

College Major Choice for Students of Color: Toward a Model of Recruitment for the Agricultural Education Profession

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The purpose of this study was to gain a deeper understanding of the reasons students, identifying as non-White, made the decision to pursue a career in agricultural education. This phenomenological study allowed the researchers to obtain the overall phenomenon of the thought processes that encompass decisions of students of color when selecting an academic major in college. Participants described having external and internal value orientations toward college major choice. When a value orientation increased toward a major prior to college, participants tended to be more apt to pursue a specific degree program. It was concluded that in addition to particular value orientations, distinct barriers to the decision-making process also inhibit the choice of agricultural education.

Keywords: recruitment; students of color; barriers, self-determination; diversity

Introduction/Theoretical Framework

The population of the United States continues to grow and expand into diverse cultures (US Census, 2008). In 2008, the United States Census Bureau (USCB) issued a report detailing population predictions by ethnicity from 2010 to 2050. From the report, the USCB predicted the White population to have the lowest increase (1.3%) of 2.48 million people over the 40-year time-period. The Hispanic population numbers included the largest population increase with a 62.5% (83 million) difference in population growth from 2010 to 2050, followed by Asian populations with increases of 32.2% or 19.3 million people and finally African Americans with a 26.8% or 10.7 million predicted population growth by 2050.

With the population of the United States continuing to diversify by race, the enrollment trends for secondary school students reflects a

similar trajectory (Davis & Bauman, 2011). However, similar predictions are not true regarding the diversity of teachers employed at U.S. schools. In 2009, 6.9% or nearly 234,000 of the total teacher population in public schools, were African American, yet African American students, in public schools, constituted 15.7% of the total student enrollment (Coopersmith, 2009; Keigher, 2009). Hispanic student enrollment in public and private secondary schools accounted for 23.8% of enrollment populations, which was an increase from 11% in 1991, and Asian student enrollment totaled 4.4% of the student population in schools. Conversely, Hispanic teachers represented 7.1 % of all secondary school teachers and Asian teachers represented 1.2% of secondary school teachers. White students represented 58.2% of the students enrolled in secondary school, which was down from 69.6% in 1991, while White teachers represented 83.3% of the total teacher

population employed in all secondary schools throughout the United States (Coopersmith, 2009; Keigher, 2009).

The enrollment statistics and employment statistics in United States public schools reveal a gap between the cultural diversity of teachers and the students enrolled in their classes. The lack of teachers representing diverse cultures exists within agricultural education as well. In a 2005 study, 93.4% ($n = 198$) of preservice teachers in agricultural education reported to be White, non-Hispanic, followed by 2.4% Hispanic ($n = 5$), 1.4% ($n = 3$) African American and 0.9% ($n = 2$) Asian American (Rocca & Washburn, 2008). Nearly 95% of preservice teachers in agricultural education are from rural and suburban areas. Rural and suburban areas subsequently represent a majority of White non-Hispanic populations (Dilworth, 1989), which perpetuates the cycle of misrepresentation in ethnicity between teachers and students (Coopersmith, 2009). In a census study of all agricultural teacher education programs over the past five years, a 50% decrease has occurred in the ethnicity of students entering agricultural education teacher preparation programs (Kantrovich, 2007; 2010).

An understanding of the disparity between the cultural representation among students and teachers in American public schools is significant because the cultural background of individuals in power positions has been demonstrated to matter. Previous studies have concluded that agriculturalists from diverse ethnic backgrounds are key role models in helping students of color overcome stereotypes about agricultural sciences (Bowen & Rumberger, 2002; Kandel & Cromartie, 2004; Larke & Barr, 1987; Mullinix, Garcia, Lewis-Lorentz, & Qazi, 2006). The influence of teachers of color has been known to contribute to decreased dropout rates and increased engagement among students of color (Franklin, 1990; Gomez & Rodriguez, 2011; Southern, 1990). Professional organizations such as Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) have been noted as successful organizational examples that increase participation and success for students of color at the postsecondary level (Bowen & Rumberger, 2002; Talbert, Larke, & Jones,

1999). Conversely, literature exists that purports the race of the teacher had minimal influence on the enrollment in secondary agricultural education classes; however, the ability for the teacher to relate socially and culturally with the students of color had major impact on enrollment (Jones & Bowen, 1998).

