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Examining the Reasons Agricultural Education Teaching Graduates Choose to Enter, Leave, or Stay in the Teaching Profession

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Abstract

With half of all school-based agricultural education teachers leaving the profession within their first six years, the need is greater than ever for post-secondary graduates to enter and stay in the profession. This study explored potential influencers on graduates' career decisions, focusing on identifying potential reasons they chose to not enter, leave, or stay in the profession. The target population was Montana State University Agricultural Education Teaching graduates who completed their degree program between May 2005 and May 2016 (N = 58). Respondents' post-graduation career paths fell into five pre-determined groups, which were then narrowed into three broader groups: never entered, leavers, and currently teaching. Similar to previous research, competitive salaries outside education, being recruited for another position, and an inadequate work-life balance emerged as the largest factors in respondents' decisions to not enter the profession. Somewhat contradictory, adequate work-life balance; stable contracts with a competitive salary; and positive student, school, and community connections emerged as top reasons to remain in the profession. Since the most common reasons for not entering/leaving the profession revolved around careers outside of education, primarily the salaries of those positions, it is recommended that stakeholders explore alternative methods of providing supplemental funding for these salaried positions.

Keywords*:* career decisions; leavers; retention

Introduction

There is a well-documented need for agricultural education teachers across the United States (Foster, Lawver, & Smith, 2017; Kantrovich, 2010; Myers, Dyer, & Washburn, 2010). Public school districts struggle to fill positions, and university agricultural education teacher-preparation programs deal with a perceived lack of interest in the profession. Agricultural education stakeholders need current, accurate estimates of the supply and demand for agricultural education teachers in order to inform meaningful policy decisions at all levels (Kantrovich, 2010). Teacher educators, agricultural education organizations, and state agricultural education staff also need these data for recruitment efforts (Foster et al., 2017).

Literature Review

Whether school-based agricultural education (SBAE) teachers are relevant, applicable, or important in the current school system is an issue of ongoing debate. In a world where science and business have expanded research into food, fiber, and natural resources, SBAE teachers are needed not only to educate students "about" agriculture but also "in" agriculture (Mercier, 2015; Vaughn, 1999). SBAE programs reach beyond secondary classrooms and laboratory environments and enter the surrounding

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communities as SBAE students eventually transition into active community members (Mercier, 2015; Vaughn, 1999). Having a community of informed consumers and producers is essential in creating an agriculturally literate society (Mercier, 2015). In addition to becoming more agriculturally literate, there are positive relationships between student involvement in SBAE programs and state standardized test scores (Chiasson & Burnett, 2001), school and community engagement (Balschwield & Talbert, 2001), and the likelihood of attending a two- or four-year college (Balschweid & Talbert, 2001).

Nationwide, 7,775 agricultural education programs employ 11,558 teachers (Foster et al., 2017). In 2016, 66 full-time vacancies existed, and 245 alternatively certified teachers were hired to fill positions (Foster et al., 2017). Additionally, 175 new positions and 149 new programs were created (Foster et al., 2017). With half of all SBAE teachers leaving the profession within their first six years (Clark, Kelsey, & Brown, 2014), the need is greater than ever for agricultural education majors to enter the profession and build a career within it.

Understanding why agricultural education teachers leave the profession is necessary to combat the national shortage. Current and former teachers are generally satisfied with their teaching positions. However, agricultural education teachers are not opposed to leaving the profession, often citing retirements and family commitments (Lemons, Brashear, Burris, Meyers & Price, 2015; Tippens, Ricketts, Morgan, Navarro, & Flanders, 2013). Additional research has shown that agricultural education teachers often leave the profession due to job burnout (Tippens et al., 2013). Similarly, Lemons et al. (2015) recognized four emergent themes related to former secondary agriculture teachers' reasons for leaving the profession: (1) alternative opportunities, (2) unattainable exterior expectations, (3) occupational burdens, and (4) interpersonal relationships.

Foster et al. (2017) provided a comprehensive annual report on the supply and demand of agricultural education teachers and found that 74% of program completers across the United States intended to enter SBAE programs. This support's Kantrovich's (2010) findings that approximately 30% of program completers chose not to teach. To address the shortage and further explore career decision-making, the agricultural education profession has begun examining pre-service teachers' perceptions of teaching as a career.

By identifying pre-service teachers' concerns about becoming career educators, teacher educators can better address these concerns through teacher preparation programs (Paulsen, Anderson, & Tweeten, 2015; Roberts, Greiman, Murphy, Ricketts, Harlin, & Briers, 2009; Roberts, Harlin & Briers, 2009). Pre-service teachers have repeatedly described working conditions, self-efficacy, classroom management, and lack of support as career concerns (Fritz & Miller, 2003; Knobloch & Whittington, 2002; Paulsen et al., 2015). The student teaching experience is portrayed as a "critical period" in the development of teacher candidates (Edgar, Roberts & Murphy, 2011) and may be a challenging time for pre-service teachers (Knobloch & Whittington, 2002). Upon entering and completing student teaching, teaching intentions display either very little or no change (Roberts, Greiman, et al., 2009; Roberts, Harlin, et al., 2009). Addressing the concerns of pre-service teachers before they begin student teaching is essential in guiding students into careers as agricultural educators, and addressing the needs of beginning teachers entering the profession is vital to retaining them. Teachers' needs may also change based on their career state and experiences (Kahler, 1974). Identifying and addressing the needs of teachers in different career phases may support career longevity (Sorensen, Lambert, & McKim, 2014; Touchstone, 2015).

