

A COMPARISON OF TEACHERS' AND STUDENTS' MULTICULTURAL COMPETENCE  
AND RACIAL COLOR-BLINDNESS IN ETHNICALLY DIVERSE AND NON-DIVERSE  
FFA CHAPTERS

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Doctor of Philosophy

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by  
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A Comparison of Teachers' and Students' Multicultural Competence and Racial

Color-Blindness in Ethnically Diverse and Non-Diverse FFA Chapters

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## **DEDICATION**

To my parent, Royce and Dot and in memory of my grandfather, Hobert,

I dedicate this work.

To Mom and Dad – You were right all along. Thanks for pushing me!

To “Pappaw” – As promised, I hope I continue to make you proud!

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A Comparison of Teachers' and Students' Multicultural Competence and Racial  
Color-Blindness in Ethnically Diverse and Non-Diverse FFA Chapters

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**ABSTRACT**

The purpose of this study was four-fold. First, this study sought to describe the sub-constructs of multicultural competence in school-based agriculture teachers and their relationship to the ethnic diversity of local FFA membership in selected high schools. Additionally, this study examined the racial color-blindness of school-based agriculture teachers and their students and its relationship to the ethnic diversity of local FFA membership. This study compared multicultural competence and racial color-blindness between teachers and students. Finally, this study described relationships between teacher and student characteristics in terms of the ethnic diversity of local FFA memberships.

The study consisted of 10 school-based agriculture teachers and their students from a school with an ethnic enrollment of at least 30%. Half of the teachers and students represented a diverse FFA chapter while the other half represented a non-diverse FFA chapter.

Teachers in diverse FFA chapters reported a higher multicultural competence score than teachers in non-diverse FFA chapters. The same results hold true for the students of the teachers. As a whole students reported to believe their teacher's multicultural competence is higher than what the teachers' rating.

Teachers and students in diverse FFA chapters have a higher racial color-blindness than teachers and students in non-diverse FFA chapters. The variety of multicultural training, years of teaching and other teacher characteristics were correlated with the ethnic diversity of the FFA membership. In addition, students' cumulative grade point average, career preference, and educational level of mother are correlated with the ethnic diversity of the FFA membership.

# CHAPTER 1

## INTRODUCTION

### Background and Setting

#### A Discrepancy in America's Schools

The United States is growing and transitioning into a more pluralistic country (Villegas & Clewell, 1998; Woods, 2004; Census, 2008). In 2008, the United States Census Bureau (USCB) issued a report detailing population predictions by ethnicity from 2010 to 2050. The USCB predicted that the White population will have the lowest increase in population (1.2%; 2.48 million) over the 40-year time-period as compared to other ethnic groups. By contrast, the Hispanic population is anticipated to have the largest increase (167.1%; 83 million) followed by Asians (137.3%; 20 million) and African Americans (36.7%; 14 million).

This dramatic change in ethnic composition is expected in public school classrooms across the United States as well (Diller & Moule, 2005; Luft, 1996; Milner, Flowers, Moore, Moore, & Flowers, 2003). Minority students are projected to comprise 48% of the nation's school age children by 2020 (Pallas, Natriello, & McDill, 1989). Projections suggest, however, that the teacher population will not reflect a similar demographic change.

In 2009, 6.9% of the total public school teacher population was African American while African American students constituted 15.7% of the total enrollment in public schools (Coopersmith, 2009; Keigher, 2009). Teacher and student population trends of other minority ethnic groups are similar. For

instance, Hispanic teachers compose 7.1% of the public school teacher population, yet Hispanic students accounted for 23.8% of the total public school enrollment. Of all teachers in public schools, 1.2% are Asian, while Asian students account for 4.4% of the total enrollment. Conversely, 83.3% of teachers and 58.2% of students in public schools are White. (Coopersmith, 2009; Keigher, 2009). The White student enrollment is down 13% over the last twenty years, while the number of White teachers in public schools remains the same (National Center for Educational Statistics, 1991). Obviously, ethnically diverse teachers do not evenly represent ethnically diverse students in public schools. Over the past 20 years, a discrepancy existed in the teacher and student populations and it continues to reflect this trend (1991). Interestingly, Hispanic teachers are the only minority teacher population to increase since 1991 (Coopersmith, 2009; National Center for Educational Statistics, 1991).

Can teachers make an impact on students who are ethnically different than themselves? Representatives of some minority cultures believe education and the role of the teacher is the most prominent factor in promoting social change and improving the life circumstances of minorities (Joint Center for Political Studies, 1989). For example, throughout history, the largest group of African American professionals to provide leadership within African American communities has been educators (Franklin, 1990). Furthermore, ethnic minority students characterized as at risk benefit the most from relationships with non-White, minority teachers (Southern Education Foundation, 1990). King (1993a) and Martinez (1991) explained that Hispanic and African American children need Hispanic and African American role models for academic success. When

controlling for student and teacher ability, minority students scored higher on an economic literacy test with the presence of an African American role model in the classroom (King, 1993b). However, the population gap in teacher and student ethnicities (Coopersmith, 2009; Keigher, 2009) suggests that society is relying on White teachers to serve as role models and foster academic achievement for other ethnicities.

The lack of minority teacher representation exists in agricultural education as well. In a study of the 2005 preservice agriculture teacher population, 93.4% of the respondents reported to be White, followed by 2.4% Hispanic, 1.4% African American and 0.9% Asian (Rocca & Washburn, 2008). This trend is expected to continue as 95% of all teacher education students hail from rural and suburban areas, which subsequently represent a majority of White non-Hispanic populations (Dilworth, 1989). Although the Dilworth report is dated and includes all disciplines, membership data within the agricultural education discipline itself mirror the Dilworth publication (Kantrovich, 2007; Rocca & Washburn, 2008).

As the United States continues to become more ethnically diverse, educators will be called on to teach more students from diverse cultures (Diller & Moule, 2005). It is not sufficient to merely expect students to accept the same antiquated models of agricultural education programs or for schools to be able to hire a few ethnically diverse teachers to meet the need (2005). Instead, a change in cultural sensitivity is needed in order to effectively teach ethnically and culturally different students (Banks, 2003). Adoption of the concept of multicultural competence is necessary in order to accomplish the vision of Banks' (2003) and Diller and Moule's (2005).

