional knowledge related to pedagogy or field experiences, and general knowledge courses including liberal art requirements, satisfied an average of 37.8 and 36.6 semester credit hours, respectively (Easterly et al., 2018). Notably, the integrative studies was the least common type of credit hour requirement, with institutions reporting an average of only 0.8 semester credit hours being required of their students (Easterly et al., 2018). These experiences are defined as opportunities which connect professional knowledge and technical knowledge in real-world learning environments (Barrick & Garton, 2010; Easterly et al., 2018). With this greater emphasis on technical education as part of the pre-service agricultural education teacher curriculum, educators are able to build their confidence and capacity to be successful teaching content that they will likely be tasked with teaching and have the skills to make meaningful experiences for learners (Easterly et al., 2018; Rada, 2023).

In addition, literature suggests the importance and value of providing pre-service teachers with exposure to innovative or unique teaching methods, along with student-centered approaches, such as project- and inquiry-based learning (Newcomb et al., 2004; Sheehan & Moore, 2019; Voges et al., 2020). While methodologies are constantly emerging and being refined, one study conducted by McCubbins et al. (2016) examined the use of flipped learning and team-based learning in an undergraduate course. Flipped learning involves students learning content outside of the classroom, while applying key concepts in a collaborative environment during scheduled face-to-face, synchronous class times. While this study was conducted prior to the COVID-19 pandemic and the growth of digital and online learning, the study did reveal students having positive perceptions regarding their engagement not just with the content, but in their ability to interact and work with others. Most notably, students participating in the study indicated their ability to apply the knowledge they learned in the course to future opportunities outside of the course (McCubbins et al., 2016).

On the other hand, for traditional face-to-face courses that are lecture-based, research by Ewing & Whittington (2009) revealed a disconnect between students and teachers in terms of cognitive levels

between professor discourse and student cognition. The study recorded a variety of lessons taught across 21 courses taught by 12 professors and found that only 40% of student thoughts shared during these sessions were found to be engaged or related to the lesson, and over 62% of these engaged thoughts were at the bottom-most levels of Bloom's Taxonomy, knowledge and comprehension (Ewing & Whittington, 2009). While there is a time and a place for each of the different modalities of instruction, agricultural education teacher preparation programs develop and teach their courses, it is recommended that they remember their audience and engage them appropriately to ensure maximum retention of information and effective modeling of lecturing skills, so pre-service teachers continue to feel engaged and motivated to become teachers as well. Modeling a variety of teaching methods and effective lecturing skills within their courses can increase their self-efficacy (Sheehan & Moore, 2019) and provide pre-service teachers with ideas for methods they can use in their classroom, while hopefully encouraging them to try them during their student teaching experience (Ball & Knobloch, 2005).

FFA and Leadership Development Experiences in Undergraduate Training

While FFA is an intra-curricular organization for students in formalized secondary agricultural education (National FFA Organization, 2023), opportunities for pre-service teachers to engage with FFA or leadership development exist at the undergraduate level at many institutions. Similar to a high school, there are a variety of leadership organizations students can be a part of, including major organizations, student executive councils, boards, fraternities or sororities, and collegiate FFA (Cletzer et al., 2023; Foreman & Retallick, 2012; Park & Dyer, 2005). Engaging in leadership organizations through being an active member or pursuing a specific leadership role or office can be a strategy for gaining experiences that will assist with the continuous development of leadership skills and building experiences that can be utilized in an FFA advisor role in the future (Everett & Raven, 2018). While engagement within organizations like academic-centric, FFA, or 4-H within high school was found to be a top contributing factor to the likelihood of students engaging in leadership opportunities at a post-secondary level as part of their pre-service teaching experience (Park & Dyer, 2005), those who begin involvement in their respective undergraduate leadership organizations as freshmen tended to be the most involved on an hourly basis throughout their undergraduate experience (Foreman & Retallick, 2012). Engagement in these leadership experiences may assist pre-service teachers in gaining greater confidence in their ability to assist and advise the student-led FFA organization once they enter student teaching and their own classroom, therefore increasing their self-efficacy and confidence, and ideally retaining them within the agricultural education profession (Rada, 2023).

