

# Exploring Personal Identity Characteristics of Agricultural Education Majors at the University of Florida

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## Abstract

*Establishing an identity is a key developmental task during adolescence that influences future educational goals and career paths. This study used a mixed-methods research design to examine the personal identity characteristics and decision-making processes of undergraduate students who chose to major in Agricultural Education (Ag Ed). The research draws upon the Personal Identity Model of College Major Selection, which integrates the Theory of Planned Behavior, Psychosocial Development Theory, Marcia's Identity Statuses, and Social Cognitive Theory. This researcher-designed model was used to explore how personal identity, normative beliefs, personal influences, and environmental factors collectively impact students' academic choices. Fifteen Ag Ed majors were surveyed to collect descriptive data and responses on the Social and Personal Identities Scale (SIPI). Four participants were selected for in-depth interviews to further explore their motivations and experiences. Findings revealed that 80% of students decided on their major in high school, with considerable influence from personal identity development and involvement in activities such as FFA, 4-H, sports, and school clubs. Participants' perceptions of their major were strongly shaped by normative beliefs, environmental conditions, and personal experiences. SIPI data suggested personal identity attributes played a slightly greater role in major selection than social identity attributes. Findings highlight the importance of aligning academic programs with students' evolving identities. To attract a more diverse student body to fields like agricultural education, institutions should consider recruitment strategies that align with students' personal interests and identities.*

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## Introduction

The agriculture, food, and natural resources (AFNR) industry continues to grow in response to the rising global population, which increases demand for agricultural products. Despite this growth, promoting careers in agriculture remains a challenge. Due to lingering negative perceptions and a cultural shift away from our agrarian roots, AFNR careers are often misunderstood—particularly by those without an agricultural background. These careers are frequently associated solely with production agriculture and perceived as involving difficult labor for low wages, leaving many students unaware of the broad range of opportunities available in the industry (Dobbins et al., 2002; Sutphin & Newsom-Steward, 1995; Unay-Gailhard & Brennen, 2022). Recognizing this disconnect, the American Association for Agricultural Education (AAAE) Research Values document has identified *career and youth development in AFNR* and *assessment of youth decision-making* as key research priorities (AAAE, 2023). Building a diverse and sustainable workforce within AFNR is essential to meeting future industry demands. This goal can be achieved by increasing access and representation through targeted education and evaluation efforts within AFNR programs. To support these efforts, colleges of agriculture must develop effective recruitment strategies aimed at attracting high-caliber students who are eager to pursue careers in the agricultural sector. A foundational element of such strategies is educating students in secondary school-based agricultural education (SBAE) programs about the vast array of career paths available in agriculture.

However, like the broader agriculture industry, agricultural education faces a persistent shortage of college graduates entering the profession each year (Smith et al., 2025). According to the National Supply and Demand Study in 2024, despite programmatic growth, 45 states reported vacant teaching positions (Smith et al., 2025). In total, 107 teaching positions were lost, and 58 programs closed. The primary reasons cited for these losses were a lack of available teachers (33%), low student enrollment (27%), and insufficient funding (21%) (Smith et al., 2025). Addressing these shortages requires not only increasing the overall number of graduates but also improving the diversity of those entering the field. Recruiting and retaining individuals from traditionally underserved populations remains one of the most significant challenges for professionals and educators in agriculture and natural resources (Outley, 2008). A closer look at demographic trends revealed that, while the U.S. student population continues to diversify, the agricultural education workforce has not kept pace. During the fall 2022 school year, minority students accounted for a sizable portion of enrollment in U.S. secondary schools: 15% identified as Black or African American, 29% as Hispanic or Latino, and 5% as Asian (Irwin et al., 2024). In contrast, during the same time, 77% of all school teachers were female and their diversity did not mirror that of their student population: only 6% identified as non-Hispanic Black, 9% as Hispanic, and 2% as non-Hispanic Asian (Taie & Lewis, 2022). This disparity becomes even more pronounced when examining the demographics of graduates entering the field of agricultural education. Among licensed, eligible program completers in 2024, the demographic breakdown was as follows: 80% White, Non-Hispanic; 12% Hispanic/Latino; 5% Unknown; 1% Biracial/Multiracial; 1% African American; 1% American Indian/Alaskan; and 0% Asian (Smith et al., 2025). These figures show a move toward homogeneity not diversity, with white females increasingly dominating the field, while white males, African Americans, Latinos, and Asians are underrepresented.

Understanding and addressing this disparity requires a deeper look into factors that influence students' decisions to pursue careers in agricultural education. Gender, race, and ethnicity are integral components of personal identity (Erikson, 1968; Tajfel & Turner, 2003), and these identity factors may play a significant role in career decision-making. Yet, there was a notable gap in the literature regarding how personal identity characteristics influence the choice to major in agricultural education. Differences in personal identity may help explain the variability found in past recruitment efforts. Exploring these characteristics could help institutions tailor recruitment strategies to better resonate with specific demographic groups (Stair et al., 2016). As the demand for college graduates in agriculture continues to grow, gaining a clearer understanding of how personal identity shapes student decisions will be essential to

attracting underrepresented populations into the field—and ultimately, to creating a more diverse and effective agricultural education system.

### **Previous Research**

Agricultural education positions across the country are regularly going unfilled or being staffed by individuals without agricultural certification due to an insufficient number of certified graduates entering the workforce (Smith et al., 2025). This issue reflects a longstanding trend. According to the National FFA Organization (2024), the shortage of qualified school-based agricultural education (SBAE) teachers has persisted for over a century. In addition to this shortage, diversity among the SBAE teaching workforce needs addressing to better reflect the nation's increasingly diverse population (Smith et al., 2025). To effectively address these challenges, it is essential to understand the factors that influence students' decisions to pursue careers in agricultural education. Identity formation shows a positive correlation in shaping students' career interests and commitments (Kim, 2021).