Specifically, induction-level agriculture teachers have indicated many areas where they need assistance, including in classroom management (Garton & Chung, 1996; Mundt & Connors, 1999; Myers et al., 2005; Touchstone, 2015), planning FFA events and activities (Garton & Chung, 1996; Myers et al., 2005; Touchstone, 2015), utilizing an advisory committee (Myers et al., 2010; Sorensen et al., 2014;

Touchstone, 2015), incorporating other content areas (Haynes & Stripling, 2014), and recruitment (Myers et al., 2005; Touchstone, 2015).

In contrast to the needs of the induction-phase teacher, whose needs are largely related to classroom management skills and competencies (Sorensen et al., 2014), teachers with five or more years of experience have several noticeably different perceived needs. In particular, non-induction-phase teachers perceived work/life balance, organizational skills, time management, and stress management as their most important perceived needs (Sorensen et al., 2014). Understanding teacher's needs is paramount to examining their career decisions. Using established theoretical frameworks that cater to the career decisions of teachers allows for more in-depth examinations of these reasons.

Theoretical Framework

Bandura's (1977) Social Learning Theory (SLT) was used for this study as a means of explaining factors associated with an individual's decisions to not enter, stay in, or leave the teaching profession. Bandura's SLT posits that learning and decision-making are largely cognitive processes that often take place in a social setting or context, and primarily occur through either an individual's observation or by direct instruction. Additionally, learning and decision-making can occur through the observation of potential rewards or punishments because of actions performed by the individual. Bandura contends that human behavior is constant interaction among cognitive, behavioral, and environmental influencers. These three elements are reciprocal in nature, in that each one causes the others as opposed to depending on the others.

Building on Bandura's (1977) SLT, Krumboltz (1979), and Mitchell and Krumboltz (1996) related SLT to how an individual makes career decisions. Specifically, Mitchell and Krumboltz (1996) adapted the SLT model to identify how genetic factors, learning experiences, performance skills, and environmental conditions interact when individuals make certain career decisions.

Chapman (1983) applied the SLT of career decision-making to the teaching profession. This model seeks to describe and explain retention and attrition among beginning teachers, contending that teacher retention is a combination of: (1) personal characteristics (gender, age), (2) educational preparation (adequacy of teacher preparation program, individuals' performance in program, etc.), (3) initial commitment to teaching, (4) quality of the first employment experience, (5) professional and social integration into the teaching profession (the individual's values, skills, and abilities), and (6) accomplishments and external influencers (employment climate, alternative employment opportunities, etc.).

Rots, Aelterman, and Devos (2010) built upon Chapman's model and the SLT of career decision-making by examining teacher education graduates and their decisions to take teaching positions upon graduation. This new model (Figure 1) combines the previous body of work into a single model that could be used to test the relationship between teacher education variables and an individual's intent to enter the teaching profession. Rots et al. (2010) found relationships exist between these teacher education variables and graduates' intent to enter the teaching profession.

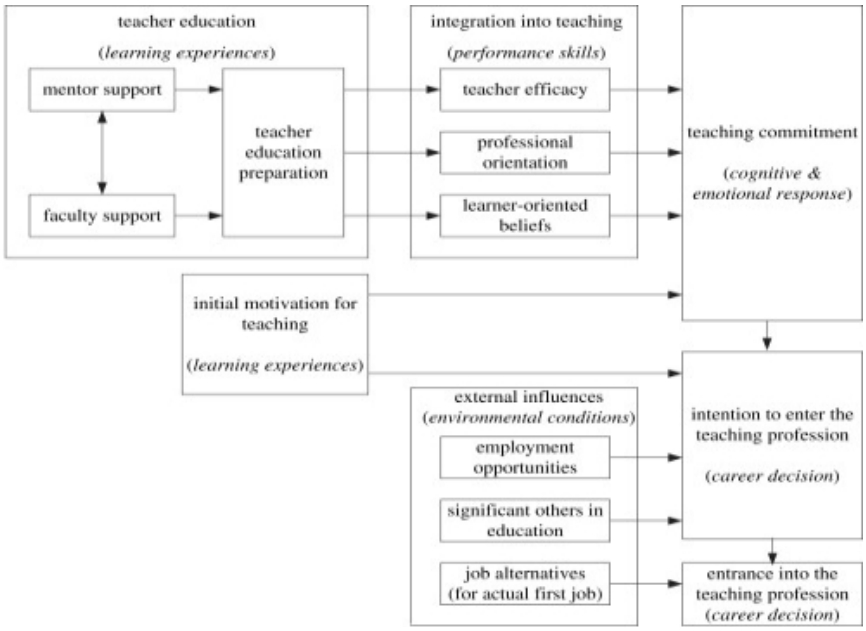

Figure 1. Rots et al.'s (2010) model of teacher education and the choice to enter the profession.

Purpose and Objectives

Due to limited literature and research exploring agricultural education teaching graduates' career decisions in the northwestern United States, this census study served as a starting point for evaluating the reasons graduates chose to enter, leave or stay in the teaching profession. The following research objectives guided this study:

1. Identify potential reasons behind Montana agricultural education teaching graduates' decisions not to enter the profession.
2. Identify potential reasons behind Montana agricultural education teaching graduates' decisions to leave the profession.
3. Identify potential reasons behind Montana agricultural education teaching graduates' decisions to stay in the profession.