To date, there is no definitive strategy for closing the ethnic gap in agricultural education between teachers and students or employers and employees. However, those who study this issue might agree that addressing various socialization factors is paramount to understanding why students of color select particular careers (Bowen & Rumberger, 2002; Mason & Hansen, 2004). Socialization is the process through which individuals learn and internalize social values and perceptions in order to function effectively in society. Previous studies investigating influences in career planning posit factors related to socialization serve as the underpinnings for academic major selection (Guay, Sénécal, Gauthier, & Fernet, 2003; Kuijpers, Meijers, & Gundy, 2011; Toyokawa & McLoyd, 2011). These factors include parental education level, parental income level, father's employer, substantive early exposure starting at the middle school level, career opportunities as influences in career choices, and motivational habits at the high school and college levels (Anderson & Kim, 2009; Esters & Bowen, 2004; Esters & Bowen, 2005; Jones & Bowen, 1998; Mason & Hansen, 2004; Talbert & Larke, 1995).

Although the educational literature outside agricultural education, including career and technical education, has examined teacher recruitment in underrepresented populations (Irvine, 1988; Torres, Santos, Peck, & Cortes, 2004), the literature in agricultural education is limited and focuses mainly on student recruitment into agriculture as a whole. With the lack of ethnically diverse teachers in agricultural education, the hurdles students of color have to overcome to enroll in postsecondary education, and the inherent challenges with the recruitment and retention of students of color into the profession (Guarino, Santibañez, Daley, 2006), the question remains, regarding what motivates students of color to pursue a career in agricultural education.

Self-determination theory (SDT) was used as the framework for this study (Deci & Ryan, 1985). Ryan and Deci (2000; 2002) defined SDT as a macro-theory of human motivation emphasizing an inherent orientation toward growth and development through the internalization of attitudes, values, and regulatory processes in social contexts. The term internalization refers to the process by which an individual acquires social mores and gradually transforms them into personal values (Hayamizu, 1997). In other words, the theory focuses on the degree to which behaviors are regulated based on the presence or absence of inducements. The differing degree to which the individual has accepted values makes SDT different from other developmental theories. This perspective does not treat internalization as a dichotomous concept in which values are either accepted or not by the individual, but as a more complex construct in which different types of internalization can be distinguished depending on the type of inducement present (Niemic et al., 2006).

SDT proposes that individuals regulate their behaviors based upon the perception of how engagement in the task will satisfy the basic psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 2000). This perception is based on the positive or negative stimulus or incentives they receive from participation, also known as inducements. According to Deci and Ryan, the satisfaction of these basic psychological needs is necessary for effective internalization and overall well-being. Autonomy denotes the need to experience self-rule during the initiation, participation, and termination of a behavior. Competence refers to the need for achievement when interacting in a social environment. While relatedness concerns the need for belonging and caring while interacting with others.

Previous research has found the processes occurring internally as well as socially have affected individuals' phenomenological experiences and the internalization of attitudes, values, and regulatory processes (Niemic et al., 2006). Therefore, an individual's decision to major in agricultural education could be influenced by how he or she was socialized. Those individuals who have internalized the

perceived benefits of being an agriculture teacher will pursue a career based on internal factors, while those individuals who do not internalize the perceived benefits of being an agriculture teacher but find it is congruent with social norms will pursue the career based on external factors. To the extent that individuals perceived their experiences with agricultural education has satisfied their three psychological needs will determine the degree of internalization; notwithstanding the complexity of internalization and an individual's ability to ascribe to both internal and external values simultaneously.

Purpose and Objectives

The purpose of this phenomenological study was to glean insights on the central reasons students of color select agricultural education as their academic major. The two guiding questions were: (a) What motivates students of color to teach agriculture at the secondary level as their profession; and (b) What inhibits students of color from selecting to teach agriculture at the secondary level as their profession?