Personal identity was widely recognized as a psychosocial developmental process that begins at birth and continues throughout a person's lifespan (Erikson, 1963). Erikson's (1963) theory outlines eight stages of development, with the fifth stage, identity versus role confusion, being particularly critical during adolescence and young adulthood. This was the stage when individuals begin to explore their interests and make important decisions, including choosing a college major and future career path (Erikson, 1963, 1968). Despite the recognized importance of identity development, no studies have specifically examined its relationship to the selection of an agriculture major or college major selection in general. However, existing research on personality traits and major selection suggests that students were naturally drawn to majors and career fields that align with their personalities (Corulla & Coghill, 1991; Harris, 1993; Kline & Lapham, 1992; Lievens et al., 2002; Marrs et al., 2007; Rubinstein, 2005; Wilson & Jackson, 1994). Furthermore, personality traits have been positively associated with identity formation (Hill et al., 2013). Past studies have also examined college students in relation to personal identity and how self-esteem affects identity development (Gonzales-Backen et al., 2015; Luyckx et al., 2013). Other studies focused on career identity of college students relating to parental support (Guerra & Braungart-Rieker, 1999; Berríos-Allison, 2005; Stringer & Kerpelman, 2010).

The college years represent a critical period for identity development, particularly as students navigate the transition from adolescence to adulthood and engage in expanded social and academic roles (Kaufman, 2014). For pre-service agriculture teachers, this developmental phase is important to developing a professional identity, which affects their interests in professional development and successfully transitioning into the teaching profession (Shoulders & Myers, 2011). Establishing such an identity early supports role clarity and contributes to long-term instructional effectiveness and career commitment (Beijaard et al., 2004).

In addition to individual identity, enhancing diversity within agricultural education programs is essential for addressing persistent teacher shortages and for improving cultural responsiveness in classrooms. Recruiting and supporting underrepresented student populations can narrow the cultural gap between educators and learners (Torres et al., 2004). Research has shown that when educators share or understand the cultural backgrounds of their students, it positively influences student engagement and improves academic outcomes (Vincent et al., 2012).

Diverse agricultural educators serve as role models who help students of color overcome longstanding stereotypes about agriculture and envision themselves in agricultural careers (Bowen & Rumberger, 2002; Kandel & Cromartie, 2004; Larke & Barr, 1987; Mullinix et al., 2006). To ensure continued innovation and leadership in the agricultural industry, it is imperative to recruit and retain a more diverse teaching workforce, particularly at the secondary and post-secondary levels (Bowen & Rumberger, 2002; Jones & Bowen, 1998; Roberts et al., 2009). Increasing diversity among agriculture teachers is a

crucial first step toward building a more inclusive and representative agricultural community (Bowen & Rumberger, 2002).

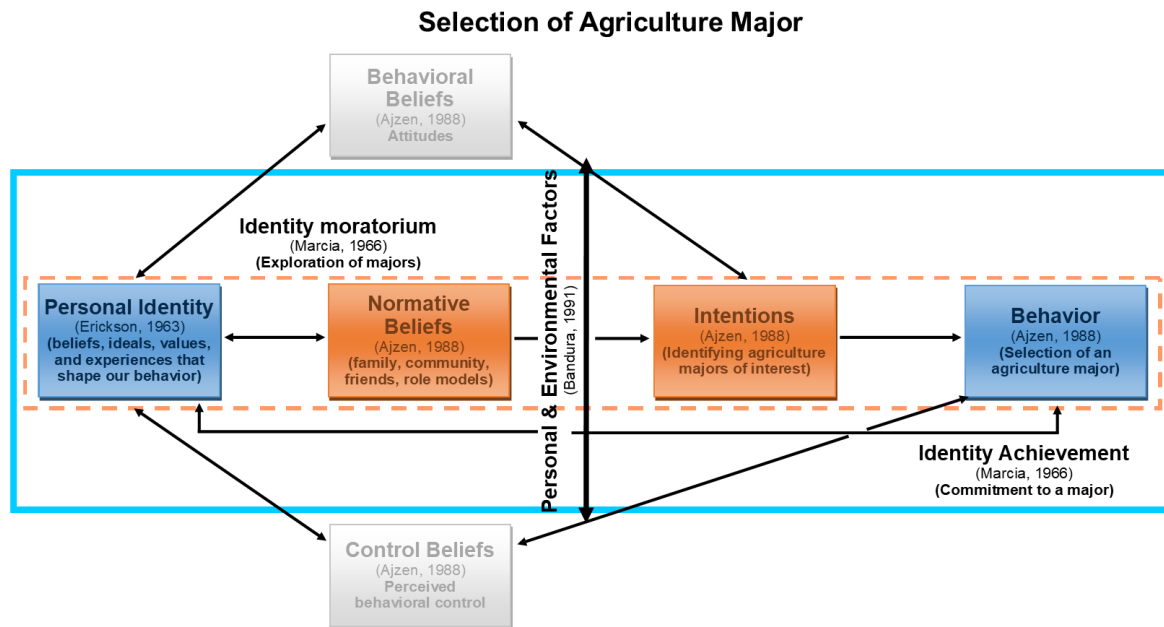
### **Conceptual Framework**

The Personal Identity Model of College Major Selection (see Figure 1) is a researcher-developed model that illustrated how Personal Identity (Erikson, 1963) interacts with the behavioral, normative, and control beliefs outlined in the Theory of Planned Behavior (Ajzen, 1988). This interaction ultimately influences students' behavioral commitment to selecting a major and pursuing a career in agricultural education. To further explain the process of identity development, the model incorporates Marcia's (1966) Identity Statuses, specifically identity moratorium and identity achievement. These statuses represent key stages in a student's exploration of potential college majors (moratorium) and their eventual decision-making and commitment process through a behavioral commitment (achievement). These components help explain how students evaluate options and solidify their educational and professional paths. Additionally, Social Cognitive Theory (Bandura, 1991) informed the model by emphasizing the role of both personal and environmental factors in shaping behavior. These factors were present and influential throughout the model, underscoring the complex relationship between internal identity development and external influences such as family, peers, and educational experiences. Theory of Planned Behavior (Ajzen, 1988) is a common framework used by researchers relating to college major selection in fields such as STEM majors (Moore & Burrus, 2019), communication sciences (Choo et al., 2023), and accounting (Santos & Almeida, 2018). Social Cognitive Theory (Bandura, 1991) has been linked to studies on selecting college majors in engineering (Lent et al., 2010), nontraditional majors (Nauta & Epperson 2003), and computing majors (Luse & Jacobson, 2014). Psychosocial development Theory (Erikson, 1963) is linked to studies involving self-efficacy and major changing behavior (Cunningham & Smothers, 2010) and predicting STEM academic majors (McPherson & Park, 2021). Finally, Marcia's (1966) Identity Statuses was the framework for a study profiling students' decision-making process in choosing a college major (Germeijs et al., 2012). These four theories selected worked together the best to create a model that allowed the researcher to answer the objectives of the study better than other well-known models, such as Social Cognitive Career Theory (Lent et al., 1994) which does not combine all of the factors of the model.