## **Multicultural Competence**

Beginning in the mid-1960s, American psychologists “felt the effects of professional and social crosswinds, bringing with them, seemingly intractable problems” (Korman, 1974, p 441). Psychologists noticed changes in the country’s ethnic population, yet they continued to serve primarily White upper and middle-class individuals (Sue & Sue, 2008). Growing concerns and criticisms from psychologists led the American Psychological Association (APA) to conduct a conference in Vail, Colorado (Korman, 1974). Recommendations developed from the “Vail Conference of 1973” led to cultural diversity training in all doctoral programs and educational workshops (American Psychological Association, 2003). In addition, committees were formed to develop strategies to improve psychologists’ ability to counsel individuals from different cultures (Korman, 1974).

As a result, 11 competencies for culturally skilled counseling psychologists were developed from one of the committees (Sue et al., 1982). The 11 competencies hinged on three constructs: awareness, knowledge, and skills. The first construct, awareness, involves sensitivity, value, and respect to another individual’s culture and being comfortable with differences that exist among cultures. The second construct, knowledge, involves possessing a knowledge and understanding of worldviews, group associations, and sociopolitical influences. The final construct distinguishes skills needed to work with minority groups, individually and institutionally. To define multicultural competence, Sue and Sue (2008) utilize the 11 competencies and 3 constructs. Sue and Sue described multicultural competence as “an active, developmental, and on-going process that

is aspirational rather than achieved” (p. 43). Although the term is broad, Sue and Sue (2008) applied a more complex definition of a multicultural competent helping professional. A multicultural competent helping professional is one who:

1. Actively is in the process of becoming aware of his or her own assumptions about human behavior, values, biases, preconceived notions, and personal limitations;
2. Actively attempts to understand the worldview of his or her culturally different clients; and
3. Actively develops and practices appropriate, relevant, and sensitive intervention strategies and skills in working with his or her culturally different client (Sue & Sue, 2008, p. 44).

The commitment to multicultural competence since the Vail Conference has resulted in positive change in counselor/patient relations (American Psychological Association, 2003). The APA continues to improve strategies for training culturally competent counseling psychologists. Moreover, other professions such as human service providers, international relations, and teacher education, have utilized the three constructs for developing culturally skilled counseling psychologists (Banks, 2003; Diller & Moule, 2005).

As for agricultural education, few activities for development of culturally skilled school-based agriculture teachers have been documented in recent issues of the *Journal of Agricultural Education*. Of those, neither provided evidence of an on-going commitment in improving teachers’ level of multicultural competence (Woods, 2004; Webster & Hoover, 2006). In fact, Woods (2004) provided only recommendations while Webster and Hoover (2006) reported positive

experiences among pre-service teachers on a weeklong immersion activity.

Clearly, research in agricultural education has yet to investigate a commitment to multicultural competence.

### **Historical Struggles of Ethnicity in Education and Agricultural Education**

After the passage of Title VI of the Civil Rights Act of 1964, educational equality and multicultural competence came to the forefront in public schools. Title VI prohibits discrimination based on race, color, and national origin, in any program or activity receiving federal financial assistance (Guidelines for Vocational Education Programs, 1979). Through time, diversity and multicultural acceptance has become a mainstream issue, focus, and concern in education (Banks, 2003). For instance, the Vocational Education Amendments of 1968 and 1976 emphasized and mandated reform of vocational and technical education (Phipps, Osborne, Dyer, & Ball, 2008). The purpose was to maintain, extend, and improve existing programs of vocational education, to develop new programs, and to overcome discrimination and stereotyping in vocational education programs (Phipps et al., 2008).

School-based agricultural education and its student organization, the National FFA Organization, have experienced change from the previously mentioned legislation. The merger of the New Farmers of America in 1965 with the FFA and the admittance of females into the organization in 1969 are direct results of Title VI and the Vocational Education Amendments of 1968 (Official FFA Manual, 2008; Wakefield & Talbert, 2000). Since the merger, however, there has been a steady decline in the African American FFA membership (Bowen,

2002; Wakefield & Talbert, 2000). On the other hand, since their admittance, female membership in the FFA has increased (Official FFA Manual, 2008). Do barriers exist that prohibit or discourage African American students to enroll in agricultural education and to join the National FFA Organization? Could a lack of multicultural competence of school-based agriculture teachers be one of those barriers?

### **Significance of the Problem**

As schools continue to become more ethnically diverse, so to should school-based agricultural education programs (Bowen, 2002). However, the ethnic composition of the FFA membership and college graduates in agricultural education suggest otherwise (Kantrovich, 2007; Official FFA Manual, 2008; Rocca & Washburn, 2008; Talbert & Larke, 1995). Considering there are no easy answers for recruiting ethnically diverse agriculture teachers (Talbert, Larke, & Jones, 1999), the profession must seek other strategies for teaching ethnically different students (Woods, 2004). Otherwise, the agriculture teacher population will continue to be non-reflective of current and future student demographics in public schools (Bowen, 2002).

In 2001, agricultural educators were challenged by Dr. Blannie Bowen to aggressively pursue ethnically diverse teachers and to develop better training methods in multicultural education (Bowen, 2002). Prior to this challenge, agricultural education received warnings of a lack of ethnic diversity in student enrollment and concerns that an embedded bias among teachers and their students could be to blame (Whent, 1993). Nearly 20 years later, research findings indicate that pre-service agriculture teachers continue to have a lack of

concern for teaching students of different cultures (Vincent, Killingsworth, & Torres, 2009). Does a connection exist between embedded ethnic biases in teachers and students, a lack of multicultural teaching concern and a lack of ethnic diversity in local FFA memberships? In other words, could the level of ethnic diversity among members of an FFA chapter be attributed to the cultural competence of the local agriculture teacher?

### **Statement of the Problem**

Attitudes, competencies, and biases are found to play a major role in the successful treatment of stakeholders among teachers, counselors, and employers (Brach & Fraser, 2002; Ottavi, Pope-Davis, & Dings, 1994; Pedersen, 2002). However, research regarding multicultural competence and level of teacher bias in agricultural education is limited (Jones & Bowen, 1998a).

How does the profession address multicultural competence? Is multicultural competence observable by students? Does multicultural competence affect the ethnic diversity of membership in FFA chapters? According to Banks (2003), the first step in addressing multicultural competence is to examine attitude toward different cultures. In his Multidimensional Model for Developing Cultural Competence model, Sue (2001) explained that individuals who seek cultural competence are noticed in their professional organization and society. Therefore, it stands to reason that there could be a connection between teacher characteristics of multicultural competence and the ethnic diversity of the FFA chapter.