Methodology

The target population for this study was Montana State University (MSU) Agricultural Education-Broadfield Teaching graduates who completed their degree program between May 2005 and May 2016 (N = 58). This population was selected because MSU is the only agricultural education teaching preparation program in Montana, and thus provided a state-wide perspective. Respondents were divided into five groups based on career decisions and circumstances: (1) never entered SBAE teaching profession; (2) entered SBAE teaching profession upon graduation, currently teaching; (3) entered SBAE teaching profession upon graduation, left at a later date, did not re-enter; (4) did not enter SBAE teaching profession upon graduation, entered at a later date, currently teaching; and (5) did not enter SBAE teaching profession upon graduation, entered at a later date, then left.

The initial list of graduates and contact information was sourced from MSU Agricultural Education faculty and the MSU Office of Planning. A master list of graduate names and contact information was then created and finalized. The list followed guidelines in accordance with Dillman, Smyth, and Christian 2008).

Each member of the population on the master list was assigned a researcher-generated personal code. This code allowed respondents to access the survey instrument to verify that it was free of responses from individuals outside of the research sample. In an attempt to increase response rates (Dillman et al., 2008), participants were given a $5.00 Amazon gift card.

Planning for non-response error within the population is an important part of any voluntary survey. Lindner, Murphy, and Briers (2001) portrayed nonresponse error as individuals in the sample or population failing to provide usable responses for the study. Ary, Jacobs, and Razavieh (1996) suggested response rates under 75% should lead the researcher to determine and describe how respondents and non-respondents might differ from one another. This study did not address nonresponse error because data collection efforts resulted in a response rate of 79.3% and results were explicitly stated as not to be generalized beyond parameters.

Instrumentation

This study utilized a researcher-modified survey. We examined two previously established surveys exploring educators' career decisions (Ohio Department of Education, 2013; Walker, 2004) and modified them for applicability and specificity to the field of agricultural education. To establish face and content validity, the instrument was sent to a panel of experts whose research interests involved agriculture teacher preparation and retention (Dillman et al., 2008). The instrument was also sent to current agricultural educators for pilot testing. Multiple rounds of revisions followed panel review and pilot testing, after which the survey was submitted to the MSU Human Ecology Learning and Problem Solving (HELPS) Lab, which helped further refine and check the survey instrument for both content validity and reliability.

The instrument included a general demographics section, multiple choice questions, open-ended questions, and a Likert-type item section adapted from the Ohio Department of Education (2013). Each item in the Likert-type section asked respondents to identify whether the item was a major, moderate, minor, or non-factor in their career decisions. These items were grouped into three separate constructs to aid in the analysis of the items and allow more in-depth discussion of specific items and constructs: (1) career factors, (2) teacher training/professional development, and (3) perceptions of a school environment.

We used the Tailored Design Method as the backbone of the data collection procedures (Dillman et al., 2008). We initiated contact at six different points. Dillman et al. (2008) suggested that follow-up requests be sent at least twice, either every week or every other week. A follow-up invitation was sent out after weeks one, two, three, five, and six. Responses were analyzed one week after final contact was initiated. Descriptive statistics were used to analyze respondents' demographic and programmatic characteristics, as well as responses to the instrument's multiple choice and Likert-type responses associated with objectives one through three. Objectives one through three also explored open-ended responses, which were analyzed using Creswell's Data Analysis Spiral (2013) to identify general themes and categories for reporting.

Findings

The target population was MSU Agricultural Education-Broadfield Teaching graduates who had completed their degree program between May 2005 and May 2016. Of the 58 graduates that made up the study population, 46 agreed to complete the survey instrument, yielding a 79.3% response rate. Table 1 includes complete descriptive data for all groups.

Respondents' post-graduation career paths fell into the five pre-determined groups, which were then narrowed into three broader groups to facilitate analysis: *never entered*, *leavers*, and *currently teaching*. The *never entered* group included those who had never entered the agricultural education teaching

profession (*n* = 16, 34.8%). The *leavers* group (*n* = 8, 17.4%) comprised respondents who had either (1) entered the SBAE teaching profession upon graduation, left at a later date, and not re-entered (*n* = 7, 15.2%), or (2) not entered the SBAE teaching profession upon graduation, entered at a later date, and then left (*n* = 1, 2.2%). Lastly, the *currently teaching* group (*n* = 22, 47.9%) was a combination of respondents who had either (1) entered the SBAE teaching profession upon graduation and were currently teaching (*n* = 21, 45.7%), and (2) not entered the SBAE teaching profession upon graduation, entered at a later date, and were currently teaching (*n* = 1, 2.2%).