The current study applies this model to investigate the personal identity characteristics of agricultural education majors, as part of a broader exploration into college major selection. By utilizing this model, the researcher identified identity-related patterns among students and explored these characteristics qualitatively. The development of this model enabled the researchers to integrate the most effective elements of four distinct theories into a single, comprehensive model to explain the process by which participants select their academic major and career path. Overall, the model highlights how personal identity and normative beliefs about what is considered normal or expected play a key role in how participants decide on and commit to choosing a major in agricultural education.

Figure 1

*Personal Identity Model of College Major Selection.*



### Purpose & Objectives

The purpose of this study was to examine the personal identity characteristics of undergraduate students majoring in Agricultural Education at the University of Florida. The study aimed to understand how these identity characteristics develop and influence students' decisions to pursue a major and career in agricultural education. By exploring students' interests, experiences, and identity-related factors, the study sought to construct a comprehensive profile of Agricultural Education majors. Objectives for this study were to:

1. Describe the personal interests, characteristics, and identity attributes of students.
2. Investigate factors such as experiences, beliefs, and social influences that contribute to students' selection of an Agricultural Education major and career path.
3. Analyze students' responses on the Social and Personal Identities Scale (SIPI) to assess identity-related outcomes.
4. Explore how students whose identities differ from perceived norms navigate the process of choosing their major and career in agricultural education.

### Methodology

A mixed-methods explanatory sequential research design was used to address the objectives presented in this study (Creswell & Plano Clark, 2018). This design consisted of two separate interactive phases, beginning with the collection and analysis of quantitative data, followed by the collection and analysis of qualitative data to explain or expand on the initial quantitative results (Creswell & Plano Clark, 2018). The selection of this design enabled the researcher to explore the phenomenon related to participants' selection of Agricultural Education as a major in relation to their personal identity characteristics and subjective norms. The philosophical assumptions guiding this study were both postpositivist (quantitative) and interpretivist (qualitative), which are common in mixed-methods research using a sequential design (Creswell & Plano Clark, 2018).

The quantitative phase allowed the researcher to objectively collect data and deductively test the model developed from the theoretical framework. The instrumentation included a researcher-developed questionnaire based on the Personal Identity Model of College Major Selection (see Figure 1). The survey constructs included personal identity formation, normative beliefs, personal and environmental factors, college major exploration (identity moratorium), and commitment to a major (identity achievement). Four questions addressed personal interests, hobbies, major selection, and confidence in major selection. The questionnaire also included the Social and Personal Identities Scale (SIPI) (Nario-Redmond et al., 2004) and seven demographic questions: ethnicity, race, biological sex, self-identity, home residence, community type, and year in college. The SIPI scale exhibited high internal consistency through factor and reliability analyses to support the scale's stability as a two-factor scale and was a validated instrument used as a tool to measure individual identity preferences (Nario-Redmond et al., 2004). This tool was selected over other instruments because of the extensive testing of the instrument on college major selection, which captured variations in how individuals prioritize personal versus social identity, providing insight into how these factors may influence college major and career decisions. "The SIPI scale was specifically designed to capture individual differences in the relative importance and centrality assigned to both personal and social identity" through sixteen items, each rated by participants on a scale from 1 ("not at all important to who I am") to 9 ("extremely important to who I am") (Nario-Redmond et al., 2004, p. 147).

The qualitative phase employed an inductive process to discover phenomena through personal interaction with participants via interactive video conferencing (Zoom). Qualitative instrumentation consisted of a researcher-developed interview guide informed by the SIPI Scale (Nario-Redmond et al., 2004) results and guided by the Personal Identity Model of College Major Selection (see Figure 1). This guide consisted of twelve questions relating to one or more of the following constructs: personal identity, normative beliefs, intentions, and behavior. Individual interviews were conducted via interactive video conferencing (Zoom) and recorded for analysis. Interviews were transcribed using Otter.ai software and uploaded into NVivo for qualitative data analysis.

### Population and Sample

The population for this study consisted of all undergraduate students majoring in Agricultural Education at the University of Florida during the Fall 2023 semester ( $N = 19$ ). To conduct a census, all 19 students were invited to participate in the survey. Of those invited, 15 students responded, resulting in a 79% response rate. Our population frame of students already in the major from one university during one semester is a limitation of our study. However, the novelty of examining how personal identity influences the choice of major in a previously unexamined population (agricultural education) positions this study to make a meaningful contribution to literature.

Following the survey, results from the Social and Personal Identities Scale (SIPI) were used to select interview participants through purposive sampling. Participants were chosen based on their SIPI scores, specifically targeting those whose responses deviated most from the group norm (i.e., the outliers). This approach allowed for the inclusion of diverse perspectives and ensured that the sample reflected a range of identity-related experiences, rather than being limited by demographic categories such as race or gender, which were not fully represented in the available data. We worked under the assumption that selecting students who were most different from the norms of all students in the major would give us insights that might be more like students not enrolled in the major, thus bringing a different perspective about the choice of major. We recognize the limitations that people interviewed may still not be comparable to people that did not select the major, however, people selected to interview seem different giving insight to others that are different and did not select the major. Five students met the selection criteria, and four agreed to participate in follow-up interviews. Each interviewee was assigned a unique identifier consisting of the letter "A" (indicating Agricultural Education major) followed by a number (1–4) corresponding to

their order of participation. Additional identifiers included gender, participants' self-reported race/ethnicity, and academic classification.

**Table 1**

*Description of participants*

Participant and Self Identification	Community Raised and Time of College Major Selection	Hobbies and Interests	Influences on College Major and Career Goals
A1 - Female White, Not Hispanic Senior	Suburban Late College (junior/senior)	I played track and soccer. I was very academically involved so I volunteered a lot with different honor societies I was involved in.	I do not come from an agricultural background, but through my AP Environment Science course, I started to learn more about it, which is when I learned that I was more interested in going into ag.
A2 - Female White, Not Hispanic Senior	Rural Early High School (grades 9-10)	FFA, 4-H, Beta Club, Softball, Soccer, Volleyball, hunting, and fishing	My ag teachers were the worst and I enjoyed what I could in FFA, which motivated me to provide opportunities and support to my future students that I did not get.
A3 - Female White, Not Hispanic Senior	Suburban Late High School (grades 11-12)	I danced for 8 years and did summer camps with golf, tennis, and art. Once I got to middle school I got involved in agriculture.	I got involved in agriculture and realized I was passionate about the subject and wanted to continue to learn about agriculture and be involved in agriculture in my future career.
A4 - Female Black or African American, Not Hispanic Junior	Rural Early High School (grades 9-10)	FFA, 4H, Student Government, AVID, and making sublimation cups	My personal interest gave me a drive to teach the next generation about the importance of agriculture and its influence on me to become an agricultural teacher.