## **Theoretical Framework**

Research provides a plethora of conceptual and theoretical frameworks that seek to explain multicultural competence (Bennett, 2001). Existing research articles, presentations, and journals on emerging theories and concepts in multicultural competence are based on the multicultural model of psychology, the counselor's wisdom paradigm, and the model of multicultural understanding (Fuertes & Gretchen, 2001).

The framework guiding this research was the Multidimensional Model for Developing Cultural Competence (Sue, 2001; Sue et al., 1998). This model recognizes the cognitive and constructive stages that reflect the various competence levels: awareness, knowledge, and skill. In addition, Sue's (2001) framework reflects and explains the important role that multicultural competence plays in social organizations.

### **Multidimensional Model for Developing Cultural Competence**

Sue's model (2001) was designed to help counseling psychologists become more culturally competent. The model integrates three important dimensions associated with effective multicultural counseling: (1) the need to consider specific culture's worldviews; (2) components of cultural competence; and (3) the focus of cultural competence (Sue & Sue, 2008). In Dimension 1, the model is interchangeable, based on the culture (i.e. race/ethnicity, sexual orientation, and ability level) with which an individual is working. The second dimension focused on the three constructs described in the development of a culturally skilled counseling psychologist (Sue, et al., 1982). The final dimension of the

Multidimensional Model for Developing Cultural Competence is the foci of therapeutic interventions: individual, professional, organizational, and societal.

### **Purpose of the Study**

The purpose of this study was four-fold. First, this study sought to describe the sub-constructs of multicultural competence in school-based agriculture teachers and their relationship to the ethnic diversity of local FFA membership in selected high schools. Additionally, this study examined the racial color-blindness of school-based agriculture teachers and their students and its relationship to the ethnic diversity of local FFA membership. This study compared multicultural competence and racial color-blindness between teachers and students. Finally, this study described relationships between teacher and student characteristics in terms of the ethnic diversity of local FFA memberships.

### **Research Objectives**

The following research objectives were developed to guide the study:

1. Describe selected characteristics of school-based agriculture teachers by the ethnic diversity of the local FFA membership. Specifically: age, number of years teaching agriculture, highest obtained degree, agriculture area being taught, level of effort placed on recruitment, multicultural training received, total FFA membership, percent of ethnic enrollment in chapter, total unduplicated enrollment in agriculture, and percent of ethnic enrollment in agriculture were selected.
2. Describe selected characteristics of school-based agriculture students by the ethnic diversity of the local FFA membership. Specifically: sex, race,

cumulative grade point average (GPA), career aspiration, and parent's educational level were selected.

3. Describe the level of multicultural competence held by school-based agriculture teachers.
4. Describe the racial color-blindness of school-based agriculture teachers.
5. Compare the level of multicultural competence held by school-based agriculture teachers by the ethnic diversity of the local FFA membership.
6. Compare the racial color-blindness of school-based agriculture teachers by the ethnic diversity of the local FFA membership.
7. Describe the level of multicultural competence held by school-based agriculture teachers as perceived by their students.
8. Describe the racial color-blindness of school-based agriculture students.
9. Compare the level of multicultural competence held by school-based agriculture students by the ethnic diversity of the local FFA membership.
10. Compare the racial color-blindness of school-based agriculture students by the ethnic diversity of the local FFA membership.
11. Describe the relationship between selected characteristics, noted in Objective 1, multicultural competence, and racial color-blindness of school-based agriculture teachers with the ethnic diversity of the local FFA membership.
12. Describe the relationship between selected characteristics, noted in Objective 2, of school-based agriculture students with the ethnic diversity of the local FFA membership.

13. Compare the level of multicultural competence held by school-based agriculture teachers with students' perception of teachers' multicultural competence.
14. Compare the racial color-blindness levels between school-based agriculture teachers and their students.

### **Definition of Terms**

The following terms are defined to provide clarity. Each of the terms is used operationally throughout this document.

Awareness – Conscious of own assumptions, values, and biases (Sue, Arredondo, & McDavis, 1992).

Culture – An integrated pattern of human behavior that includes thoughts, communications, languages, practices, beliefs, values, customs, courtesies, rituals, manners of interacting, roles, relationships and expected behaviors of a racial, ethnic, religious or social group; the ability to transmit the above to succeeding generations; is dynamic in nature (Goode & Dunne, 2004).

Diverse – An individual(s), organization, or society associated to an FFA chapter with a minority membership of 30% or higher.

Diversity – A structure that includes the tangible presence of individuals representing a variety of different attributes and characteristics, including culture, ethnicity, sexual orientation, and other physical and social variables (Talbert, 2006).

Embedded Biases – Subtle or blatant and are usually unconscious. Expressed when educators have preconceived ideas about a specific race or gender

that limits the acceptance or access of that group into professional programs or careers. People with embedded biases can subtly or blatantly treat some people as less than equal (Whent, 2003).

Ethnically Diverse School – A school with a minority enrollment of 30% or higher

Ethnicity (Ethnic) – A connectedness based on commonalities in which specific aspects of cultural patterns shared and transmission over time creates a common history and ancestry (Pinderhughes, 1989).

Individual – Someone who is overcoming biased cultural conditioning means conquering the inertia and feeling of powerlessness on a personal level. People are capable of change if they are willing to confront and unlearn their biased conditioning (Sue, 2001)

Knowledge – Have a good understanding of the sociopolitical system's operation in the United States with respect to its treatment of minorities; a clear and explicit understanding of the generic characteristics of counseling and therapy; understanding of institutional barriers; possesses information about a group in association with (Sue et al., 1982)

Minority – An individual, organization, or society that is not representative of the most populous culture.

Non-Diverse – An individual(s), organization, or society associated to an FFA chapter with a minority membership lower than 30%.

Professional – An individual, as previously defined, who evaluates and adopts a code of ethics and standards of practice that are multicultural in scope (Sue, 2001).

Race (Racial) – Phenotypic appearances, such as skin color, hair type, skin hue, eye color, stature, body size, nose, eyes, and head shape.

Racial Color-Blindness – An attitude that the race and ethnicity of an individual should not and does not matter in any situations (Neville et al., 2000).

Rural School – A school that represents at least 75% enrollment of students that reside from a rural home determined by the US Census Bureau (Elder, 1992).

School-Based Agricultural Teacher – A person teaching agriculture and natural resources and related topics to youth or adults in formal or nonformal settings (Phipps, Osborne, Dyer, & Ball, 2008)

Skills – The ability to generate a wide variety of verbal and nonverbal responses, send and receive the responses accurately and appropriately, and exercise institutional intervention on behalf of a minority individual when appropriate (Sue et al., 1982).