Additionally, engagement with the FFA organization itself may serve as an introduction to the organization for those without prior FFA experience themselves, or as a reminder of the key duties of FFA advisement for those who do have prior FFA experience (Ferand et al., 2020). This may be accomplished through assisting with local, state, or national events or competitions, or even providing training experiences in the over 25 career and leadership development events offered in the organization (National FFA Organization, 2023). These experiences may be facilitated through engagement with an agricultural education society within the teacher preparation program, through reaching out to a pre-service teacher's already established network of agricultural education teachers near campus, or through engagement in early field experiences (Rank & Smalley, 2017).

Supervised Agricultural Experience and Work-Based Learning Experiences in Undergraduate Training

The next component of agricultural education relates to experiential learning, otherwise known as supervised agricultural experience (SAE) or work-based learning (Croom, 2010). These opportunities enable students to gain employment or other career exploration-related experiences that assist them in developing a variety of skills they can apply outside of the classroom. However, the SAE component has been cited as a difficult and oftentimes overlooked area of the model to implement (Wilson & Moore, 2007). As a result of this, there is a clear need to facilitate teacher preparation experiences within the SAE

component so once they enter the field, educators are also motivated and informed on how to engage their students in this critical element of the agricultural education experience.

Similar to the unique intricacies of each individual student's SAE program, each university and teacher preparation program has ways of instructing teacher candidates on SAE programming. With the evolution and prevalence of the new SAE for All framework, a research study conducted by Toombs et al. (2022) explored the impact of a simulated school-based enterprise experience for students in an undergraduate agricultural education course. Since SAE programming is oftentimes the most lacking for teachers, especially early career teachers (Doss & Rayfield, 2019; Retallick, 2010), this school-based enterprise engagement opportunity provided pre-service teachers with an opportunity to increase their self-efficacy as it relates to SAE programming and facilitating meaningful opportunities for learners. A school-based enterprise integrated into a pre-service program can serve as a great model for pre-service teachers to integrate at a secondary agricultural education program for students who have challenges identifying their own SAE project; it served as a way for future teachers to recognize this through hands-on experiences raising broilers using the facilities available at the college. Results indicated positive trends in self-efficacy but revealed some apprehension relating to tracking and assessing progress using the Agricultural Experience Tracker (AET) website (Toombs et al., 2022).