**Data Collection and Analysis**

Quantitative data was collected through an internet-based survey questionnaire using Qualtrics. Internet-based questionnaires are the most widely used data collection instrument and come with several advantages, such as: (a) reduced costs, (b) larger sample population, (c) reduced human error, and (d) participants can complete the questionnaire at home as well as many others (Dillman & Bowker, 2001). The instrument items were tested for face validity by a panel of experts. Face validity (Kidder, 1982) is used to ensure that participants understand the questions or statements in the survey questionnaire. The instrument was pilot-tested to a small sample of participants for readability, question intent, format, time, and ease of use. Pilot testing can lead to questionnaire improvements to improve the accuracy of the data and participant ease of use (Rothgeb, 2008).

Participants were sent a link to the survey with a description of the purpose of the study through a Canvas announcement in one of their Ag Ed courses. An email was also sent to each participant with a survey link and explanation of the importance of the study for future advisement and recruitment of

undergraduate students in agricultural education. Participation was described as confidential and voluntary with an estimated completion time from a pilot study of ten minutes. Based on the participation rate, an additional email was sent to participants to increase the response rate. Response rates for internet-based surveys are usually lower than paper-based surveys (Reips, 2002). According to Lindner et al. (2001), a response rate below 85% requires assessment for potential nonresponse bias. To address this, early and late respondents were compared, with “late” defined as the final 50% of responses received (Dooley & Lindner, 2003). The comparison revealed no significant differences between early and late responders, suggesting minimal risk of nonresponse error.

For the quantitative phase of research, demographic questions and Likert-type questions were analyzed using Qualtrics Stats IQ. Descriptive statistics described demographic variables, which included grade in school committed to major, year in college, ethnicity, race, gender, home residence, community, and career confidence level. The SIPI scale (Nario-Redmond et al., 2004) was analyzed using descriptive statistics. Reliability was assessed post hoc on the two constructs of the SIPI scale (Nario-Redmond et al., 2004), with social identity having an alpha of .852 and personal identity yielding an alpha of .860. Cronbach’s alpha measures the average correlation between scaled items for internal consistency and considers .70 or greater as reliable (Cronbach, 1951).

During the qualitative phase, interviews were conducted and recorded over Zoom in the Fall 2023 semester and Spring 2024 semester, averaging twenty-six minutes each. The interview guide contained 13 questions based on the constructs of the Personal Identity Model of College Major Selection and influenced by the SIPI Scale results. and transcribed using Otter.ai. Transcriptions were conducted using Otter.ai, edited, and summarized by the researcher, and member checked with the participant to ensure data accuracy. Transcripts were open-coded line by line using NVivo software. A blend of inductive and deductive coding was used. First, *in vivo* coding was used to generate initial codes inductively while maintaining participant voices (Saldaña, 2013). Next, *axial* coding was used for a second and third cycle of coding to inductively explore how the themes and subthemes relate to one another (Saldaña, 2013). The final round of analysis was performed using *structural* coding to deductively organize themes around the model (see Figure 1) (Saldaña, 2013).

Credibility was established through weekly peer debriefings throughout the study with field experts to formulate the research questions, research design, and transcript analysis using line-by-line coding (Bitsch, 2005). Member checking ensured the credibility of data through a process of allowing participants to review transcriptions and offer corrections to any errors in data or perceived wrong interpretations (Lincoln & Guba, 1985). Member checking was used to verify transcript accuracy, and no changes were suggested by participants.

Purposive sampling, reflective journaling, and thick, rich descriptions were used to establish transferability and applicability of the study (Lincoln & Guba, 1985). The researcher used a writing journal to develop an audit trail of the research data allowing other researchers to see how the data was used to produce results (Merriam, 1998). The research process was documented for consistency and accuracy of data throughout the data collection and analysis phase in consultation with a research expert to establish dependability and confirmability (Lincoln & Guba, 1985). Participants were given thick, rich descriptions (see Table 1) allowing readers to “determine how closely their situations match the research situation, and hence, whether findings can be transferred” (Merriam, 1998, p. 211).

### **Bias Statement**

Biases should always be considered in conducting mixed methods research. The lead researcher worked full-time at the University of Florida in Plant City as the Academic Program Coordinator, where he developed a working relationship with some of the participants because of academic and career advising

responsibilities. The lead researcher's bachelor's degree was also in Agricultural Education, with thirteen years of teaching experience in school-based agricultural education. This study was part of a larger study for dissertation research. There was professional interest in this study from the lead researcher, who also works as a recruiter of agricultural education students, and as someone who has identified the need for new recruitment opportunities to fill industry demand for agriculture teachers. The interview guide and analysis of results were completed alongside an expert in the field, to eliminate researcher bias. However, background experience could potentially influence data interpretation.

## Findings

### Personal Identity

The first research objective described personal interests, characteristics, and identity attributes of students majoring in agricultural education. Demographic information (see Table 2) showed that 87% of participants were female with two-thirds of all participants white/non-Hispanic. At the time of research, 87% of participants were in their junior or senior year of college. Most participants chose their major either early or late in high school (80%) with 20% of participants choosing after enrolling in college.

**Table 2**

*Characteristics of survey participants*

Variables	Categories	<i>n</i>	%
Sex	Male	2	13.3
	Female	13	86.7
Ethnicity/Race	Hispanic/Hispanic	4	26.7
	White/Non-Hispanic	10	66.7
	Black/Non-Hispanic	1	6.7
Major Selection	Early High School (9-10)	5	33.3
	Late High School (11-12)	7	46.7
	Early College (freshman-sophomore)	2	13.3
	Late College (junior-senior)	1	6.7
Academic Classification	Freshman	1	6.7
	Sophomore	1	6.7
	Junior	4	26.7
	Senior	9	60
Community	Urban	1	6.7
	Suburban	7	46.7
	Rural	7	46.7
Job Confidence Level	Extremely confident	10	66.7
	Somewhat confident	4	26.7
	Extremely unconfident	1	6.7

Agricultural Education majors surveyed were asked, "What personal interests did you have growing up (e.g., hobbies, sports, clubs, organizations, etc.)?" This led to a variety of hobbies and interests being expressed (see Table 3) across five different themes. The number of participants was identified in parenthesis that expressed interest for each theme, and for items identified in hobbies and interests. According to responses, fourteen (93%) of the participants named a hobby or interest relating to agriculture, with the National FFA Organization (FFA) garnering the most interest (60%). School and leisure activities were discussed by eleven (73%) participants with reading (40%) cited most often as a hobby. Sports (67%) and outdoor activities (60%) followed closely behind the other themes with soccer (33%) being the favorite sport and none of the outdoor activities being mentioned more than once.