### **Basic Assumptions**

The following assumptions were accepted statements assumed to need no documentation. As a result, the following assumptions guided this study:

1. The respondents were certified teachers in the respected states for which the instrument was delivered.
2. The student participants were academically enrolled in high school and completed, or in the process of completing, three years of secondary agricultural education.

3. The school-based agriculture teachers selected student participants that were enrolled in high school and completed, or in the process of completing, three years of secondary agricultural education.
4. The students possessed sufficient knowledge of their FFA advisor to complete the instrument.
5. The respondents completed each instrument honestly and objectively.

### **Limitations of the Study**

The independent variables cannot be controlled by manipulation because the evaluations are based upon pre-established behaviors. This factor limits the research to an ex-post facto study. Because the variables are controlled, the researcher can infer a genuine relationship. Although a relationship may occur, it may be caused by other variables not considered in the study (Ary, Jacobs, Razavieh, & Sorensen, 2006). In addition, the researcher recognizes the following limitations.

1. The dependent variables are limited due to the number of agricultural education programs in rural schools that entail a 30% or higher minority enrollment.
2. In order to find FFA chapters that reach the diverse, the researcher is limited to most southern states and small schools in various pockets of the United States due to historical migration patterns.
3. In order to document a cumulative grade point average from each student participant, the student had to provide it. Therefore, GPA is limited to the provided response of the student participant.

4. The study utilized a pre-identified case study population. Therefore, the sample was not representative of the entire population of secondary agriculture teachers and is non-probabilistic; caution should be exercised when interpreting the results and interpretations should not extend beyond the sample. The schools were selected based upon their distance from Columbia, Missouri.

## **CHAPTER 2**

### **REVIEW OF LITERATURE**

#### **Theoretical/Conceptual Framework**

#### **Background to the Development of the Multidimensional Model for Developing Cultural Competence**

Beginning in 1973, issues of cultural encapsulation and its damaging affect on minority individuals receiving psychological counseling generated numerous recommendations among the counseling profession at a conference in Vail, Colorado (Korman, 1974). A few years later, 1977, Sue and Sue wrote an article entitled, “Barriers to Effective Cross-Cultural Counseling.” This article contributed to a debate toward multicultural competence. Within the article, the authors emphasized that poor communication may occur in counseling when a counselor cannot clearly understand cultural messages from the client and communicate information appropriately by the culture of the client. Following Sue and Sue’s article, three conferences noted a series of deficiencies in psychological training in working with groups representing the different religions, races, ethnic backgrounds, sexual orientations, and economic statuses (Sue et al., 1982). In 1980, the American Psychological Association voted to develop an APA Board of Ethnic Minority Affairs with the first challenge: to create policy recommendations in training, service delivery, and develop activities that increases awareness.

As a result, Sue et al. (1982) developed the 11 competencies of the culturally skilled counseling psychologist. These competencies hinged on three dimensions: awareness, knowledge, and skills. The first deals with one’s *awareness*, sensitivity,

value and respect to another individual's race, aware of own values and bias, and is comfortable with differences that exist. The second dimension recognizes that a good culturally skilled counselor has a good *knowledge* and understanding of their worldviews, the group they work with, and the sociopolitical influences that exists. The third and final dimension distinguishes the *skills* needed to work with minority groups, individually and institutionally.

The 11 characteristics paved the way for different paths in training and developing sound and culturally competent counseling psychologist. However, research began to reveal holes in the model that suggested other cultures, besides race, needed to be included (Ibrahim & Arredondo, 1986). The Association for Multicultural Counseling and Development recognized the need and in 1991 recommended to amend and adopt new standards for practice that would encompass a multicultural view (Robinson, 2005).

The recommendation led the restructure of the 11 characteristics of a culturally skilled counseling psychologist into 31 cross- (or multi-)cultural counseling competencies. Sue, Arredondo, and McDavis (1992) continued to utilize the three dimensions, but added three additional characteristics. The three characteristics developed were: counselors' beliefs and attitudes of own assumptions, values, and biases; understanding in the worldview of the culturally different client; and develops appropriate intervention strategies and techniques. The three dimensions (beliefs and attitudes, knowledge, and skills) and three characteristic cross to explain a series of competencies (see Figure 2.1).

Beliefs & Attitudes	Understanding	Strategies & Techniques
<ul style="list-style-type: none"> <li>• <b>Awareness</b></li> <li>•culturally aware and sensitive</li> <li>•aware of own background's influence</li> <li>•recognize own limits</li> <li>•comfortable with differences that exist</li> <li>• <b>Knowledge</b></li> <li>•of own race and cultural heritage</li> <li>•of the affects of oppression, racism, discrimination, and stereotyping</li> <li>•of their social impact</li> <li>• <b>Skills</b></li> <li>•seeks education, consultation, &amp; training</li> <li>•always seeking to understand themselves</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Awareness</b></li> <li>•aware of their own negative emotional reaction to others</li> <li>•aware of their stereotypes and preconceived notions</li> <li>• <b>Knowledge</b></li> <li>•aware of life experiences, heritage, and historical background</li> <li>•different cultures affect personality, vocation, disorders, behaviors, and approaches</li> <li>•aware of sociopolitical issues and their affects</li> <li>• <b>Skills</b></li> <li>•familiarize with relevant research</li> <li>•become actively involved with individuals outside the setting</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Awareness</b></li> <li>•respects beliefs and values</li> <li>•respects native practices and fundamental help-giving networks</li> <li>•value bilingualism</li> <li>• <b>Knowledge</b></li> <li>•understand that generic characteristics of counseling may clash with cultural values</li> <li>•aware of institutional barriers that prevent minority use</li> <li>•of the potential bias in assessments and interprets findings in mind of cultures represented</li> <li>•of family structures, hierarchies, values, and beliefs</li> <li>•aware of discriminatory practices at the social and community level</li> <li>• <b>Skills</b></li> <li>•engaged in a variety of helping responses</li> <li>•exercise intervention skills</li> <li>•not averse to seeking consultation in religious and spiritual leaders</li> <li>•take responsibility for interacting in the language requested</li> <li>•trained and efficient in the use of assessments</li> <li>•attend to and work to eliminate biases, prejudices, and discriminatory practices</li> <li>•take responsibility in educating their clients</li> </ul>

Figure 2.1: Cross-Cultural Counseling Competencies

## Multidimensional Model for Developing Multicultural Competence

In 1992, Sue, Arrendondo, and McDavis developed the Tripartite Model of Multicultural Counseling Competencies, but following several issues concerning the incorporation of psychology, Sue (2001) developed the Multidimensional Model for Developing Cultural Competence (see Figure 2.1). The MMDCC consists of three primary dimensions of multicultural competence: specific racial/cultural group perspectives, components of cultural competence, and foci of cultural competence. Each cell in the model represents a combination of the three major dimensions.