Table 1

*Agricultural Education Graduates' Descriptive Information (*n = *46)*

	Never Entered (*n* = 16)		Left Teaching (*n* = 8)		Currently Teaching (*n* = 22)		Combined Groups (*n* = 46)	
	f	%	*f*	%	*f*	%	*f*	%
Sex								
Male	7	43.8	4	50.0	15	68.2	26	56.5
Female	9	56.3	4	50.0	7	31.8	20	43.5
Age								
20-25	8	50.0	-	-	4	18.2	12	26.1
26-30	4	25.0	2	25.0	13	59.1	19	41.3
31-35	3	18.8	6	75.0	4	18.2	13	28.2
36+	1	6.3	-	-	1	4.5	2	4.3
Ethnicity								
White or Caucasian	16	100	8	100	22	100	46	100
Years Teaching								
0	12	75.0	-	-	4	18.2	16	34.8
1-5	4	25.0	6	75.0	10	45.5	20	43.4
6+	-	-	2	25.0	8	36.4	10	21.7
Highest Degree Awarded								
Bachelors	15	93.8	8	100	19	86.4	42	91.3
Masters	1	6.3	-	-	3	13.6	4	8.7
Income Level								
Less than $10,000	1	6.3	-	-	-	-	1	2.2
$10,000 - $19,999	3	18.8	-	-	1	4.5	4	8.7
$20,000 - $29,999	2	12.5	3	37.5	4	18.2	9	19.6
$30,000 - $39,999	4	25.0	3	37.5	8	36.4	15	32.6
$40,000 - $49,999	2	12.5	1	12.5	5	22.7	8	17.4
$50,000 - $59,999	3	18.8	-	-	3	13.6	6	13.0
$60,000 and Over	1	6.3	1	12.5	1	4.5	3	6.5
Final GPA								
2.00-2.50	2	12.5	-	-	-	-	2	4.3
2.51-3.00	4	25.0	5	62.5	5	22.7	14	30.4
3.01-3.50	4	25.0	3	37.5	13	59.1	20	43.5
Over 3.50	5	31.3	-	-	4	18.2	9	19.6

As a group (*n* = 46), respondents self-identified sex, age, ethnicity, years of formal teaching experience, degrees awarded, personal income level, and final GPA upon graduation from MSU. The average respondent was a 26–30 year-old (*n* = 19, 41.3%) white (*n* = 46, 100.0%) male (*n* = 26, 56.5%) with one to five years of formal teaching experience (*n* = 20, 43.4%). The average respondent held a

bachelors as their highest degree awarded (n = 42, 91.3%), had graduated with a GPA of 3.01–3.50 (n = 20, 43.5%), and reported a personal income of $30,000–$39,999 (n = 15, 32.6%).

The average respondent in the *never entered* group (n = 16) was 20–25 years old (n = 8, 50.0%), white (n = 16, 100.0%), and female (n = 9, 56.3%), with zero years of teaching experience (n = 12, 75.0%). Quite a bit of variation was present when attempting to explore the typical respondent in the *never entered* group. Highest response frequencies were for those who held a bachelor's degree (n = 15, 93.8%), graduated with over a 3.50 GPA (n = 5, 31.3%), and reported a personal income of $30,000–$39,999 (n = 4, 25.0%).

The average respondent in the *leavers* group (n = 8) was 31–35 years old (n = 6, 75.0%) and white (n = 8, 100.0%), with 1–5 years of teaching experience (n = 6, 75.0%). *Leavers* were evenly distributed male (n = 4, 50.0%) and female (n = 4, 50.0%). The highest degree held by any member of this group was a bachelors (n = 8, 100.0%). The most common final GPA of this group was 2.51–3.00 (n = 5, 62.5%). The average *leavers*' personal income range was evenly split among $20,000–$29,999 (n = 3, 37.5%) and $30,000–$39,999 (n = 3, 37.5%).

The average respondent in the *currently teaching* group (n = 22) was 26–30 years old (n = 13, 59.1%), white (n = 22, 100.0%), and male (n = 15, 68.2%), with 1–5 years of teaching experience (n = 10, 45.5%). The most frequently awarded degree was a bachelors (n = 19, 86.4%), and the most common final GPA was 3.01–3.50 (n = 13, 59.1%). Similar to the aforementioned groups, respondents reported personal income of $30,000–$39,999 (n = 8, 36.4%).

Decision Not to Enter the Profession

Objective one sought to identify potential reasons Montana agricultural education teaching graduates' chose to not enter the profession. Upon graduation from MSU, only five members of the *never entered* group (n = 16) reported applying for agricultural education teaching positions. Members of this group responded to 25 Likert-type items, reporting whether each of the items was a major (= 3), moderate (= 2), minor (= 1), or non-factor (= 0) in their decision to not enter the teaching profession. These 25 Likert-type items were then divided into three separate constructs to allow for comparison of similar items: (1) *career factors*, (2) *teacher training/professional development* and (3) *perceptions of a school environment*. In addition to the Likert-type items, respondents had the opportunity to provide short answer responses to elaborate where applicable.

Within the *career factors* construct, respondents in the *never entered* group indicated that competitive salary outside the field of education (M = 2.06) was the most influential factor in deciding to not enter the teaching profession. Being recruited for another position (M = 1.94) and inadequate work-life balance (M = 1.06) were additionally reported as influential. Respondents indicated *teacher training/professional development* construct items were not greatly influential. Specifically, inadequate classroom management training (M = 1.00) and inadequate training to support position (M = 0.88) were non-factors or minor factors. Likewise, a lack of advancement in the teaching profession (M = 0.50) was not reported to be a substantial reason. Respondents indicated that *perceptions of school environment* construct items were not influential in deciding to not enter the teaching profession. Ranking highest by mean was inadequate mentoring (M = 0.94), inadequate administrative leadership (M = 0.44), and administrator actions not supporting teaching staff (M = 0.88). Response items, sorted by mean scores, can be seen in Table 2.