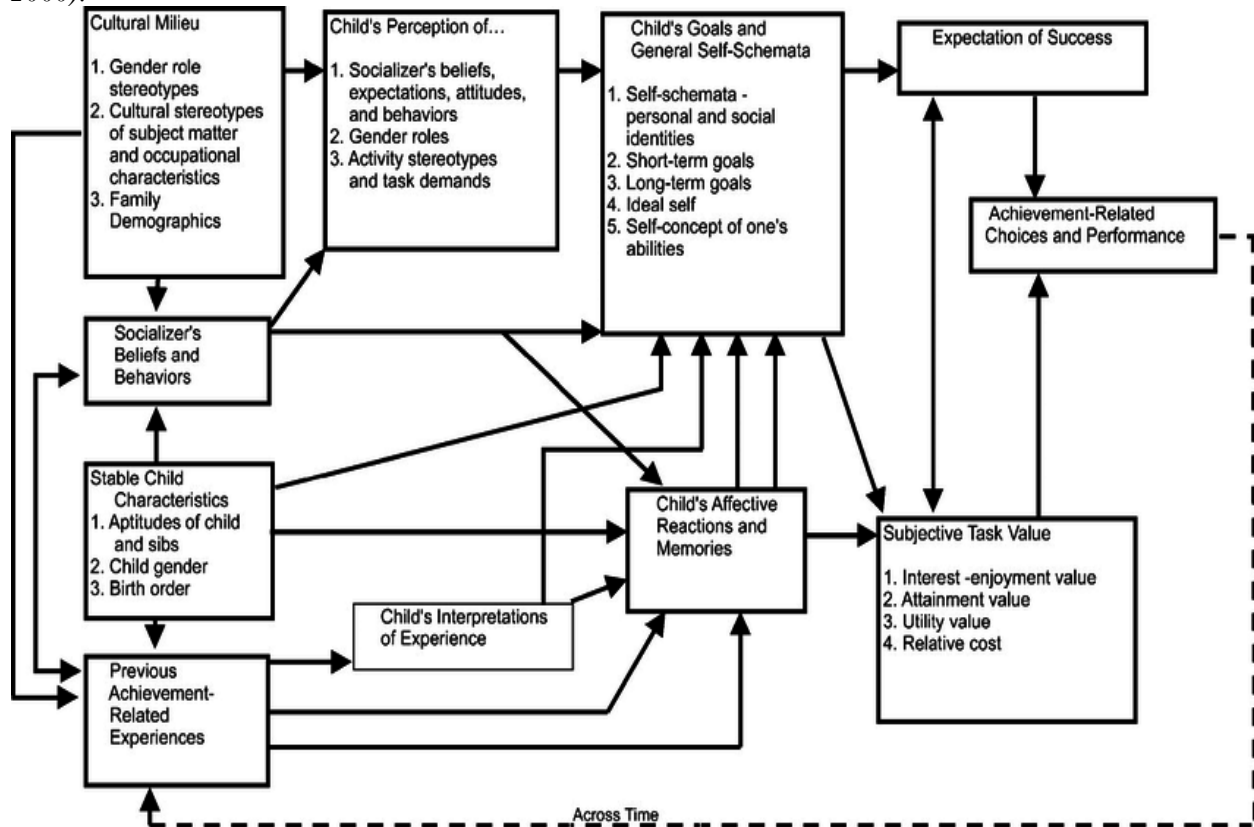
Another way to model work-based learning for teachers is through the facilitation of early field experience opportunities for students (Smalley & Retallick, 2012). Similar to a high school student going to a workplace or completing job shadowing as part of their SAE program, a pre-service teacher is able to obtain a micro-internship with a school to learn more about the inner workings of an agricultural education program (Smalley & Retallick, 2012). This early engagement with secondary students may help pre-service teachers to truly discern if a career in agricultural education is for them. Likewise, interacting with secondary students multiple times throughout the undergraduate teacher preparation experience may also help entice those who are unsure of their career goal into the profession since they are getting to work with students more frequently (Smalley & Retallick, 2012). At the same time, early field experiences will provide them with ideas for their future agricultural education program, including curriculum, FFA experiences, and the facilitation of experiential learning opportunities (Rank & Smalley, 2017). Research has found that these field experience opportunities are an effective way for pre-service teachers to see how these components interconnect (Rank & Smalley, 2017). The amount of hours or required components of an early field experience will vary depending on the institution or the state (Rank & Smalley, 2017), but likely will include opportunities for reflection and engagement with their peers to solidify their learning and share ideas or key discoveries of the early field experience with one another.

Theoretical Framework

The theoretical framework utilized in this study was the expectancy-value model of achievement (Wigfield & Eccles, 1992, 2000). The expectancy-value model of achievement is influenced by positive and negative aspects of different tasks (Eccles & Wigfield, 2002). Both the expectations and values have a direct influence on performance, persistence, and the different task choices (Eccles & Wigfield, 2002). The ability of success displayed by the individual is based on the individual's beliefs and expectations about the upcoming task in both the immediate or long-term future (Eccles & Wigfield, 2002).

Figure 1

Eccles, Wigfield, and colleagues' expectancy-value model of achievement motivation (Wigfield & Eccles, 2000).



As described by the previous research and findings outlined in the literature review, undergraduates pursuing a career in agricultural education are afforded with a variety of experiences during their formalized training that can ultimately influence their career decision, including youth outreach opportunities, engagement in collegiate leadership organizations, formal coursework, field experiences, student teaching, internships and much more. These opportunities have been proven to provide pre-service teachers with additional networking opportunities, and insights into what a career in agricultural education may look like, therefore influencing their perceptions, beliefs, and expectations regarding their career choice. Each engagement provided to them through their teacher preparation program, including classes, early field experiences, interactions with youth, and internships, has the potential to shape or influence their decision. The accumulation of these experiences provides the pre-service teacher with ideas and beliefs that lead them to making the decision to enter the agricultural education classroom or explore other career opportunities that are outside of the classroom.

Wigfield and Eccles' (2000) model focused on the individual's particular beliefs highlighting choice, persistence, and performance on a task or decision. Individuals make decisions based on the belief of how well they can perform the task at hand which in turn affects the decision-making process. Through this study, we sought to investigate if the same can be said for pre-service teachers' decision to enter a career in agricultural education. Based on the individual's belief, they can pursue a career in agricultural education and perform to a high degree within the profession. An individual's perception and productivity depends on their performance in course work, expectations of the career demands, and previous experience in the career field. Individuals who choose teaching as a career utilize their related experiences when

teaching, whether that be through presentations in courses, early field-based experiences, or student teaching. Based on the individual's performance during these tasks and their beliefs (Wigfield & Eccles, 2000), the individual makes their decision about their future career engagement within agricultural education. Since a career in agricultural education consists of a variety of different roles and responsibilities across the three components (Croom, 2010), it is imperative that experiences are offered to undergraduates in each of these areas so that they maintain their motivation to teach agricultural education.