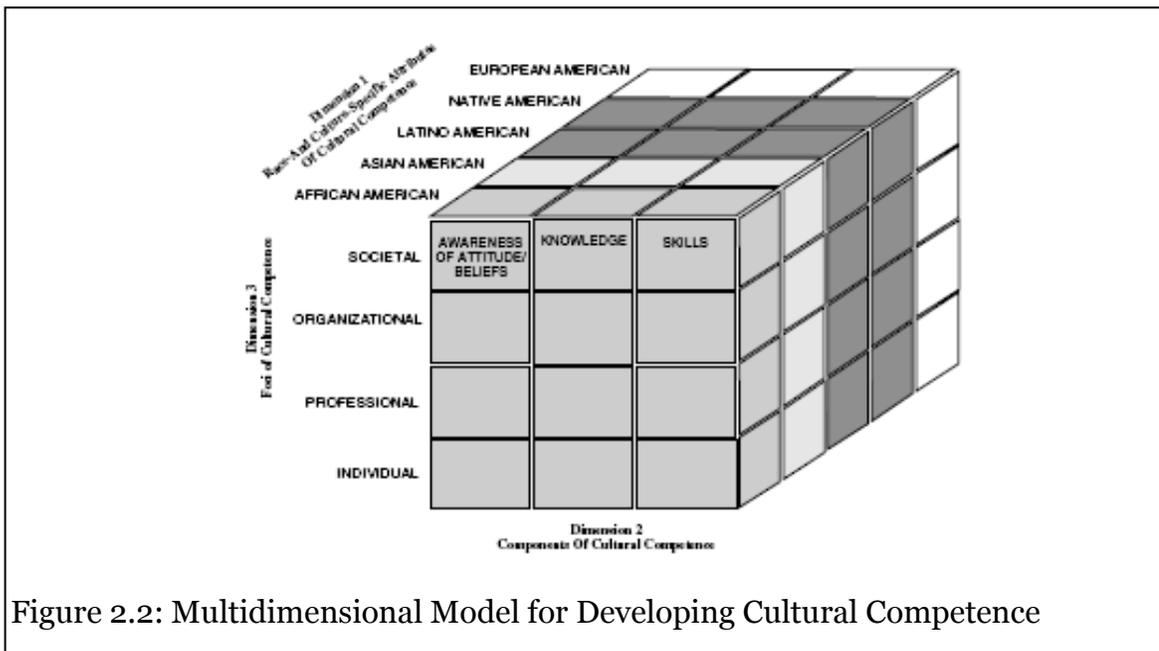


Figure 2.2: Multidimensional Model for Developing Cultural Competence

### **Dimension 1: Race- and culture-specific attributes of competence.**

This dimension pertains to acknowledgement of races or cultures. The reason the model includes more than just race is justified from concern that culture extends beyond race (Carter, 1995). Sue et al. (1999) explains that enhancing multicultural competence means balancing an understanding of the sociopolitical forces that dilute the importance of race and our need to

acknowledge the existence of other group identities related to culture such as ethnicity, social class, gender, and sexual orientation. That being said Sue (2001) places emphasis that people may belong to more than one cultural group. Therefore, when utilizing the MMDCC, a list of races or salience of one culture should be recognized. In Figure 2.1 as well as in this study, the model depicts race, more specifically African American, Asian American, Latino/Hispanic American, Native American, and European American, as the area being assessed for multicultural competence.

### **Dimension 2: Components of multicultural competence.**

According to Sue (2001), minority individuals are often correct when complaining about therapist, in this study teachers, cannot relate to their life circumstances, are insensitive to their needs, and have little insight to their own personal biases. Therefore, the components of multicultural competence must be about social justice, providing equal access and opportunity, being inclusive, and removing individual and systemic barriers to fair services (Sue, 2001).

Dimension 2 composes of the constructs from the multicultural counseling competencies (Sue et al., 1998). The constructs are composed of an individual's acquisition of awareness, knowledge, and skills needed to function effectively in a pluralistic democratic society and on an organizational/societal level (Sue 2001). Sue (2001) explains that the acquisition of the three constructs help an individual develop new theories, practices, policies, and organizational structures that are more responsive to all groups.

### **Dimension 3: The foci of multicultural competence.**

The foci of dimension 3 examine the person versus the organizational systems of analysis. The work on multicultural competence begins and, typically, focuses on the individual level (Sue et al., 1998). Development of multicultural competence along dimension 3 proceeds in a concerted, hierarchical fashion along four main foci: individual, professional, organizational, and societal levels (Sue, 2001). This study examines the individual and professional foci of dimension 3.

Four principals are noted in seeking to become multicultural competent at the individual focus (Sue & Sue, 2008). First, the individual must experience and learn from as many sources as possible to check the validity of their assumptions and beliefs. Second, the individual spends time with healthy and strong people in that culture. Third, the individual must supplement their factual understanding with the experiential reality of the groups they hope to understand. Finally, the individual must become attentive to bias in themselves and the people around them (Sue, 2001).

Most criteria used to judge multicultural competence is strongly linked to the individual (Sue, 2001). However, professional multicultural competence looks at the individual in their professional setting (Sue et al., 1998). In the broadest sense, a professional multicultural competent means that the agricultural education department reevaluates its definition of agricultural education and adopts codes of ethics and standards of practice that are multicultural. Sue (2001) says that, “failure to translate multicultural competencies into actual practice will only continue the path of cultural incompetence” (p 806).

## **Racial Color-Blindness**

Before an individual can have a desire to become multicultural competent, they must first acknowledge that they are multicultural incompetent. According to Sue (2001), major obstacles seem to block the path toward attaining the first focus of multicultural competence, the individual. One obstacle is the realization of acknowledging personal biases is difficult because people perceive and experience themselves as moral, decent, and fair people (Sue & Sue, 2008). The fact that people operate from a politeness protocol, disinclines them to examine, explore, and discuss unpleasant realities of prejudice, stereotyping, and discrimination (Sue, 2001), which leads to another obstacle.