Methods and Procedures

A qualitative phenomenological study was implemented in order to obtain information regarding the motivation for seeking a career teaching secondary agriculture. In a phenomenology, the researcher seeks to describe the meaning for several individuals' lived experiences of a concept or phenomenon (Creswell, 2007). In this study, the participants shared a lived experience. Each was a student of color, pursuing a career in a predominantly White agricultural education profession. The procedures for phenomenology, as illustrated by Moustakas (1994), consist of identifying a phenomenon to study, bracketing out one's experiences or biases, and collecting data from several persons who have experienced the phenomenon. Exploring lived experiences of students of color tap into personal experiences not previously studied or shared within agricultural education research. Because this research was qualitative in nature, it followed the basic assumptions of qualitative research

(Creswell, 2007) including: (a) reality is subjective and has multiple views from multiple participants; (b) the distance between the researcher and the phenomenon is minimized; (c) researchers are value-laden and must acknowledge the biases associated with their values; (d) the language is rhetorical in nature and reflective of the human role in the research; and (e) research uses inductive logic and emergent themes.

Participant Selection

The researchers were asked by the National Association for Agricultural Education (NAAE) to attend the National MANRRS Conference and determine the motivating factors for students of color to select teaching agriculture as a profession. Funding for attendance was provided by the NAAE. A purposive sample of 10 students of color participated in this phenomenological study. Polkinghorne (1989) suggests a true phenomenological study consist of the researcher interviewing 5 to 25 individuals who have all experienced the phenomenon. The ethnicities of the participants were African American (five students) and Latino American (five students). Each participant was an undergraduate student in the United States. The majority of participants self-reported to be from rural or suburban America. Each of the participants was pursuing a degree or had considered pursuing a degree in agricultural education with a desire to teach at the secondary level.

Procedures

Participants were nominated by advisors and recruited to participate in a nine-question semi-structured, focus group interview, lasting approximately one-hour. After obtaining informed consent, the interview took place during the first day of the MANRRS national conference. The interviews were audio-recorded and transcribed verbatim. A homogeneous type of sampling was utilized. Miles and Huberman (1994) explained this sampling focuses, reduces, simplifies, and facilitates group interviewing.

A semi-structured interview protocol was prepared to assess the participants' passion for following a degree path in agricultural education. Two researchers moderated the

question and interview session and one researcher took observational notes. All of the students' names were coded and a reflective journal was kept throughout the process in order to bring any research biases to light and help organize thoughts.

Data Analysis

Moustakas' (1994) phenomenological method was employed in analyzing the transcripts of the participants. In this method, six systematic steps in the data analysis procedures and guidelines were set for assembling the textual and structural descriptions. The six systematic steps are: (a) describe the personal experience with the phenomenon under study; (b) develop a list of significant statements; (c) take the statements and group into larger units of information called themes; (d) written description of what the participants experienced with the phenomenon; (e) written description of how the experience happened; and (f) written composite description of the phenomenon incorporating steps 4 and 5.

Trustworthiness

The process of validating the findings followed the format set by Creswell and Miller (2000). The researchers used follow-up interviews with the participants, and diverse methods of questioning from two different researchers to triangulate the responses. Credibility of the data was established using reference material and peer debriefing. An outside source was utilized to review the transcription and coding for validation. Additionally, follow-up phone calls or electronic mails were conducted/sent for content verification. The researchers provided findings to all participants and asked for a confirmation/approval of the results as member checks. According to Denzin and Lincoln (2005), receiving confirmation/approval of the results establishes data confirmability.

Bracketing

Denzin and Lincoln (2005) posit the identification of research bias assists in establishing data confirmability and objectivity. The researchers were each secondary agriculture teachers and are now involved in teacher

education from three different universities. One of the researchers practiced secondary teaching and teacher education in the south and the remainder in the Midwest. One of the researchers is an African American. Through triangulation of the data and noting personal biases in a reflective journal, the researchers made every attempt to minimize the influence their selection to teach played in their interaction, interview, and observations.