Purpose and Objectives

The purpose of this descriptive quantitative study was to determine what motivates students at Iowa State University to pursue a career as an agricultural education teacher. The objectives that guided this purpose include:

1. Identify motivators for pre-service teachers to pursue a career in agricultural education.
2. Identify perceptions of pre-service teachers to pursue a teaching career in agricultural education.
3. Describe the career expectations of pre-service teachers regarding their future teaching career.

Methods/Procedures

The population for this descriptive study was all pre-service teachers at Iowa State University enrolled in the teacher certification program ($N = 98$) which were identified by utilizing departmental records. The instrument used in this study was adopted by Bakar et al. (2014), which was an instrument that also studied teacher motivations and was based on the theoretical framework (Wigfield & Eccles, 2000). Specifically, the instrument served to gauge the pre-service teachers' motivations, perceptions, and expectations of teaching. These variables which were assessed on this instrument align with the expectancy-value model of achievement (Wigfield & Eccles, 2000) and served as the foundation for the focus of this study. In contrast to the previous instrument used in the Bakar et al. (2014) study, we did not assess the satisfaction of the pre-service teachers. The Bakar et al. (2014) study included students in their final semester of their educator preparation program and allowed those students to reflect on the satisfaction they associated with teaching school-based agricultural education. The pre-service teachers in our study had not yet engaged in their field-based experiences at the time of the study, so satisfaction associated with teaching was not assessed.

This instrument contained demographic questions, 35 questions regarding motivation, 9 statements discussing perceptions about teaching, and 10 questions regarding expectations. According to Matell and Jacoby (1971) "reliability and validity are independent of the number of scale points used for Likert-type items" (p. 666). Bakar et al. (2014) conducted a pilot test of their instrument to ensure consistency (Nunnally & Bernstein, 1994). A five-point Likert-type scale was used. Researchers did not provide any definitions of the scale as the students were self-reporting their motivations, perceptions and expectations associated with teaching.

The tailored design method (Dillman et al., 2009) was followed to develop the electronic questionnaire and data collection procedures. The questionnaire was sent through a personalized email containing the link to the questionnaire through Qualtrics. To ensure maximum response rates were collected, personalized emails including an introduction to the research study, along with an embedded link to the electronic questionnaire was sent (Monroe & Adams, 2012). Reminder emails were sent out three times over the course of three weeks at different times each day to try to capture as much of the target population as possible (Dillman et al., 2014). The usable response rate was 75% ($n = 74$). Early and late responses were compared to address nonresponse error (Linder, Murphy, & Briers, 2001). Respondents who completed the instrument prior to the second reminder email were considered as early responders ($n = 38$), and respondents who completed the instrument after the second reminder were considered to be late

respondents ($n = 36$). The results of the independent samples t-test indicated that there were not statistically significant differences existing between the two groups of respondents. While non-response error was not an issue, we did not use sampling techniques in this study, and we had a failed census. Therefore, the results of this study are not generalizable to the target population and only represent the perceptions of the pre-service teachers who responded to this study.

Results

The purpose of this descriptive quantitative study was to determine what motivates students at Iowa State University to pursue a career as an agricultural education teacher. Of those who chose to participate in this study, 54 were females and 20 were males. Respondents ranged in age from 18 to 40 years. From the respondents listed, 6% were freshmen, 17% were sophomores, 36% were juniors, 32% were seniors and 8% were classified as graduate students. Within the study, 89% of respondents came from a school that had a high school agricultural education program while 11% did not have a high school agricultural program. Respondents indicated their years of involvement in their agricultural program with 1.33% involved for one year, 4% involved for 2 years, 9.33% involved for 3 years and 74.67% involved all 4 years, while 10.67% of respondents were not involved.