**Table 3***Hobbies and interests of survey participants*

Themes	Mentioned Hobbies and Interests
Outdoor Activities ( <i>n</i> = 9)	kayaking, hiking, photography, hunting, spending time on the river, fishing, animals, summer camps, rodeo
Agriculture related clubs and interests ( <i>n</i> = 14)	FFA– CDE’s, LDE’s, SAE’s, 4-H Collegiate Cattlewomen, Block & Bridle, horticulture, gardening, beef industry
School Activities ( <i>n</i> = 11)	Beta club, Student Government, Leading Ladies, HOSA, Key club, NHS, JROTC, Band, AVID, leadership organizations, FCA, FCCLA, FFEA
Sports ( <i>n</i> = 10)	softball, soccer, volleyball, cross country, dance, golf, tennis, flag football, basketball, track
Leisure Activities ( <i>n</i> = 11)	Reading, crafts, gaming, art, star gazing

**Selection of Major and Career**

The second research objective investigated factors such as experiences, beliefs, and social influences that contribute to students’ selection of an Agricultural Education major and career path.

Survey participants were asked to “Describe how your personal interests influenced your college major and career goals?” Several factors were shared, which were analyzed individually and collectively using Excel before being grouped into themes. All these factors directly correlated to participants’ identified personal interests relating to agriculture and/or their experience participating in a school-based agricultural education program in middle or high school. The themes that surfaced the most, with the percent of participants in parenthesis included: agriculture, natural resources, and the environment (60%); enjoyment and importance of teaching (53%); relationship with their agriculture teacher (40%); participation in FFA (40%); and passion developed toward the agriculture industry, teaching, or FFA (27%).

Student interest in agriculture, natural resources, and the environment was a dominant motivator for nine participants. For everyone, their interest in this field was shaped by their different experiences – whether it was a family background in agriculture or an interest developed organically through involvement in school-based agriculture education programs.

Eight participants credited having an interest and joy in teaching as an influential factor in selecting their major and career choice. This group of future educators not only enjoyed teaching but recognized the need for more professionals in the field. They aimed to inspire the next generation of agricultural leaders and were drawn to the idea of shaping young minds, with one individual always knowing they were going to become a teacher when they grew up.

The impact of an individual’s agriculture teacher on their decision to become an educator was another decisive factor, with six participants crediting their mentors for sparking their enthusiasm. Another factor related to their agriculture teacher was participation in the FFA, which was mentioned as an influencing factor by six participants. Each participant articulated the value of the National FFA organization in shaping their interests and leadership skills. Having been inspired by FFA, they sought to educate future students about the organization’s benefits and opportunities, driven by a deep appreciation for the role it played in their lives.

Finally, four participants discussed their passion for the agriculture industry, teaching, FFA, or a combination thereof as a leading factor toward selecting their major and career choice. Overall, participants did not resonate in isolation with just one influencing factor toward their major and career selection. Each participant identified with two or more of the factors showing a strong correlation between the factors.

### Social and Personal Identities Scale (SIPI)

The third research objective involved analyzing students' responses on the Social and Personal Identities Scale (SIPI) to assess identity-related outcomes. The SIPI Scale was a validated instrument that best reflects how central or important the description is to participants sense of who they are using a sliding scale from 1 ("not at all important to who I am") to 9 ("extremely important to who I am") (Nario-Redmond et al., 2004). The descriptive summary (see Table 4) breaks the scale into two parts to analyze social identity (odd questions) and personal identity (even questions).

The average social identity and personal identity scores were almost equally important to participants with a slight edge given to personal identity ( $M = 4.84 - 4.96$ ). Based on the frequency of items selected, personal identity attributes were rated more often than social identity attributes (103 – 110), and social identity attributes had a higher variance with  $SD = 2.45$  vs. personal identity  $SD = 2.35$ .

**Table 4**

*SIPI scale descriptive statistics summary*

Social Identity (SI)	Frequencies									n
	1	2	3	4	5	6	7	8	9	
1. The similarity I share with others in my group (major).	0	3	0	1	8	3	0	0	0	15
3. My family nationality or nationalities.	1	1	1	2	2	0	0	2	3	12
5. The memberships I have in various groups (related to my major).	1	1	2	0	3	4	0	1	2	14
7. The places where I have lived.	1	2	2	0	4	1	2	1	2	15
9. My sense of belonging to my own racial group.	3	0	1	1	3	0	0	2	0	10
11. My gender group.	1	0	3	0	6	0	2	0	2	14
13. The color of my skin.	4	0	1	0	2	1	1	0	1	10
15. My being a citizen of my country.	3	0	0	1	4	1	2	0	2	13
Social Identity $M = 4.84$ ; $SD = 2.45$										
Personal Identity (PI)	1	2	3	4	5	6	7	8	9	n
2. My rebelliousness.	5	2	0	1	2	1	1	0	0	12
4. My need to be completely distinct and unique from everyone else.	2	1	3	2	5	0	1	0	0	14
6. My creativity.	0	0	0	1	2	4	3	3	1	14
8. My sense of being different from others	1	1	2	0	4	4	1	1	0	14
10. My complete individuality.	1	1	0	1	2	2	2	5	1	15
12. My boldness.	2	1	0	0	5	3	1	1	2	15
14. My nonconformity.	3	1	0	1	6	0	0	0	0	11
16. My sense of independence from others.	1	1	1	0	3	3	5	0	1	15
Personal Identity $M = 4.96$ ; $SD = 2.35$										

*Note.* Scale is 1 = not at all important to who I am, to 9 = extremely important to who I am.