Table 2

Never Entered Teaching Group Reasons by Construct

	N/A		Minor		Moderate		Major			
	f	%	*f*	%	*f*	%	*f*	%	Mean[a]	SD
Career Factor Construct										
Competitive salary elsewhere OUTSIDE the field of education	2	12.5	2	12.5	5	31.3	7	43.8	2.06	1.06
Recruited for another position	3	18.8	2	12.5	4	25.0	7	43.8	1.94	1.18
Inadequate work-life balance	6	37.5	6	37.5	1	6.3	3	18.8	1.06	1.12
Relocation	7	43.8	7	43.8	-	-	2	12.5	0.81	0.98
Career change	8	50.0	5	31.3	1	6.3	2	12.5	0.81	1.05
Competitive salary elsewhere WITHIN the field of education	7	43.8	6	37.5	3	18.8	-	-	0.75	0.77
Raising a family	0	62.5	2	12.5	2	12.5	2	12.5	0.75	1.13
Dissatisfied with reassignment or changes in the position	0	62.5	5	31.3	1	6.3	-	-	0.44	0.63
Reduction in force	1	68.8	4	25.0	1	6.3	-	-	0.38	0.62
Career break	1	68.8	5	31.3	-	-	-	-	0.31	0.48
End of contract/temporary assignment	3	81.3	2	12.5	1	6.3	-	-	0.25	0.58
Teacher Training/Professional Development Construct										
Inadequate training to manage classroom	8	50.0	3	18.8	2	12.5	3	18.8	1.00	1.21
Inadequate training to support position	8	50.0	4	25.0	2	12.5	2	12.5	0.88	1.09
Lack of advancement in the teaching profession	9	56.3	6	37.5	1	6.3	-	-	0.50	0.63
Perceptions of School Environment Construct										
Inadequate mentoring	8	50.0	4	25.0	1	6.3	3	18.8	0.94	1.18
Inadequate administrative leadership	8	50.0	3	18.8	4	25.0	1	6.3	0.88	1.02
Administrators actions did not support teaching staff	8	50.0	4	25.0	2	12.5	2	12.5	0.88	1.09
Lack of supportive working environment	8	50.0	4	25.0	4	25.0	-	-	0.75	0.86
Lack of autonomy	0	62.5	2	12.5	3	18.8	1	6.3	0.69	1.01
Lack of connection to students	9	56.3	6	37.5	-	-	1	6.3	0.56	0.81
Negative culture of school	1	68.8	2	12.5	2	12.5	1	6.3	0.56	0.96
Unclear opportunities for advancement	1	68.8	2	12.5	3	18.8	-	-	0.50	0.82
Role as FFA advisor	9	56.3	7	43.8	-	-	-	-	0.44	0.51
Inadequate community support	1	68.8	4	25.0	1	6.3	-	-	0.38	0.62
Opportunities for competition	0	62.5	6	37.5	-	-	-	-	0.38	0.50

[a]For calculation of mean, N/A= 0, Minor= 1, Moderate= 2, and Major= 3.

Respondents had the opportunity to provide short answer responses to elaborate on career decisions. First, respondents were asked to indicate whether they believed MSU had provided the necessary training,

skills, and knowledge to allow them to become successful SBAE teachers. Of the 16 respondents in this group, only six indicated that MSU had not provide the necessary training, skills, and knowledge. Recurring themes among respondents were that they had wanted more time in an actual classroom with students, additional training in classroom and situational management, working with administrators, and additional coursework in industrial/laboratory topics.

Second, respondents were asked to describe their intent to enter the teaching profession upon graduation from high school. Of the 16 respondents in this group, five indicated no intent to enter the teaching profession. Response frequency grew to eight when asked about intent to teach upon graduation from MSU. Further, 11 respondents indicated not even applying for SBAE teaching jobs upon graduation.

Decision to Leave the Profession

Objective two sought to identify potential reasons behind Montana agricultural education teaching graduates' decisions to leave the profession. The *leavers* responded to the same 25 Likert-style items and also had the opportunity to provide short answer responses to elaborate on their career decisions.

Within the *career factors* construct, *leavers* collectively cited inadequate work-life balance (*M* = 1.88) as the top reason for leaving. The prospect of moving to a career outside of education was also a top reason for leaving. Competitive salary elsewhere outside the field of education (*M* = 1.63), career change (*M* = 1.38), dissatisfaction with changes in the position (*M* = 1.38), recruitment for another position (*M* = 1.13), and raising a family (*M = 1.00)* all had means that indicated at least a minor role in deciding to leave the teaching profession. The second construct, *teacher training/professional development*, consisted of three Likert-type items. Although only a minor influencer, *leavers* reported inadequate training to support the position (*M* = 1.00) as the item with the highest mean influence in deciding to leave. A perceived lack of advancement in the teaching profession (*M* = 0.89) and inadequate training to manage the classroom (*M* = 0.63) were viewed as less than minor reasons for leaving the profession. Within the *perceptions of school environment* construct, inadequate administrative leadership (*M* = 2.50) and unsupportive administration (*M* = 2.50) rose to the top as items impacting respondents' decisions to leave. A perceived negative school culture (*M* = 1.63), lack of supportive working environment (*M* = 1.5), and inadequate mentoring (*M* = 1.25) were also reported to have at least a minor impact on respondents' decisions to leave. Table 3 illustrates a complete view of responses.