Respondents were first asked 29 statements about what motivates them to teach. Respondents indicated one of the most important factors motivating them to teach was that they wanted to help adolescents learn ($M = 4.48$; $SD = 0.62$) followed by they were interested in teaching ($M = 4.43$; $SD = 0.62$) and that they liked teaching ($M = 4.43$; $SD = 0.68$). On the other hand, respondents indicated motivators such as teaching being a useful career to have when traveling ($M = 3.16$; $SD = 1.12$), encouragement from family members to pursue a teaching career ($M = 3.14$; $SD = 1.36$) and fulfilling a long-term desire to be a teacher ($M = 3.11$; $SD = 1.11$) as the lower motivating factors. A complete summary of data can be found in Table

Table 1

Motivations about a Teaching Career

	<i>n</i>	Not very Important		Not important		Moderately Important		Important		Very Important		<i>M</i>	<i>SD</i>
		<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
I want to help adolescents learn.	74	0	0.00	0	0.00	5	6.76	29	39.20	40	54.10	4.48	0.62
I am interested in teaching.	74	0	2.70	1	1.40	3	4.05	25	33.80	43	58.10	4.43	0.62
I like teaching.	74	0	0.00	1	1.40	5	6.76	29	39.20	39	52.70	4.43	0.68
Teaching will allow me to influence the next generation.	74	0	0.00	0	0.00	5	6.76	32	43.20	37	50.00	4.43	0.62
Teaching is a career suited to my abilities.	74	0	0.00	0	0.00	5	6.76	33	44.60	36	48.70	4.42	0.61
Teaching is a fulfilling career.	74	1	1.35	0	0.00	8	10.81	26	35.10	39	52.70	4.38	0.78
Teaching will allow me to have an impact on adolescents.	74	0	0.00	1	1.40	9	12.16	31	41.90	33	44.60	4.30	0.73
Teaching enables me to 'give back' to society.	74	0	0.00	2	2.70	9	12.16	31	41.90	32	43.20	4.26	0.77
I have had positive learning experiences.	73	0	0.00	2	2.70	13	17.81	26	35.60	32	43.80	4.21	0.83
Teaching will offer a steady career path.	74	0	0.00	2	2.70	9	12.16	36	48.70	27	36.50	4.19	0.75
Teaching allows me to provide a service to society.	74	0	0.00	2	2.70	11	14.86	36	48.70	25	33.80	4.14	0.76
Teachers make a worthwhile social contribution.	74	1	1.35	2	2.70	10	13.51	37	50.00	24	32.40	4.09	0.83
I have had good teachers as role models.	74	1	1.35	3	4.10	13	17.57	29	39.20	28	37.80	4.08	0.91
I like working with adolescents.	74	0	0.00	2	2.70	18	24.32	26	35.10	17	37.80	4.08	0.82
I have had an inspirational teacher.	74	2	2.70	1	1.40	16	21.62	27	36.50	28	37.80	4.05	0.94
Teaching will allow me to raise the ambition of underprivileged youth.	74	1	1.35	3	4.10	14	18.92	29	39.2	27	36.5	4.05	0.90

Table 1 *Motivations about a Teaching Career Continued*

I want a job that involves working with adolescents.	74	0	0.00	4	5.40	24	32.43	18	24.30	28	37.80	3.95	0.96
Teaching hours will fit with the responsibilities of having a family.	74	3	4.05	5	6.80	12	16.22	29	39.20	25	33.80	3.92	1.07
Teaching is a secure job.	74	0	0.00	4	5.40	19	25.68	36	48.70	15	20.30	3.84	0.81
School holidays will fit in with family commitments.	74	3	4.05	5	6.80	18	24.32	30	40.50	18	24.30	3.74	1.03
People I've worked with said I should become a teacher.	74	1	1.35	9	12.00	23	31.08	23	31.10	18	24.30	3.65	1.03
I want to work in an adolescent - centered environment.	73	0	0.00	14	19.00	18	24.66	21	28.80	20	27.40	3.64	1.08
A teaching qualification is recognized everywhere.	74	3	4.05	9	12.00	22	29.73	29	39.20	11	14.90	3.49	1.02
Teaching will provide a reliable income.	74	2	2.70	7	9.50	31	41.89	24	32.40	10	13.50	3.45	0.92
Teaching as a career will allow me more family time.	74	4	5.41	9	12.00	24	32.43	25	33.80	12	16.20	3.43	1.06
Teaching will allow me to work against the socially disadvantaged.	73	8	10.96	9	12.00	24	32.88	24	32.90	8	11.00	3.21	1.12
Teaching will be a useful job for me to have when traveling.	73	4	5.48	20	27.00	16	21.92	26	35.60	7	9.59	3.16	1.12
My family thinks I should become a teacher.	74	12	16.22	12	16.00	19	25.68	16	21.60	15	20.30	3.14	1.36
I have always wanted to be a teacher.	74	7	9.46	12	16	30	40.54	16	21.60	9	12.20	3.11	1.11

Note. Item mean is shown in boldface. Scale: 1 = *Not very important*, 2 = *Not important*, 3 = *Moderately important*, 4 = *Important*, 5 = *Very important*.