Many times teachers that face these obstacles will resort to identifying characteristics of the culturally different student rather recognizing the student's culture and examining their own biases. This process results in an alienation of the culturally different student, who then regards the teachers guilty of prejudice or stereotyping (Cochran-Smith, 1995). When this occurs, the teacher is guilty of racial color-blindness. Racial color-blindness is an attitude of denial in the social significance of race, or culture, and the dismissal of the existence of contemporary prejudice in the United States (Gushue, 2004). According to Neville et al (2000), racial color-blindness is not an inability to see, but to the failure to acknowledge that examples of potential discrimination or prejudice constitute evidence of societal racism. Therefore, if an individual is racially color-blind, then difficulty will exist in their ability to become an individual who is multicultural competent.

## **Research in Multicultural Competence**

Sue's development of the cultural competencies spurred continued research the following twenty years in evaluating, development of instruments, training, and empirical studies in multicultural competent individuals (Worthington, Soth-McNett, & Moreno, 2007). Of the research on multicultural competence, startling discoveries have percolated, developing into further advancements for counselors and educators. Constantine (2001) found that racial and ethnic counselor trainees were rated as more competent in their awareness level with minority patients than their colleagues who were White. The need for additional training and awareness does not end among counselors. Within the medical field alone, professionals are urging the importance of proper training in multicultural competence (Tervalon & Murray-Garcia, 1998). These studies along with others serve as motivating factors in the development of best practices and training in multicultural education.

According to Banks (1995), the importance of training, in the form of multicultural education, is broke down into three major factors. The first factor describes ethnic pluralism as a growing societal reality that influences the lives of young people, while the second factor states that in one way or another, individuals receive knowledge or beliefs, sometimes invalid, about ethnic and cultural groups. The final factor says that beliefs and knowledge about ethnic and cultural groups limit the perspectives of many and make a difference, often a negative one, in the opportunities available to individuals representing different ethnic groups (Banks, 1995). The instruction provided in Banks' training book spurred additional research and recommendations in hopes of providing more

efficient training techniques in multicultural education (Flores & Heppner, 2002; Banks, 1995; Banks, 1994; Grant, 1992).

As a result of the training improvement efforts, success in counselor/patient relations were found in the form of higher retention and attrition efforts by the patient when receiving counseling from a counselor who received training in multicultural education (Wade & Bernstein, 1991). In addition, the trainings and research led to the revelation of various conceptual and theoretical frameworks in cross-cultural competence (Locke, 1998; Herring & Walker, 1993; Helm, 1990).

### **Need for Multicultural Competence in Education**

Industries are accepting, implementing, training, and hiring diverse and culturally competent individuals, including education. However, this has not always been the case. According to Gay and Howard (2000), teachers across the United States do not equal the diversity of the population by stating that over 87% of the nation's teachers are White or European American. Universities, over the past few decades, are calling out to the profession to diversify their faculty—to increase the representation of minorities and women (Erekson & Trautman, 1995) by raising the question, “Why is the profession homogeneous?” Larke, (1990) stated, “Preservice teachers—those individuals who are teacher candidates in teacher education programs—often enter classrooms culturally, racially, and ethnically incompetent.” Ladson-Billings (1995) suggested that a cultural mismatch exists between teacher preparation enrollments and the students they serve. In part, because the students had little contact with people that were different from themselves (Cockrell, Placier, Cockrell, & Middleton, 1998).

The previously mentioned research has raised concerns among teacher educators about multicultural competence and action is being implemented. A 2006 research by Mayhew and Grunwald provides that, on average, male and female faculty members of color were more likely than White male and female faculty members to incorporate diversity-related content into their course material. This failure to incorporate diversity into the curriculum has its effects. The National Center for Educational Statistics (Lairde, Cataldi, Ramani, & Chapman, 2008) reported between 347,000 and 544,000 tenth through twelfth grade students dropped out of secondary schools over the last decade. Studies provide evidence that the majority of these dropout students are minority and are due to the lack of acceptance in a classroom or failure to relate to the educator (Friedenberg, 1999; Grant & Sleeter, 2003; Kurlaender & Yun, 2006). However, if students of various cultures are in school, the diversity of the classroom and the educational experience of all students increase (Umbach & Kuh, 2006). In addition, students of color tend to bring rich experiences and perspectives that engage students in diversity related activities. These activities are reported to create higher levels of academic challenge, greater opportunities for active and collaborative learning, and a more supporting environment (Sleeter, 2001; Umbach & Kuh, 2006).

### **Multicultural Competence in Education: Awareness, Knowledge, Skill, and Racial Color-Blindness**

Educators from all areas of education are calling out for teachers to increase their awareness in multicultural education and demand for more culturally competent teachers (Bennett, 1991; Crow, 2008; Friedenberg, 1999;

McAllister & Irvine, 2000; Sheppard, 1983). Art educators, for example, are mimicking cultural competency by defining a culturally competent teacher and addressing that they (culturally competent teachers) are most important in meeting the needs of a population rich in diversity (Andrus, 2001). In order to help their members understand and grasp the importance of cultural competence, the National Education Association released a series of tips on how to become more aware of students who are culturally different than themselves (NEA, 2002).

Although efforts are visible in the attempt to prepare culturally competent teachers, research continues to provide information that eludes one to assume that a need for cultural competence exists now more than ever. The present issue has lead educators to finger pointing and excuse blaming. Some believe that most teachers receive limited preparation in working with minority students who fail to conform to White, middle class norms (Villegas & Clewell, 1998). While others believe that teachers do not understand their own worldviews and the views of their students (Bennett, 1993). This lack of understanding can related to teacher bias that reflect, sadly, in student performance (Downey & Pribesh, 2004) and in return lead to self-fulfilled prophecies that confirm a teacher's stereotypes (Obiakor, 2001).

The results of the aforementioned are noticed among the results and expectations of secondary minority students. More than coincidence can explain why 80% of all gifted and talented students within the United States are White, who, subsequently, represent only 17% of the K-12 school population (Fry, 2005). It is easily assumed that the expectations among African American youth, males in particular, are low; resulting in poor performance when educators view these

students as endangered, dangerous, and poor communicators in the classroom (Jackson & Moore, 2006; Beachum & Lewis, 2008). These instances imply that minority students are disadvantaged, academically based on race and/or ethnicity (Gordon, 2006). In an effort to encourage educators to provide equal opportunities to all students that result in positive contributions to society, Allemán (2006) wrote: “Educational accountability in a democratic society should provide teachers and school administrators with the means to intelligently and honestly offer each child an equal opportunity to develop as an individual” (p. 30).