Table 3

Left Teaching Group Reasons by Construct

	N/A		Minor		Moderate		Major			
	f	%	*f*	%	*f*	%	*f*	%	Mean[a]	SD
Career Factor Construct										
Inadequate work-life balance	-	-	2	25.0	5	62.5	1	12.5	1.88	0.64
Competitive salary elsewhere outside the field of education	1	12.5	2	25.0	4	50.0	1	12.5	1.63	0.92
Career change	3	37.5	1	12.5	2	25.0	2	25.0	1.38	1.30
Dissatisfied with reassignment or changes in the position	3	37.5	1	12.5	2	25.0	2	25.0	1.38	1.30
Recruited for another position	4	50.0	1	12.5	1	12.5	2	25.0	1.13	1.36
Raising a family	3	37.5	2	25.0	3	37.5	-	-	1.00	0.93
Career break	6	75.0	-	-	-	-	2	25.0	0.75	1.39
Reduction in force	6	75.0	-	-	1	12.5	1	12.5	0.63	0.74
Relocation	6	75.0	1	12.5	1	12.5	-	-	0.38	0.74

Table 3

Left Teaching Group Reasons by Construct Continued

Competitive salary elsewhere within the field of education	7	87.5	-	-	1	12.5	-	-	0.25	0.35
End of contract/temporary assignment	7	87.5	-	-	1	12.5	-	-	0.25	0.35
Teacher Training/Professional Development Construct										
Inadequate training to support position	2	25.0	4	50.0	2	25.0	-	-	1.00	0.76
Lack of advancement in the teaching profession	4	50.0	2	25.0	2	25.0	-	-	0.75	0.89
Inadequate training to manage classroom	3	37.5	5	62.5	-	-	-	-	0.63	0.52
Perceptions of School Environment Construct										
Inadequate administrative leadership	-	-	1	12.5	2	25.0	5	62.5	2.50	0.76
Administrators actions did not support teaching staff	-	-	1	12.5	2	25.0	5	62.5	2.50	0.76
Negative culture of school	2	25.0	2	25.0	1	12.5	3	37.5	1.63	1.30
Lack of supportive working environment	1	12.5	3	37.5	3	37.5	1	12.5	1.50	0.93
Inadequate mentoring	1	12.5	5	62.5	1	12.5	1	12.5	1.25	0.89
Unclear opportunities for advancement	4	50.0	1	12.5	3	37.5	-	-	0.88	0.99
Inadequate community support	4	50.0	3	37.5	1	12.5	-	-	0.63	0.74
Lack of autonomy	4	50.0	3	37.5	1	12.5	-	-	0.63	0.74
Role as FFA advisor	5	62.5	2	25.0	1	12.5	-	-	0.50	0.76
Opportunities for competition	5	62.5	2	25.0	1	12.5	-	-	0.50	0.76
Lack of connection to students	5	62.5	3	37.5	-	-	-	-	0.38	0.52

[a]For calculation of mean, N/A = 0, Minor = 1, Moderate= 2, and Major = 3.

Leavers averaged 3.25 years in the teaching profession, with a median of 3 years. Among this group, all members reported the intent to teach agricultural education upon graduation from high school and MSU. Further, all eight reported that student teaching highly influenced their decision to enter the teaching profession. When asked about receiving the necessary knowledge, skills, and training from MSU to be a successful agricultural educator, responses were evenly split. Four indicated receiving the necessary knowledge, skills, and training, and four did not. Among the four who indicated not receiving the necessary knowledge, skills, and training, common recommendations for additional training included increased time in front of high school students, additional training in agricultural mechanics and technology areas, and more emphasis in guiding student learning.

Finally, members of this group were asked about plans to re-enter the agricultural education teaching profession in the future. Only one respondent indicated plans to re-enter the profession, citing a long enough break from teaching and the hope for a better administration.

Decision to Stay in the Profession

Objective three sought to identify potential reasons behind Montana agricultural education teaching graduates' decisions to stay in the profession. Members of the *current teaching* group responded to 18 Likert-type items and indicated whether each item was a major, moderate, minor or non-factor in deciding to remain in the teaching profession. Similar to the *never entered* and *leavers* groups, the Likert-type items were separated into three constructs of similar items. Respondents also had the opportunity to provide short answer responses to elaborate on career decisions.

Within the *career factors* construct, a stable contract ($M = 2.50$) was reported to be the strongest influencer in deciding to remain in the teaching profession. Work-life balance ($M = 2.14$), time to raise a family ($M = 1.91$), and a competitive salary in their community ($M = 1.82$) were also reported as substantial influencers. Within the *teacher training/professional development* construct, adequate training to support the position ($M = 1.91$) was the item of most influence, with adequate training to manage classroom ($M = 1.82$) and advancement in the teaching profession ($M = 1.65$) not far behind. Multiple items in the *perceptions of school environment* construct demonstrated mean scores over 2.00, indicating these items were viewed as having at least a moderate impact on respondents' decisions. Highest among these included connecting to students ($M = 2.73$) and role as an FFA advisor ($M = 2.55$). For full analysis, see Table 4.