Table 2 depicts respondents' perceptions about a career in teaching. Respondents were asked to utilize the same scale to evaluate their beliefs for nine statements regarding their perceptions. The statements which ranked highest were dealing with skills ($M = 4.05$; $SD = 0.92$), work ethic ($M = 4.03$; $SD = 0.95$), and knowledge ($M = 3.95$; $SD = 0.77$). The highest-ranking statement was that respondents think teaching is a highly skilled occupation followed by teaching is hard work. However, respondents indicated lower ratings regarding teachers' salaries ($M = 3.08$; $SD = 0.90$) and that the occupation has a high social status ($M = 3.08$; $SD = 1.10$).

Table 2

Perceptions about a Teaching Career

	Not very Important			Not important		Moderately Important		Important		Very Important		M	SD
	n	f	%	f	%	f	%	f	%	f	%		
I think teaching is a highly skilled occupation.	74	1	1.35	3	4.05	14	18.98	29	39.20	27	36.49	4.05	0.92
I think teaching is hard work.	74	1	1.35	4	5.41	14	18.92	28	37.80	27	36.49	4.03	0.95
I think teachers have high morale.	74	0	0.00	3	4.05	15	20.27	39	52.70	17	22.97	3.95	0.77
I think teaching requires high levels of expert knowledge.	74	0	0.00	6	8.11	22	29.73	32	43.20	14	18.92	3.73	0.86
I think teachers need high levels of technical knowledge.	74	1	1.35	4	5.41	25	33.78	29	39.20	15	20.27	3.72	0.89
I think teachers need highly specialized knowledge.	74	0	0.00	7	9.46	28	37.84	26	35.10	13	17.57	3.61	0.88
I think teachers feel valued by society.	74	2	2.70	13	17.57	31	41.89	17	23.00	11	14.86	3.30	1.02
I think teachers earn a good salary.	74	1	1.35	18	24.32	35	47.30	14	18.90	6	8.11	3.08	0.90
I think teachers feel their occupation has high social status.	74	5	6.76	16	21.62	31	41.89	12	16.20	10	13.51	3.08	1.10

Note. Item mean is shown in boldface. Scale: 1 = Not very important, 2 = Not important, 3 = Moderately important, 4 = Important, 5 = Very important.

Additionally, respondents were asked to respond to 11 statements regarding their expectation about pursuing a teaching career. Of the statements, respondents indicated feeling delight by a pupil's achievement was very important ($M = 4.30$; $SD = 0.72$), followed by believing they would be doing a socially worthwhile job ($M = 4.20$; $SD = 0.77$), and that teaching will be the right career for them ($M = 4.13$; $SD = 0.81$). On the other hand, respondents reported lower expectations of a career in teaching being a well-respected one ($M = 3.53$; $SD = 0.97$) and that expectation of it being a high-status career ($M = 3.04$; $SD = 1.05$). Full data are presented in Table 3.

Table 3

Expectations about a Teaching Career

	Not Very Important			Not Important		Moderately Important		Important		Very Important		<i>M</i>	<i>SD</i>
	<i>n</i>	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%		
I feel delighted by pupils' achievements.	70	0	0.00	1	1.40	8	11.43	30	42.90	31	44.29	4.30	0.72
I believe that I will be doing a socially worthwhile job.	70	0	0.00	2	2.90	9	12.86	32	45.70	27	38.57	4.20	0.77
I believe that the teaching profession is right for me.	70	1	1.43	0	0.00	13	18.57	31	44.30	25	35.71	4.13	0.81
I believe that I will be happy with the amount of holidays.	70	0	0.00	3	4.30	15	21.43	26	37.10	26	37.14	4.07	0.87
I expect I will stay longer in the teaching profession.	70	1	1.43	3	4.30	19	27.14	26	37.10	21	30.00	3.90	0.93
I expect to work for more than 6 years as a basic teacher before promotion.	69	1	1.45	3	4.40	28	40.58	23	33.30	14	20.29	3.67	0.88
I expect teaching to provide me with a better career path.	70	0	0.00	7	10.00	25	35.71	25	35.70	13	18.57	3.63	0.88
I expect teaching will enable me to contribute more effectively to the economic well-being of my family.	70	1	1.43	7	10.00	22	31.43	30	42.90	10	14.29	3.59	0.89
I believe teaching is a well-respected career.	70	2	2.86	8	11.00	21	30.00	29	41.40	10	14.29	3.53	0.97
I believe teaching is perceived as a high-status occupation.	69	4	5.80	18	26.00	24	34.78	17	24.60	6	8.70	3.04	1.05