### Personal Identity and Choice of Major

The last research objective explored how students whose identities differ from perceived norms navigate the process of choosing their major and career in agricultural education. After examination of the

SIPI scale results, participants' average SI and PI scores were compared to the overall SI and PI mean. Five participants' individual scores that differed furthest from the norm SI and PI means were asked to participate in qualitative interviews, with four participants participating (see Table 5). These participants exhibited more diversity of thought to help explain the phenomenon discovered through the interview questions that were developed based on the model.

**Table 5**

*Interview participants*

ID	Sex	SI Mean	Difference	PI Mean	Difference
A1	Female	2.75	2.09	3.00	1.96
A2	Female	2.67	2.17	5.00	-0.04
A3	Female	2.88	1.97	3.25	1.71
A4	Female	2.75	2.09	1.63	3.34
		Overall SI Mean: 4.84		Overall PI Mean: 4.96	

Interview participants were asked questions from a researcher-developed interview guide centered around six overarching themes aligning with the constructs of the Personal Identity Model of College Major Selection (see Figure 1). Subthemes emerged inductively from participant responses and then were grouped under their relating overarching theme to explain the phenomena relating to the participants that differed from the norm on the SIPI scale and the process they went through in selecting their major and career choice.

**Personal identity**

This theme was explored directly through participant answers to three interview questions and indirectly through three interview questions. The following subthemes emerged: educator, major & career exploration, and self.

Participants expressing the *educator* subtheme were A1, A3, and A4. They believed that teaching agriculture would become part of their identity, but not the only thing that defines them. A1 commented, "I do think that when you become a teacher, you become a member of the community and more of a prominent one, so that becomes your new identity." A4 stated, "people are going to see me and be like, Oh, she's an ag teacher." This fits the social identity attribute of participants where greater importance was placed on "memberships I have in various groups," relating to their association to becoming an agriculture teacher. The personal identity attribute "my complete individuality" was also expressed here as participants place importance on identifying as an agriculture teacher.

Participants A1, A2, and A3 discussed the impact of how their personal identity fit into the subtheme of their *major & career exploration*. A1 said, "So I ended up learning more about teaching and realized, hey, maybe this actually is something that I want to do because I enjoy working with youth." When A2 was exploring majors and careers, she took an Ag careers test and said, "teaching fit my personality the best and so I took a lot of classes while completing my AA degree in early education because I may want to teach elementary agriculture."

The subtheme *self* surfaced across all participants as they explored their personal identity relating to how others would describe them as a person and how they viewed themselves. Family and friends were talked about the most, followed by how peers would describe them along with their personal views. A1 said, "friends would describe me as a grandma, like to stay home, go to bed early, an old soul preferring a more relaxed lifestyle." All of the participants mentioned at some point that it depends on who you ask with A2 commenting, "some people would say I am cold-hearted," "not one to let strangers in easily," "can come

across as not friendly,” or “very much a mom person, have snacks in the purse.” Two of the four participants (A2 and A4) talked about their learning disabilities dealing with ADHD and how it affected them growing up and contributed to their personal identity development. A1 described herself as “I’m a very calm person in terms of my personality,” and “I’ve always loved being with younger people and am super excited for my teaching experience next spring.”

### **Behavioral beliefs**

The behavioral beliefs theme was explored indirectly from participants answers across eight interview questions with subthemes that included: Ag Ed program, attitudes toward education, and passion.

The *Ag Ed program* subtheme emerged across participants A1, A2, and A3, who discussed their beliefs about school-based agricultural education through their experiences. Not all their beliefs were positive and many of their beliefs through their ag ed program helped shaped their perceptions of agricultural education as a potential career. When discussing the ag ed program, A3 said “it is going to be so fun. It was not but I still ended up loving it. So, I was like I am going to stay here and it kind of grew on me.” A4 commented, “freshman year I thought ag was stupid for the longest time and a pointless elective, then I got dropped into it.” Participants’ experiences in SBAE through FFA competitions, leadership teams, and SAE’s formed a positive experience in their minds which helped shape their attitudes about education leading to the next subtheme.

All participants talked about their student and teacher beliefs shaping their *attitudes toward education*. Positive and negative experiences with education had different motivating effects on participants’ selection of major and career field. The unanimous feeling among participants was that teaching is a hard profession but very rewarding. Parents and students can be difficult to deal with, yet there was no better feeling than seeing students love what you are teaching them and succeed in the classroom. A1 mentioned, “It’s not going to be perfect, you’re not going to love it every day, but you have to keep reminding yourself why you entered this job in the first place.” A2 recalled past experiences with teachers and said, “I just did not like how students who deserve these opportunities were not given them. I have seen a lot of ag teachers just not doing it right and it is just unfair the way they were doing things.” When talking about students, A4 said, “just seeing the smile when they catch something, or seeing their brains work in their learning was so rewarding.”

The subtheme *passion* was shared by A1, A2, and A3 when discussing their behavioral beliefs. These participants showed an overall passion for education and agriculture. They believed in sharing their passion for agriculture through teaching the next generation of students to be advocates for the industry. A1 said, “I’m passionate about sharing that education, especially with youth and encouraging youth to get involved in either something they’re passionate about, specifically agriculture, because it is the future, and there are so many things that rely upon that.” A2 said, “I have a passion for guiding children and showing them like, just providing support and everything,” and “it’s the reason why I get up and make lesson plans.” Finally, A3 said, “I am passionate for agriculture. But I am also passionate about just teaching people because there is so many people who are unaware.”

### **Normative beliefs**

Normative beliefs were explored directly through participant answers from four interview questions and indirectly from three interview questions. Subthemes emerging included: education, people, and role models. All participants expressed normative beliefs held throughout each of the subthemes.

The subtheme *community* was centered on the participants’ interactions within the agriculture community, which was very supportive of students, especially those students with a strong family name.

Even communities without strong agricultural ties were very encouraging to students interested in becoming teachers. A1 noted, “the impact I could see teachers making in the community kind of encouraged me to get involved as a teacher but also make it to where I would become a community member.” A4 was appreciative of the community she grew up in, which allowed her to build a name for herself. She said, “The support and encouragement from my community gave me opportunities to succeed and do better in ag. I want to give back to them as an ag teacher so that other kids have those opportunities.”