Table 4
Currently Teaching Group Reasons by Construct

	N/A		Minor		Moderate		Major			
	f	%	*f*	%	*f*	%	*f*	%	Mean[a]	SD
Career Factor Construct										
Stable contract	-	-	1	4.5	9	40.9	12	54.5	2.50	0.60
Work-life balance	-	-	3	13.6	13	59.1	6	27.3	2.14	0.64
Raising a family	4	18.2	2	9.1	8	36.4	8	36.4	1.91	1.11
Competitive salary	1	4.5	7	31.8	9	40.9	5	22.7	1.82	0.85
Teacher Training/Professional Development Construct										
Adequate training to support position	-	-	6	27.3	12	54.5	4	18.2	1.91	0.68
Adequate training to manage classroom	-	-	7	31.8	12	54.5	3	13.6	1.82	0.66
Advancement in the teaching profession	-	-	10	45.5	7	31.8	3	13.6	1.65	0.86
Perceptions of School Environment Construct										
Connection to students	-	-	1	4.5	4	18.2	17	77.3	2.73	0.55
Role as FFA advisor	-	-	2	9.1	6	27.3	14	63.6	2.55	0.67
Supportive working environment	-	-	2	9.1	8	36.4	12	54.5	2.45	0.67
Adequate community support	-	-	1	4.5	13	59.1	8	36.4	2.32	0.57
Culture of school	-	-	3	13.6	9	40.9	10	45.5	2.32	0.72
Autonomy	1	4.5	1	4.5	13	59.1	7	31.8	2.18	0.73
Adequate mentoring	-	-	6	27.3	10	45.5	6	27.3	2.00	0.76
Administrators actions support teaching staff	-	-	8	36.4	7	31.8	7	31.8	1.95	0.84
Adequate administrative leadership	-	-	6	27.3	11	50.0	5	22.7	1.95	0.72
Opportunities for competition	1	4.5	6	27.3	11	50.0	4	18.2	1.82	0.80

Table 4
Currently Teaching Group Reasons by Construct Continued…

Clear opportunities for advancement	4	18.2	7	31.8	8	36.4	3	13.6	1.45	0.91

[a]For calculation of mean, N/A= 0, Minor= 1, Moderate= 2, and Major= 3.

When asked about intentions to teach agricultural education upon graduation from high school, nine of the 22 respondents in the *currently teaching* group indicated that they had had no intent to teach. Further, 17 of respondents indicated that student teaching highly influenced their decisions to enter the teaching profession. Of the nine respondents indicating no intention to teach upon graduation from high school, eight indicated that by the time they graduated from MSU, their intentions had changed and they planned to enter SBAE programs. Of the 22 respondents in this group, only four reported not receiving the necessary training, skills, and knowledge from MSU to be successful in the profession.

Conclusions and Discussion

Objective one sought to identify potential reasons behind an agricultural education teaching graduate's decision to not enter the profession. Similar to previous research, competitive salaries outside education, being recruited for another position (Lemons, Brashear, Burris, Meyers & Price, 2015), and an inadequate work-life balance (Lemons et al., 2015; Tippens et al., 2013; Sorensen et al., 2014) emerged as the largest factors in respondents' decisions to not enter the teaching profession. While salary was identified as a top factor in the decision to not enter the profession, the average respondent's salary within each group was the same. This suggests that higher salaries outside the teaching profession in this geographic region might be a misconception. Referring to the Rots et al. (2010) Model of Teacher Education and the Choice to Enter the Teaching Profession, the majority of these influences can be classified as environmental conditions and are thus directly related to the intent to enter and ultimate entrance into the teaching profession.

When asked to elaborate on the necessary training, skills, and knowledge required to become successful high school agricultural educators, respondents indicated a desire for more time in an actual classroom with students and training in classroom and laboratory management. These findings align with current research (Fritz & Miller, 2003; Garton & Chung, 1996; Knobloch & Whittington, 2002; Mundt & Connors, 1999; Myers et al., 2005; Paulsen et al., 2015; Touchstone, 2015). Compounding the decision of entering the teaching profession, these performance skills enter into the Rots et al. (2010) model before individuals reveal their intentions to enter the profession. Respondents indicated their intent to teach at multiple stages before their ultimate decision. Contrary to current research (Roberts, Greiman, et al., 2009; Roberts, Harlin et al., 2009), there was an increase in respondents who indicated no intent to teach from high school graduation to their graduation from MSU. Aligning with the Rots et al. (2010) model, this had a direct impact on the ultimate decision to enter the teaching profession.

Objective two sought to identify potential reasons for an agricultural education teaching graduate's decision to leave the profession. Similar to the *never entered* group, major factors influencing this decision included work-life balance (Lemons et al., 2015; Sorensen et al., 2014; Tippens et al., 2013), careers outside of education with competitive salaries, and administrative leadership dissatisfaction (Fritz & Miller, 2003; Knobloch & Whittington, 2002; Lemons at al., 2015; Paulsen et al., 2015). Aligning with Rots et al. (2010), these items largely fit into external influences, having a direct and profound impact on the individual's choice to enter and remain in the teaching profession.

All respondents in this group indicated an intent to enter the teaching profession upon graduation from MSU. All respondents also reported that student teaching highly influenced their decisions to enter teaching. In contrast, responses varied when asked whether they received the necessary training, skills, and knowledge required to become a successful high school agricultural educator. Half of the *leavers* reported not receiving the necessary training, skills, and knowledge. Similar to the responses of the *never entered* group, common recommendations included more time in the classroom with students, additional training in laboratory and classroom topics, and more emphasis on guiding the learning of their students. This corresponds with current research (Fritz & Miller, 2003; Garton & Chung, 1996; Knobloch & Whittington, 2002; Mundt & Connors, 1999; Myers et al., 2005; Paulsen et al., 2015; Touchstone, 2015). This also aligns with the Rots et al. (2010) model, in which the initial step regarding the learning experiences of pre-service teachers has an impact on each sequential stage of the model leading up the ultimate decision to enter teaching.