Results and Findings

Participants identified several areas of the agricultural education profession as factors influencing their selection. Thematic areas of internal and external values resulted from the interviews as motives for selecting agricultural education as their academic major. However, inducement themes were also acknowledged as possible inhibitors to their selection.

Motives

Internal value.

Internal value emerged from the coding as a major thematic area and defined by the

researchers as the inherent worth of an act in a decision coming to fruition. The participants selected agricultural education for an internal value driven by fun/challenge associated with the profession rather than on external accolades, recognition, or money. In this study, the researchers found two areas representing the theme of internal value: *passion* and *knowledge*.

Participants indicated a passion for making a positive difference through teaching and philanthropic activities. Passion was beneficial in motivating others, a passion for teaching, and a passion for learning. Furthermore, the majority of the participants in the study discussed their lack of knowledge concerning the plethora of opportunities in agricultural education until someone provided them with a better understanding of the industry. Perceptions changed and a value for agricultural education was connected to their individual interests after the participants gained more knowledge. Table 1 displays a sample of the participants' responses to factors influencing internal value on academic major selection.

Table 1

Responses to Factors Influencing Internal Value on Selecting an Agricultural Education Major

Passion	Knowledge
"I love students and I love learning myself."	"The fact that it is everything. It is food, clothes, and everything we need comes from Agriculture. You can practically work anywhere and be in Ag."
"...the only thing I had interest in was education so I said, okay, I'll take Ag Ed."	"See, a lot of people don't understand that a degree in agricultural education can, actually, do so many different things."
"I enjoy learning and the only way to continue learning is by teaching."	"For me I will stay forever. There are so many opportunities for me in agriculture."
"It is really important for me to teach, it's just my passion."	"I told him [husband] that this [agricultural education] would benefit us as a family."
"...a passion to help people with what they need and so on."	"They [students of color] get exposed to what agriculture science is. After the exposure, they begin thinking about a higher education."

External value.

The second major thematic area emerged from the coding was *external value*. External value was defined as the regulation or act of advancement as influenced by social or outside motives. Participants in this study provided evidence of an external value orientation were motivated toward agricultural education by the possibility of two areas: *advancement* and/or strengthening *connections* in agricultural education and related disciplines.

Externally, the participants were influenced by the advancement options following their initial career selection in agricultural education. Individuals who were able to persuade the participants to select agricultural education provided these students with an insight regarding the degree as a stepping-stone for

advancement in pay or status. Each participant, regardless of ethnicity, understood the need for diversification in agricultural education and each felt they could contribute in their own way.

Similarly, participants indicated establishing or strengthening connections to individuals who represented their lifestyle or embedded ardor for the discipline as an influencing factor. Participants noted they identified with agricultural education as a connection to some key facets such as giving back to their community, or serving as a role model, which allowed purpose for the major. In addition, the participants noted a connection with a leader in the agriculture industry benefited their academic major selection. Table 2 displays a sample of the participants' responses to factors influencing external value on academic major selection.

Table 2
Responses to Factors Influencing External Value on Selecting an Agricultural Education Major

Advancement	Connections
“I see myself in the agricultural education field for a good five years and ultimately getting my masters and becoming a principal.”	“I never saw myself immersing in agriculture, but because of her [Ag teacher], I see that.”
“YES. My goal is to eventually receive my PhD and teach at XXX University.”	“Six years after I graduated from high school, I still have that connection with him [Ag teacher]...he influenced me to appreciate agriculture and the diversity of agriculture.”
“I don't want to do it for the rest of my life. I want to be a professor, maybe a dean at a college.”	“I could influence others or the world to a better environment, wait a minute. I can still teach and teach agriculture.”
“I could actually see myself at XXX University and teaching there.”	“I just could feel the connection because I feel comfortable speaking Spanish with my [Ag] teacher, not in English.” “My high school teacher convinced me to go into agricultural education.”