Some may believe that the No Child Left Behind (NCLB) Act will help by requiring public schools to show evidence that learning exists among all students. This, in theory, will drive educators to examine their own practices and contributions to the underachievement of minority students, which result in an individual growing to become multicultural competent (Beachum & Lewis, 2008).

In the events leading up to and following the passing of NCLB, researchers were developing and implementing best practices in preparing teachers to become multicultural competent. Teaching strategies in preparing pre-service teachers for a culturally different classroom entailed the use of case studies (Kleinfeld, 1998), student teacher placement (Stachowski & Mahan, 1998), identification of one’s own race, culture, and color-blindness (Cochran-Smith, 1995), and using multicultural theory into classroom practice (McAllister & Irvine, 2000).

However, other research acknowledges criticism toward these strategies. One study reported the lack of reflection on culturally responsive teaching among pre-service teachers and their cooperating teacher, with both admitting to a lack of knowledge about culture (Gormley, McDermonnt, Rothenberg, & Hammer,

1995). Milner, et al., (2003) revealed that preservice teachers report neutral responses in a study on cultural integration, suggesting that the teachers were not sure how they felt about integrating their learning environments with curricula, assessments, and other programs that support all cultures in the classroom.

Cochran-Smith (1995) believes that education will continue to see mixed results in developing multicultural competent teachers as long as racial color-blindness exists. Furthermore, Cochran-Smith believed that teachers should seek multicultural competence and realize the hindrance that racial color-blindness has on students through her statements. She said,

“Teachers who are systemic and critical inquirers do not have to be color-blind in order to be fair to all students or wait until authorities of teacher education tell them the strategies that are most effective to a culturally diverse learner. Rather, these teachers are involved in intellectually vital and independent pursuits to try to answer some of the toughest questions there are about how to work effectively in the local context with learners who are like them and not like them” (Cochran-Smith, 1995, p 520).

It seems that Cochran-Smith’s suggestions to teachers correlate with the purpose and description of Sue’s Multidimensional Model for Developing Cultural Competence.

### **Multicultural Competence in Career and Technical Education (CTE)**

Some may argue that race plays a minor role in employment opportunities and expectations. However, research conducted in 1996 followed the distribution of Black and White employment at all postsecondary institutions within the United States, concluded that nearly two-thirds of Black employees received lower

status positions and nearly two-thirds of all White employees received higher status positions (Kulis & Shaw, 1996). Are these employment opportunities a reflection of the technical skills training and education that students receive at the secondary level?

Organizations were changing their rules and lawmakers were passing bills, but Americans were failing to provide welcoming arms to the Civil Rights Act (Spring, 2007). In 1973, the Department of Health, Education, and Welfare was sued for its failure to enforce Title VI in a number of education areas, including vocational education (Department, 1979). Guidelines were forced, yet adopted due to the apparent vocational education administrators' engagement in unlawful practices (Department, 1979).

Laws can be enforced, but perceived actions and opinions are not easily changed. Beginning in the 1960's school districts began to desegregate students by race in order to provide a better education. However, research provides us with mixed views on the success of this action (Kurlander & Yun, 2006). Educators, subconsciously, based their expectations for student performances on factors such as gender, socio-economic status, ethnicity, sexual orientation, and appearance instead of on ability (Green, 1989). In fact, race and socioeconomic status of a student were significant influences on secondary course assignments of electives (vocational or non-vocational route) and principals' expectations (Lewis & Cheng, 2006). These poor expectations and course assignments result in references of traditional vocational education programs as "dumping grounds" for African American and other minority students who are labeled underachievers (Rivera-Batiz, 1995). Growing evidence provides that teacher education programs

(including CTE) are designed for White, English monolingual students and generally ignore the background and experiences of prospective teachers of color (Montecinos, 1995; Zeichner & Hoft, 1996). Considering the training teachers received in multicultural education and the secondary course assignments student receive, it is easy to assume why results in earnings would produce a 17 percent difference between minority students who attend general high school programs and those who attend career and technical education programs (Montecinos, 1995).

The income difference between vocational and non-vocational students is not the only dark cloud that lingers over Career and Technical Education (CTE). CTE teachers were found: to have difficulties with language and communication barriers between multiple minority groups (Friedenberg, 1995); disagree that changes need to reflect diverse students (Adams & Hall, 2000); and experience uncomfortable feelings with cultural diversity (Adams, Sewell, & Hall, 2004). In addition, research found that a lack of trust exists among various groups (racial, religious, socio-economic, etc.) toward the CTE industry (Cheng & Lewis, 2006).

Equity issues currently exist in Career and Technical Education (Scott, et al., 2003), but an attempt is being made to address the issue of multicultural competence that subsists in classrooms while continuing to prepare students for an evolving global society (Imei, 2000). Research suggests that a positive relationship exists between CTE and school retention (Berryman, 1980). Career and Technical Education teachers reported that teaching to students with language and culture differences were difficult, yet rewarding (Rehm, 2008). This finding suggests that the teachers enjoy teaching different minority groups, which

is an opportunity that the CTE industry should capitalize on. However, in this same study the teachers reported a lack of understanding, knowledge, and skill when working with minority students and their family. This signals a red flag that multicultural incompetence exists among CTE teachers and that CTE should continue to push for research and training in order to minimize barriers in preparing students.

### **Multiculture in Agricultural Education**

Large gaps exist in the ethnic demographics of teachers and students in agricultural education, including the industry's two largest states, California (Trexler et al., 2004) and Texas (Talbert and Larke, 1995). Prior to the Trexler study and during the depiction and estimates of the changing population (Villegas & Clewell, 1998), agriculture educators were provided a warning. Blannie Bowen (2002) suggested that within this cultural shift comes a fundamental challenge: either aggressively pursue methods to draw a diverse pool of new teachers into the discipline or remain a course of study with teachers whose backgrounds are not reflective of the students they teach. It should be noted that non-reflective backgrounds in teachers and students were not always the case in agricultural education.