Note. Item mean is shown in boldface. Scale: 1 = *Not very important*, 2 = *Not important*, 3 = *Moderately important*, 4 = *Important*, 5 = *Very important*.

Conclusions and Recommendations

The purpose of this descriptive quantitative study was to determine what motivates students at Iowa State University to pursue a career as an agricultural education teacher. The limited sample size proved to be a limitation to the study, so caution should be utilized as results from this study should not be generalized, and further research is needed in this line of inquiry. The research was guided by three main research objectives. The findings from each of the three research objectives support the expectancy-value model of achievement (Wigfield & Eccles, 2000), and guide the conclusions and recommendations that follow.

Objective 1 sought to identify motivators for pre-service teachers to pursue a career in agricultural education. Overall, students were motivated to become an agricultural teacher because they wanted to help people learn. This finding is consistent with the findings of Bakar et al. (2014) which reported that intrinsic and altruistic motivational factors contribute to the students' choices to teach. Respondents expressed they enjoyed teaching and were allowed the ability to impact a student's learning which made teaching a fulfilling career option for respondents to consider pursuing. As stated by the expectancy-value model of achievement (Wigfield & Eccles, 2000, 2002), an individual's positive and negative experiences will greatly influence their choices. As indicated in Table 1, respondents reported a positive attitude toward both teaching and learning and recognize that they have had good teachers serve as role models within their lives. These are just a few of the positive experiences that have the potential to influence teachers' ultimate decision to enter the classroom. Alternatively, respondents did indicate that they do not expect teaching to always be perceived as a high-status occupation, indicating that they are more concerned about providing strong teaching and learning for students rather than about the perceptions others have on the career choice.

Objective 2 aimed to identify the perceptions of pre-service teachers in pursuing an agricultural education teaching career. Respondents deemed teaching as a career with a high skill set and they recognized that a teaching career teaching agriculture was going to be hard work. This idea is reflected in practice as well, as teacher burnout and retention continue to be a significant challenge for school-based agricultural education (Smith & Smalley, 2018; Solomonson et al., 2018). As indicated by the expectancy-value model of achievement motivation (Wigfield & Eccles, 2000), these perceptions may potentially be shaped by their perceptions of their former agricultural educators, or other agricultural educators they know. Despite recognizing these factors, respondents still indicated strong interest in teaching agriculture and feel a sense of motivation to enter the classroom. Once again, this motivation is driven by the opportunity to positively influence students. As these educators transition into the classroom and the different stages of the agriculture teacher's lifecycle (National Association of Agricultural Educators, 2015), providing them with professional development opportunities that remind them of their purpose as an educator and the supports to navigate any barriers they may face will be essential to retaining them within the profession (Smith & Smalley, 2018).

The goal of objective 3 was to describe the career expectations of pre-service teachers regarding their future teaching career. Respondents indicated they are choosing teaching as a career because they want others to succeed and that their choice to enter the profession can help them contribute positively to society. This finding is supported by Wigfield and Eccles (2000) expectancy-value model because when pre-service teachers set the goal to help their future students succeed, they will have the expectation of success which will result in achievement-related choices. According to Johnson and Birkeland (2003) educators find their career as a teacher rewarding even though the classroom is very unpredictable. When the teacher can connect and build positive relationships with their students, the success of both the teacher and the students increases (Johnson & Birkeland, 2003). This too is supported by the expectancy-value model of achievement motivation (Wigfield & Eccles, 2000); the achievement-related experiences within teaching, when positive, can contribute to the overall success and future choices made within the profession.