The subtheme *education* surfaced frequently in reference to what people around the participants would tell them about going into education. Mixed feelings of support and doubt were shared with the participants depending on their view of the education field. Social media also played a role in participants’ normative beliefs with A1 sharing, “I see things online about teachers wanting to get out. It was hard to see, and you must keep reminding yourself why you are doing it and that their experience is not necessarily going to be your experience.” A2 was given mixed signals, noting “a lot of people tell me this path was perfect for me because I do have a passion for agriculture. However, A2 was also told, “This was not a career path that anyone should go down, especially a female because being a female ag teacher is harder than being a male ag teacher, especially being a young female and the pay was terrible.” Similar sentiments were expressed to A3, noting “why would you do that knowing the way education is right now.”

The subtheme *people* includes: family, friends, and peers that influenced participants normative beliefs impacting their personal identity and selection of major and career. The people closest to the participants have largely been supportive and encouraging although some with a bit of concern. A3 said, “My parents have said ‘if that is what you want to do, we will support you. Everyone has been supportive and reassuring and still helping me through my internship. They are concerned that I want to be a teacher though.” A1 noted, “her roommate was super involved in Department of Agricultural Education and Communication and knew a lot of the different pathway options which she shared what she thought I would be good at, and I thought that doesn’t sound too bad.”

The last subtheme that emerged from normative beliefs was *role models*, which proved very influential in participants’ lives and helped them block any negative vibes they were hearing about their chosen profession. These role models were looked up to by participants and someone they went to for help and guidance along the way. A1 discussed her AP environmental science teacher, “she was a fun person to be around and passionate about what she was teaching, so she was encouraging to everyone because she wanted us to get involved.” Former and current agriculture teachers were mentioned a lot as role models by participants, with A2 stating, “He was one of the ones that told me that I should be an ag teacher. He encouraged me and showed me that this should be my career path.” A4 talked about her agriculture teacher, “She became like my school mom, we got really close and she’s the one who ultimately pushed me to become an ag teacher.” Many teachers were credited as role models by planting seeds and inspiring participants to become teachers.

### *Personal and environmental factors*

Personal and environmental factors were influential throughout the model of this study, and this theme was explored indirectly from participant answers across eight interview questions. Subthemes included: Personal Factors and Environmental Factors.

The subtheme of *personal factors* captures the cognitions, beliefs, skills, and self-efficacy of the participant’s ability to learn and perform tasks at a desired level. All participants revealed self-efficacy challenges regarding teaching agriculture, being a subject matter expert, and knowing how to manage a classroom. However, each participant showed resilience and belief that they have the cognitive ability to succeed. A3 discussed her plans to know the subject matter stating, “I can like prep myself with some knowledge, so I can know what I’m doing in front of these kids and go in there and know more than they

do.” Her biggest concern was having an administration that supports her. The biggest concern for A2 was her self-efficacy toward maintaining a safe classroom. She commented, “I want to be prepared to go into a classroom where I know there is a possibility that I could be shot because of all these school shootings. What do I do then? That should be something for which we were prepared.”

The *environmental factors* played a role in all the participants as they discussed the social and physical factors that play a role in their behavior. A common discussion point revolved around the working environment and peer relationships desired by participants. The work environment was important to A1, and she commented, “for my work environment, I enjoy being outside, hands-on learning. I also like the idea of having that inside space to stay organized and develop lesson plans for students and develop the baseline of knowledge.” When talking about the teaching profession A3 had this to say, “Ag teachers from like the opposite end of Florida always know each other and are always there for each other.” A4 said, “My ideal work environment, probably being at a school where the admin support agriculture, and don't just think of you as another elective that wants to see you succeed.”

### *Intentions*

The Intentions theme revolves around participants' willingness to initiate a behavior in relation to selecting a career. This theme was explored directly through participant responses from two interview questions and indirectly from two interview questions. All participants expressed a *desire to teach*, but A2 was willing to keep her options open and had some fallback plans in case teaching did not work out. She stated, “I do hope to be an ag teacher, I want to do high school ag, but I'm also working on my real estate license, and I'll probably go into bookkeeping because I am a certified accountant as well.” A3 knew exactly what she wanted, “I want to be an agricultural educator. I want to teach middle school agriculture.” A4 discussed her ideal teaching scenario, “I want to be at a school where not everyone comes from an ag background. I want to give more people opportunities to learn ag and teach a course that is interesting for the students through hands on learning.”

### *Behavior*

Behavior was the last theme explored from participant responses on one direct and one indirect question with two subthemes emerging: student and working. The ability to make a decision is a major part of identity formation, known as identity achievement.

The subtheme *student* was explored with all four participants able to initiate identity achievement toward becoming an agriculture teacher by selecting their major in agricultural education. A4 stated, “So then I took all the steps in order to come to the University of Florida to be an Ag teacher.” Each of the participants were satisfied with their choices with A3 claiming, “I'm really happy with it.” A1 also stated, “And it kind of just made more sense for me. Yeah, I would say I am pretty satisfied with it.”

Two of the participants, A2 and A3, talked about their behavior initiation when it comes to the subtheme of *working*. A2 said, “I've been teaching high schoolers since I was 18 years old, it has not been easy, because some students were the same age as me.” A3 commented upon graduation with a degree in agricultural education, “Yeah, I am going to have a job anywhere. Really, I am going to walk the stage with a job.”

## **Conclusions and Recommendations**

### **Personal Identity**

Findings of this study explored the personal identity characteristics of agricultural education undergraduate students at the University of Florida. When describing personal interests and characteristics of students majoring in agricultural education, 80% of participants pursuing this major made their decision before graduating high school and 93% of all participants reported being raised in a suburban or rural environment. Participants exhibited many characteristics impacting their identity formation and leading them to pursue a career in agricultural education. Characteristics included: participation in outdoor pursuits; a passion for agriculture; involvement in FFA; engagement in school activities such as clubs, sports, and reading. Research suggests that during the fifth stage of Psychosocial Development (Erikson, 1963) students must resolve conflict or tasks to find one's own identity and were most likely to develop their career interest in agricultural education. "Personal values relating to lifestyle, family, and hobbies were identified as an influencing factor on individuals' decision to teach agriculture" (Ingram et al., 2018, p. 74). These hobbies and interests identified by participants indicate a strong alignment between personal identity development and the values and attributes of agricultural education.

At the University of Florida (UF), most students majoring in agricultural education transferred to UF as a junior in college after graduating with their associate's degree. High school was a crucial period for identifying students whose personal identities align with agricultural education, encouraging them to consider a career as an agriculture teacher. Erikson (1963, 1968) suggests that the more individuals can envision themselves in a particular profession, the more likely they were to pursue a career in that field.