Inducements

Three major themes emerged from the participants' discussion regarding factors impacting their decisions to go into agricultural education. These inducements, when negative, may act as barriers. They were *personal*, *familial*, and *structural*. Personal inducements identify the perceptions of the individual toward the academic and/or professional environment. These perceptions influence both their internal and external values toward a career in

agricultural education. In order to overcome negative personal inducements, passion, knowledge, advancement, and connection must be addressed. The following participant statements supported this idea:

- “You are not thinking in high school about how agriculture touches every aspect of life.”
- “I believe that a lot of Latinos/Hispanics still have a negative perception about agriculture.”

Most of our ancestors and to this day family members still work in the fields from sun up, to sun down with minimal pay. Agriculture is sometimes related to illiteracy, extreme working conditions, and very little reward.”

- “That is because since we were young, agriculture is something not encouraged or linked to positive motivation, so most students don’t see the need of why to promote agriculture, which is a huge part of agriculture education.”

Familial inducements identify family or cultural perceptions toward the academic and/or professional environment. Although mostly an external motive, familial pressures may lessen an individual's opportunity to gain knowledge about the discipline, which will influence the individual's ability to realize their passion for the discipline. Some of the participants' comments on family impact were as follows:

- “If my family support was not present [for agricultural education], I would probably have taken over my father’s business in Mexico and receive my degree in accounting.”
- “Then my family, my mother, they all wanted to know, what is a city boy trying to do in agriculture? They thought I was learning about farms and all that stuff.”
- “My brother steered me toward agriculture even though I did have that negative image.”
- “So joining FFA and agriculture, my family is extremely proud because my great grandparents worked in the fields and that is what got them where we are today.”

Structural inducements identify the connection to the academic and/or professional environment. This is identified through the interactions with the agriculture teacher, school, academic major, and/or industry. In order to overcome structural barriers, there must be an understanding of and ability to communicate and connect to the culture of the identified student of color. To reiterate this message, a few direct quotes were derived from the focus groups such as:

- “It is understanding the culture that you are in. It does not matter whether you are Caucasian or Mexican, African American or whatever...as long as you understand the culture, you will understand how to influence the students.”
- “We [Latino Americans] look at teachers as a role model. As a person of respect, not saying that other cultures don’t, but when my agriculture teacher says that agriculture is a good thing, check it out. What did I do? I checked it out because it is a good thing. He understood what the culture was.”
- “She convinced me to go into Ag and she pretty much convinced my parents. They were like, Ag, what is that? Agriculture education, what is that?”
- “...teenagers are in a lost direction and with the right influence, can be on the right direction.”

In addition to the familial, personal, and structural barriers, it was noteworthy the comments provided by the participants in regards to the damaging images of agriculture that continue to exist in communities with students of color. These images may be the leading cause to the three thematic barriers. When asked to explain the images of agriculture that the participants had prior to selecting agricultural education, they mentioned phrases such as farming, manual labor, lack of (ethnic or racial) diversity, harvesting crops, and slavery. Participants noted that agricultural education must address these images if the goal is to recruit more students into teaching.

Conclusions

Based on the findings of this study, the following conclusions were made regarding the central reasons why these particular students of color selected agricultural education as their academic major: (a) passion for helping others acquire knowledge and their own personal interests to learn about and promote agriculture; (b) knowledge about agricultural education and the opportunities available to him/her as an agricultural educator; (c) perception of financial stability and status as an agricultural educator; (d) perception of having support from family

and the community with the decision to teach; (e) professional support and collaborations; and (f) teacher's race within itself did not encourage nor discourage selection of agricultural education as a major, but the ability for the teacher to relate socially and culturally with the student of color.

Although these conclusions can only be applied to the participants of this study, they do support the available literature on student motivation and the engagement of

underrepresented populations into agriculture and therefore aid in establishing a credible body of knowledge that can be used to address the ethnic gap in agricultural education. Furthermore, synthesizing the findings of this study yielded a conceptual model (Figure 1) that can serve as a guide for developing recruitment interventions and establishing future research questions for students from underrepresented populations in agricultural education.