Recruiting teachers to pursue a career in agricultural education might be more effective if we understand what motivates pre-service teachers to pursue a career in agricultural education in the first place. One key motivator may include teaching in a similar school that parallel experiences they had when they grew up (Marx et al., 2017; Ronfeldt et al., 2013). Providing pre-service teachers with opportunities to teach or assist with local FFA chapters or boys and girls clubs and 4-H clubs may help in keeping pre-service teachers motivated to pursue a career in agricultural education. Another way institutions can increase student motivation to continue to choose agricultural education as a career would be through facilitating additional early field-based experiences throughout the undergraduate experience, and especially toward the beginning of it. During these experiences, pre-service teachers are making interpretations of their experiences, and those experiences are remembered as memories having an effect on their subjective task value and achievement-related choices (Wigfield & Eccles, 2000).

Recommendations

The research that was conducted has provided ideas for several professional- and research-based recommendations to explore in the future. Providing professional development events throughout the pre-service preparation experience can aid in keeping students motivated to continue pursuing a career in teaching agriculture serves as the first professional recommendation based on the findings of the study, since many indicated the profession requires a high amount of technical knowledge and skill. According to Blau and Snell (2013), professional development events can be outsourced from other sectors besides from the university to increase student engagement and skill acquisition. With students' oftentimes busy schedules, online professional development events may play a role in assisting with the need for professional development (Dede et al., 2009). Online professional development events allow every respondent the opportunity to have a voice and integrate technology into this technology savvy world (Dede et al., 2009). These positive experiences can also increase the aptitudes and achievements related to the teaching profession and are supported by the theoretical framework (Wigfield & Eccles, 2000), and as supported by the findings of this study, may help them build on their early interest in teaching and sustain their motivation throughout their preparation experiences and beyond. These professional development experiences help address the perceptions that were found in the study regarding teaching agriculture as a highly specialized profession requiring a great deal of technical knowledge. Most notably, these professional development opportunities can be designed in a way that provides pre-service teachers with integrative learning experiences that connect technical knowledge with professional knowledge, as these have been found to be the most limited types of courses that are part of an agricultural education teacher preparation program (Easterly et al., 2018). Professional development can be embedded into agricultural education coursework offered within a department. For example, perhaps a Curriculum for Agricultural Science Education (CASE) training could be integrated into an undergraduate agricultural mechanics course (Smalley & Hainline, 2024), or online training modules related to the Agricultural Experience Tracker could be embedded into an experiential learning course. Alternatively, opportunities for pre-service teachers to attend professional development as part of a state agricultural education teachers' association or other professional organizations throughout the year, or when classes are not in session throughout the summer months, can allow for the acquisition of knowledge and help pre-service teachers establish a stronger network within the profession.

Alternatively, teacher preparation programs' partnerships with local state agricultural education teacher professional organizations, or the National Association of Agricultural Educators to facilitate experiences targeted toward pre-service teachers, such as the Future Agriscience Teacher (FAST) symposium or opportunities for internships related to agricultural education may be additional professional development experiences which assist pre-service teachers in choosing to pursue a career in agricultural education. These positive professional development experiences can occur at any point throughout the pre-service training, and help contribute to the overall interest-enjoyment value of the expectancy-value model of achievement motivation (Wigfield & Eccles, 2000) and, when coupled with experiences such as early field experiences and a positive student teaching experience (Doss & Rayfield, 2019; Kasperbauer &

Roberts, 2007; Retallick, 2010; Roberts et al., 2009; Smalley & Retallick, 2012), engagement with meaningful preparatory curriculum (Chumbley et al., 2022), and leadership development experiences (Ferand et al., 2020; Park & Dyer, 2005) can contribute to the pre-service teacher's choice to enter the classroom.

Future research should be conducted with a larger population to see how motivations differ among pre-service teachers. Additional research should be conducted to follow pre-service agricultural education teachers throughout their pre-service program and as they begin their preparation program or teaching career to see how motivations, perceptions, and expectations change based on the stage of where they are at in their preparation program. Moreover, a longitudinal study would also provide a means to assess teacher satisfaction once they are in the classroom. The assessment of teacher satisfaction would allow for further comparison with the Bakar et al. (2014) study. Understanding how motivations, expectations, and perceptions change throughout a teaching career could potentially aid in developing programming for teacher retention. This could ultimately yield in the development of professional development which could help agricultural education teachers navigate challenges and celebrate successes throughout their teaching careers.

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