The study suggests that personal identity plays a role in shaping a student's interest in agricultural education. More targeted recruitment efforts from urban areas could diversify the student pool. Identifying potential students in high school, maintaining contact with them, and showing them pathways to agricultural education as transfer students could improve recruitment and expand upon the identity profile of agricultural education majors.

Future research should focus on studying diversity in gender and racial ethnicity within agricultural education by including other universities, particularly those with greater ethnic diversity. Specifically, exploring how minority students' experiences in agricultural education could reduce attrition rates. Understanding how personal identity influences career choice can provide insights into encouraging a more diverse student body.

### **Selection of Major and Career**

The number one factor influencing students' decision to select agricultural education as their major was an interest in agriculture, natural resources, and the environment, which was consistent with participants' top hobbies and interests identified. Other factors influencing students included: an interest and joy in teaching, participation in FFA, and encouragement from their agriculture teacher. Participant interests in agriculture, teaching, and FFA influenced their career choices, with 27% of participants crediting a passion for all of the above. Findings were supported by literature claiming personal experience and participation in agricultural education as influencing factors in students' realization they could see themselves teaching agriculture as a career (Arrington, 1985; Cole, 1984; Edwards & Briers, 2001; Hillison et al., 1987; Ingram et al., 2018). Participants frequently credited their passion for agriculture and the mentorship they received from teachers as pivotal in guiding them toward their major. Agriculture teacher encouragement was noted as a factor in students' decision to become a teacher (Ingram et al., 2018) suggesting that early exposure to agricultural activities and strong mentorship play a critical role in career decisions within this field.

The research showed that students were more likely to pursue a career in agricultural education when their interests align with agriculture-based school activities. Agriculture teachers were crucial in identifying students who exhibit the potential for a career in this field. Developing programs like the Agricultural Education Institute at the University of Florida can further support this process. A longitudinal study is recommended to examine how students' identities and career aspirations evolve over time, especially as they transition from school to work. This could shed light on how agriculture teachers develop an occupational identity and how that identity correlates with their teaching career.

### **Social and Personal Identities Scale (SIPI)**

Examination of students' results from the SIPI scale (Nario-Redmond et al., 2004) revealed students pursuing agricultural education exhibited a balance between social and personal identity, with a slight emphasis on personal identity. According to Nario-Redmond et al. (2004), student preference in college majors will affect the results of their SIPI score, with students leaning toward individualistic majors such as arts and humanities scoring higher in personal identity and lower in social identity. Among participants, the social identity attributes of greatest importance were family, nationality, group membership, and places lived which may indicate that placement in the field of agricultural education is important to the success and longevity of future agriculture teachers. The importance of personal identity reflects the individuality and self-determination often associated with agricultural educators, who combine a sense of belonging within the agricultural community with personal attributes such as independence, creativity, and individuality.

Interpretation of the SIPI scale (Nario-Redmond et al., 2004) results tell us that agricultural education majors value their individuality and their ability to create an identity as an agriculture teacher. Their social identity within the agriculture teacher community was also important to them in being able to find their place and feel like they were making a difference as an agriculture teacher. Making a social contribution influences the lives of students, and giving back to the field of agricultural education was often a motivating factor for individuals to want to become teachers (Ingram et al., 2018).

Future research should focus on using the SIPI scale (Nario-Redmond et al., 2004) to identify social and personal identity preferences of high school students interested in agricultural education to gain a better understanding of the identity formation of students. This could help create targeted recruitment strategies for high school students, aligning their identity development with career pathways in agricultural education. Another recommendation is to explore agriculture teachers' SIPI scores at various stages of their careers to compare personal identity profiles across distinct groups.

### **Personal Identity and Choice of Major**

The Personal Identity Model of College Major Selection (see Figure 1) provided a model for examining participants' decisions to select their major in agricultural education. Personal interviews structured by this model revealed that each theme worked together in shaping their major and career choices. Qualitative results helped the researcher understand how participants' personal identity characteristics influenced their decision to choose their major and career in agricultural education.

Personal identity was formed through the beliefs, ideals, values, and experiences of the participants as they worked through the exploration of majors (identity moratorium) to make a commitment to agricultural education (identity achievement). The exploration of majors takes place during the fifth stage of development, identity versus role confusion, (Erikson, 1963) with three of the four participants considering other majors. All participants became aware of the impact of their chosen major on their identities and embraced this identity formation.

Throughout the interviews participants' behavioral and normative beliefs and personal and environmental factors impacted their decisions. Participants described both positive and challenging experiences in agricultural education, with themes of passion, attitudes, community support, environment, people, and role models emerging from the study. These individuals viewed teaching as a rewarding profession, albeit with concerns about job preparedness and external perceptions of the profession. These students had varying attitudes toward education and their agricultural education programs; with some noting of the challenges they faced but maintaining a strong passion for teaching. Literature supports the social pressures participants face, "discouraging them from pursuing a degree in agricultural education" (Ingram et al., 2018, p. 69).

Role models and mentors played a key role in developing participants' resilience and belief they could become an agriculture teacher. These included family members, teachers, and community members who believed in participants, encouraging them to follow their desired career path. A role model is important for adolescents because they offer knowledge and expertise in a positive environment that encourages growth and helps them believe they can pursue a career in teaching (Lawver & Torres, 2012).

Personal and environmental factors also played a significant role in shaping participants' identities, career aspirations, and self-efficacy toward teaching as they reflected on their childhood, desired work environment, and teaching confidence. The environments in which they were raised influenced their personal interests and hobbies, ultimately guiding them toward involvement in secondary agricultural education or environmental science. These experiences helped them develop the interests and cognitive skills necessary for teaching agriculture. A supportive and preferred work environment was essential for participants to establish meaningful goals both inside and outside the classroom. Their self-efficacy in teaching was rooted in their own SBAE experiences and belief in their ability to draw support from family, friends, school administrators, and the broader community. Agricultural education programs contribute to this self-efficacy by equipping students with the confidence, skills, and hands-on experiences needed to succeed as agriculture teachers (Ingram et al., 2018).

Application of this study includes the creation of an identity profile of agricultural education majors to refine recruitment strategies. Identifying students early in high school and helping them understand the career path to becoming an agriculture teacher would support their identity development and encourage them to pursue a career in agricultural education. Future research should replicate this study for other majors within Colleges of Agriculture using the Personal Identity Model of College Major Selection. This could help create personal identity profiles for different majors, assisting in more effective student recruitment and major selection guidance.

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