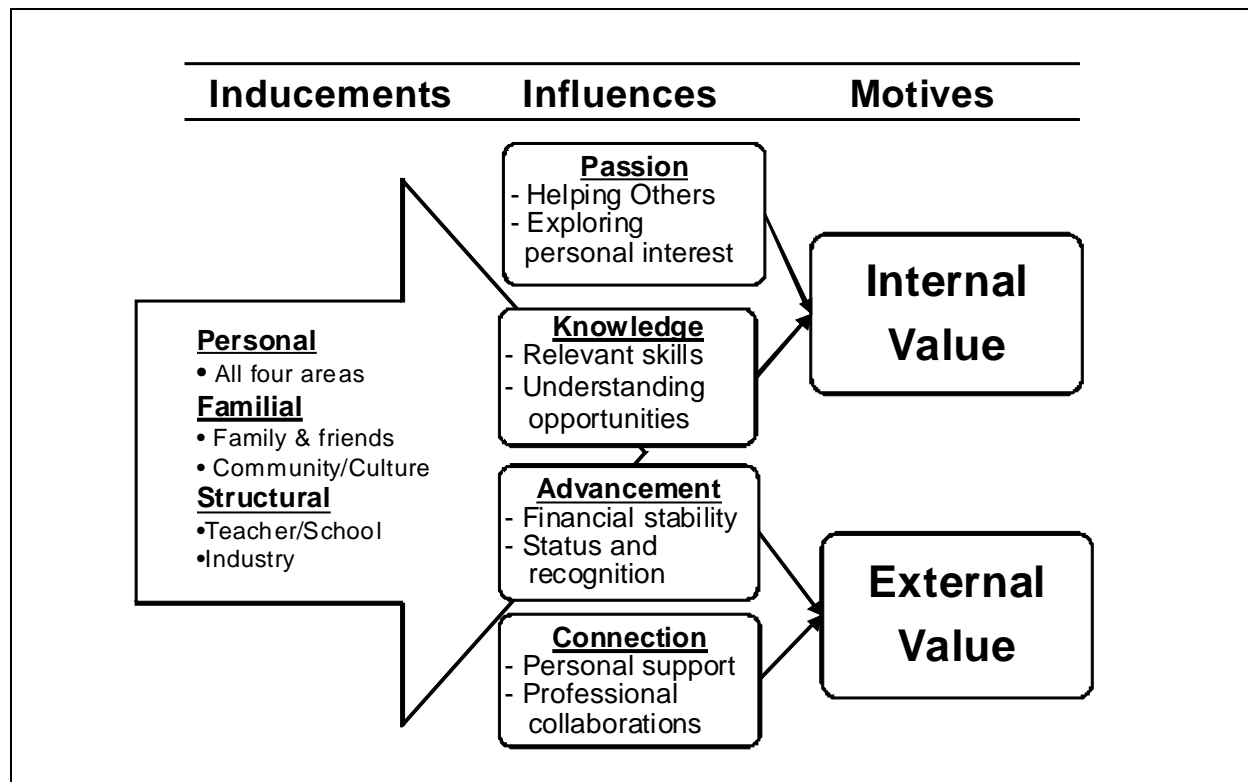


Figure 1. Conceptual model for recruiting students of color into agricultural education

The conceptual model begins with the four factors that influence the student's internal and external motives toward selecting a major. According to SDT, motivation for an individual to act varies based on how the individual internalizes the task (Ryan & Deci, 2002). Therefore, as the individual begins to identify with the four influential factors, one develops strong internal or external values for the academic major, which in turn will encourage the selection of that major. However, there are three major inducements that can act as barriers for selecting one major over the other. Similar to

the findings from Dyer, Breja, and Ball (2003), the inducements that may act as barriers to recruiting students of color are personal, familial, and structural. A successful recruitment initiative will identify which of the three inducements are acting as barriers for individual students and address them while promoting how agricultural education fulfills the four influential factors. This notion is supported by the findings of Roberts, Hall, Briers, Gill, Shinn, Larke, & Jaure (2009) about student participation in agricultural education being positively influenced by personal aspirations (passion),

high expectations and meaningful engagement (knowledge), recognition (advancement), and peer opinion (connection).