With teaching careers that lasted an average of 3.25 years, this group seemed to experience the career burnout that is seen throughout the teaching profession (Lemons et al., 2015; Tippens et al., 2013). With only one member of this group indicating an interest in returning to the teaching profession, it appears that teachers are lost to the teaching profession as a formal educator for good once they leave.

The purpose of objective three was to identify potential reasons behind an agricultural education teaching graduate's decision to stay in the profession. Adequate work-life balance (Lemons et al., 2015; Sorensen et al., 2014; Tippens et al., 2013); stable contracts with a competitive salary; positive student, school, and community connections (Lemons et al., 2015; Sorensen et al., 2014; Tippens et al., 2013); and the role as an FFA advisor (Garton & Chung, 1996; Myers et al., 2005; Touchstone, 2015) all stood out as top reasons that graduates remain in the teaching profession. Contradictory, adequate work-life balance also appeared as a reason individuals left the profession, suggesting this may be a more complex issue than its surface value suggests.

The *currently teaching* group's intent to teach grew throughout their education at MSU, where only one member reported no intent to enter the teaching profession upon graduation. Similarly, 17 of the 22 respondents reported that student teaching highly influenced their decision to enter teaching. Additionally, most respondents indicated that MSU provided the necessary training, skills, and knowledge to be successful in SBAE programs. These responses all align with the Rots et al., (2010) model with respect to the teacher education and learning experiences step and intention to enter the teaching profession.

An analysis showed that these graduates overwhelmingly felt that MSU had prepared them to enter the teaching profession but that additional training and experience in the classroom before student teaching and supplementary mechanical and technical systems coursework would be beneficial to new graduates.

Implications and Recommendations

Conclusions from this research provide information for those in teacher preparation; professional organizations that help with teacher training, professional development, and advocacy; and for future academic research. The multi-year, state-wide nature of this study provides a big-picture view of agricultural education teacher preparation and its effects on graduates entering and remaining in the teaching profession. Stakeholders at all levels of Montana agricultural education—including current teachers, administrators, state staff, teacher educators and representatives of professional organizations—should continue to examine the reasons presented in this study to effectively recruit, train, and retain agricultural education students to help meet the market demands for agricultural education positions in Montana.

Implications for teacher educators, both within agricultural education and education as a whole, incorporate responses from all three groups within this study. Twenty-eight percent of the agricultural education teaching graduates left MSU feeling that they did not receive the appropriate knowledge, skills, and training to be successful as SBAE teachers. A formal examination of reasons, as presented and reported in this study, should take place to understand and take action with respect to these reasons. The most commonly recorded critique of their time at MSU as it related to teacher preparation was lack of time in front of students. Thus, we recommend that faculty and staff pursue opportunities that allow pre-service teachers to spend time teaching and interacting with students. Teacher educators in agricultural education should research teacher preparation programs in surrounding states to examine and compare the requirements and rigor of these programs with those of MSU. Similarly, there was a perceived need for more instruction in agriculture technology and mechanical systems. Teacher educators should either implement this material into their existing courses or create new courses to address this need in preparing graduates with the appropriate training, skills, and knowledge to be successful as SBAE teachers.

Implications for professional organizations, such as the state and regional associations of agricultural educators and associations for career and technical education, are numerous. These organizations should take an active role in advocacy, preparation, retention, and continued development of teachers. The most common reasons for not entering and leaving the profession revolve around careers outside of education, primarily the salaries of those positions. Montana consistently ranks in the bottom three for states with the lowest starting salary for teachers. Without doubt, this contributes to the loss of these graduates from teaching. However, reported salaries of those who left the profession or never entered were in the same average range, indicating a skewed perspective of outside compensation in the area. Exploring fiscal opportunities to provide competitive salaries or benefits would be in the interest of these organizations.

Additionally, and as described by the Rots et al. (2010) model, providing pre-service teachers with mentors and professionals in agricultural education would address the perceived lack of mentoring present in all study groups. Similarly, efforts should be made to work with administrators and agricultural education teachers to address the apparent issue of administrator support and its impact on agriculture teacher attrition. Finally, quality continued education should be provided to those who enter the field to prevent teacher turnover and increase retention. Using the results of this study to target the needs of new graduates could lead to higher retention rates and an increased likelihood of teachers remaining in the profession.

This study was a starting point for Montana agricultural education to begin examining the career decisions of MSU agricultural education teachers. Further exploratory research will need to be conducted in order to continue to assess the career decisions of graduates and the unique reasons for those decisions. Specifically, qualitative research exploring salary perceptions in and outside the profession along with descriptors of how work-life balance influences decisions to stay in or leave the profession is recommended. A closer examination of each of the three subgroups could prove useful in determining their motivations for pursuing a degree in agricultural education, which itself could prove useful in providing a model for predicting a student's likelihood of entering, remaining in, or leaving the teaching profession.

It is recommended that teacher educators examine their preparation programs to ensure professional relevancy. Course catalogs are continually updated, but truly matching course offerings to the needs of agricultural educators could prove essential in providing the best education possible for students. Working with existing advisory groups, input from university programs, offices of public instruction, and current agricultural educators is necessary to provide teacher education programs that prepare graduates to the best extent possible.

Additional research into the professional development needs of those who enter the teaching profession is also recommended. Do the needs of induction-level agricultural educators mimic those of

other states and regions, or are their needs specific and unique? Catering state, regional and national professional development to induction-level and pre-service teachers' needs and concerns could provide the supplemental skills and knowledge to encourage individuals to remain in the classroom.

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