Recommendations and Implications

The current demographics of agricultural education do not mirror the diversity in public schools (Roberts et al., 2009). In order to sustain leadership for a viable agricultural industry, agricultural educators must strive to close the ethnic gap by recruiting students of color both at the secondary and post-secondary levels (Bowen & Rumberger, 2002; Jones & Bowen, 1998; Roberts et al., 2009). One way to encourage diversity in the student population is by encouraging diversity in the teacher population (Bowen & Rumberger, 2002). However, based on the findings of this and previous studies, if students of color are to graduate from high school with teaching agriculture as a career goal, specific strategies must be in place that take into account principles of socialization. Respect for the agriculture industry is present among students of color (Mullinix et al., 2006), but the efforts to successfully recruit and retain these students have yet to be fully realized (Bowen et al., 1991; Roberts et al., 2009). All students desire to major in a profession that they can relate to and one that contains a teacher that understands their culture, regardless of that teacher's particular culture. This desire is even more pressing for students of color whose cultures are not salient in the academic environment.

The analysis of the lived experiences of students of color who selected agricultural education as their academic major demonstrated that the two influencing factors of knowledge acquisition and the fulfillment of individual passion are a result of the desire to satisfy the need for autonomy and competence (Mageau et al., 2009). Similarly, the two influencing factors of advancement and connecting community and culture with their profession are a result of a desire to satisfy the need for competence and relatedness (Ryan & Deci, 2000). The implication of these findings suggests that there is a need for agricultural educators to make personal connections with students of color, the students' parents, and their communities. This

connection would aid in better understanding the internal and external motives that encourage academic major selection and position the educator to address barriers to selection.

It should be noted that the value placed on the external motives might not be equal to that of internal motives based on the degree to which the individual ascribes to the influences and the impact the inducements have on the individual. In alignment with motivation theory, the presence of either motive can facilitate a choice to select agricultural education as an academic major; however, the motive that the individual values most does have an impact on the decision to teach. Those individuals that place more value on external motives are more likely to elect to teach if they perceive the presence of advancement and connections in agricultural education. Similarly, those individuals that place more value on internal motives are more likely to teach if they perceive that agricultural education fulfills their personal passions and provides opportunity for personal growth. Because internal motives are more self-regulated and internalized, the volition to teach will be stronger for those individuals with internal value towards agricultural education. Simply stated, it is most important for the retention of students of color that internal value towards agricultural education is present.

To this end, it is recommended that further research involve more students of color to confirm the validity of the conceptual model for recruiting students into agricultural education. Furthermore, based on the consistency between the findings in this study and the literature, the research team offers the following recommendations for implementation and evaluation by agricultural educators:

1. Provide various opportunities for students of color gain knowledge about agriculture and connect their interests to opportunities associated with agricultural education beginning as early as middle school. Previous studies have found that many high school students are inadequately prepared to make decisions relating to their future because there were few programs available in middle schools to provide the necessary

- guidance from teachers, counselors, and parents (Peterson, Long, & Billups, 1999).
2. Address the barriers that decrease a student's internal and external values. In both value areas, the positive connection the secondary agriculture teacher or agriculture liaison had with the participants was critical to overcoming the barriers. As noted in previous literature, perceptions regarding agriculture contain barriers that students must overcome before they can identify the internal and external value of pursuing a major in agricultural education (Dobbins, King, Fravel, Keels, & Covington, 2002; Leatheberry & Wellman, 1988).
 3. Implement strategies that allow the parents of students of color to see the available opportunities in agriculture, such as inviting them to career exploration activities. Familial, personal, and structural barriers must be acknowledged early to provide adequate time for a student and their families to process the information before career and academic major decisions are made (Esters & Bowen, 2003).

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