According to Wakefield and Talbert (2000), the New Farmers of America (NFA), a national organization of African American farm boys enrolled in vocational agriculture, reached a membership of over 58,000 in 1963. In 1965, the NFA merged with the Future Farmers of America with nearly 57,000 members and by 2009, the enrollment of African Americans was just over 20,000 (National FFA Organization, 2009). As a method to address the decline of ethnic minority

enrollment, the National FFA Organization started the H.O. Sargent award in 1996. The purpose of the HO Sargent award was to promote diversity in agricultural education (Official FFA Manual, 2009). However, the H.O. Sargent award recognized its final recipient at the 2008 National FFA Convention due to minimal participation (National FFA Organization, 2009).

Research for the decline in African American FFA membership reflects the lack of acceptance of students and hiring of teachers in consolidated schools, universities, and staff of state departments of education (Wakefield and Talbert; 2000). This attitude reflects racial prejudice and a lack of support for the culturally different individuals that have an interest in agriculture. Although the results of the NFA/FFA merger reflect poorly on agricultural education and race, historical events and attitudes prior to the merger reflect these same results (Croom & Alston, 2009). The image of agricultural education could be different today, if multicultural competence existed.

### **Multicultural Competence and Agricultural Education**

In 1991, the American Association for Agricultural Education appointed a committee to examine the recruitment, retention, and career enhancement strategies utilized by 36 agricultural education departments (1862, 1890, and regional institutions) across the United States (Bowen, et al., 1991). From the findings: the committee concluded that:

“Nothing special or different has been done in most agricultural education departments across the nation for recruitment and/or retention of students (graduates and undergraduates) from diverse populations”(p. 6).

Although the 1991 committee report is dated, little argument can be made toward its relevance when comparing current ethnic graduation rates in agriculture education departments across the United States (Kantrovich, 2007). Agriculture teacher educators were recommended to seek training in diversity education prior to preparing school-based teachers for a multicultural environment (Jones & Bowen, 1998b; Kelsey, 2006). Following the recommendations, Talbert and Edwin (2007) found that agriculture teacher educators' engagement in diversity workshops and seminars are limited yet they encourage diversity-related statements in teacher education classes. The encouragement was through involving preservice agriculture teachers in early field experiences and student teaching in schools with students different from themselves (Talbert & Edwin, 2008). However, the study did not define students different from themselves nor determine if these students were in the agriculture program. If agriculture teacher educators are limited in multicultural training, then school-based agriculture teachers should provide limited evidence in multicultural competence.

In various areas of the United States, agricultural education has made efforts to produce culturally competent teachers through learning experiences in multicultural education (Bowen, 1993; Webster & Hoover, 2006; Woods, 2004). However, overwhelming research provides evidence that the agricultural education industry are lacking, and falling behind in culturally competent teachers who are aware, can recruit, will familiarize themselves with, and are accepting of various cultures within a school, (Bowen, 1993, 1994; Bowen et al., 1991; Luft, 1996; Warren & Alston, 2005).

Students representing a minority culture (i.e., race, ethnicity, sex, gender orientation, socio-economic status, religion, and social culture) fail to enroll or be retained in secondary and postsecondary agricultural education courses due to a variety of barriers. These barriers consists of lack of role models, stereotypes, sexual harassment, perceived salaries, lack of diverse educational practices, and inclusion of various cultures in a lesson (Dobbins et al., 2002; Jones & Bowen, 1998b; Luft, 1996; Sheppard, 1983; Talbert & Larke, 1995; Warren & Alston, 2005). Research has explained the barriers students representing minority cultures need to overcome in order to obtain a positive experience in agricultural education; research also explains the barriers for teachers (Rocca & Washburn, 2006; Camp, Broyles, & Skelton, 2002; Joerger & Boettcher, 2000). However, research does not exist on the barriers agriculture teachers experience in obtaining multicultural competence.

Roberts and Dyer (2004) developed 40 characteristics to describe an effective agriculture teacher. None of the 40 characteristics represented nor mirrored any of 33 multicultural counseling competency constructs (Sue et al., 1982). Furthermore, research provides limited evidence that agricultural education have the awareness, knowledge, ability, or attitude to effectively educate students from diverse cultures. Connors and Elliott (1995) concluded that although agriculture science students performed as well on state science examinations as students not enrolled in agriculture science; however, no increase was apparent in the performance of students from minority backgrounds.

In a paper, Whent (1993) stated, “The agricultural education profession continues to exhibit a severe shortage of teachers and students from diverse

populations and often members of minority populations are impeded from entering agricultural education because of embedded biases of teachers and White students.” (p. 11) Talbert and Larke (1995) noted, “...it appears that peer pressure not to enroll and negative interactions with agriculture students may be a cause for concern.” (p. 44)

Attitude, as described by Woods (2004), must change in order for secondary agriculture teachers to become less ethnocentric and biased. The attitude of secondary agriculture students are a reflection of the secondary agriculture teacher, no matter the demographic characteristic (Jones, & Bowen, 1998a). Therefore, it could be posited that preservice agriculture teachers share similar attitudes as their secondary agriculture teacher about a culture different from themselves. If true, the agricultural education profession faces a two-generation challenge of cultural incompetence.

From agricultural education literature, research toward minority students is limited in helping educators adequately prepare students in multicultural competence. In 2008, a study explored the research themes in five research journals associated with agricultural education (Edgar, Briers, & Rutherford, 2008). From the results, it was concluded that within a 10-year period, 25 articles published had a diversity research theme. However, the study did not define diversity. Prior to the Edgar et al. study, a synthesis of research on diversity in agricultural education explored four journals over a 10-year period (Woods & Moore, 1995). From the synthesis, 11 articles were published dealing with factors of influence and attitudes toward diversity (Woods & Moore, 1995). However, the majority of the articles published dealt with gender, socio-economic, and sexual

orientation. In addition, not one of the 11 studies focused their attention toward examining or developing multicultural competence in agricultural education.

The thought of multicultural competence in agricultural education may seem unattainable. Yet, small evidence of multicultural competence exists in agricultural education. Jones and Bowen (1998a) visited 12 secondary agriculture programs in southeast United States with high and low African American enrollment. In the 1998 study, Jones and Bowen discovered that the race of the teachers appeared to have minimal difference in programs with high African American enrollment. However, in programs with low African American enrollment, White teachers were not supportive of African American students and offered courses not inviting to the students. This study is the one study that surfaced multicultural competence. Within the findings, Jones and Bowen (1998a) suggests that agriculture teachers from diverse ethnicities can be multicultural competent. However, the study also implies that White agriculture teachers have the attitudes that reflect multicultural incompetence. Additional research is needed to explore this qualitative finding from over a decade ago.

### **Summary**

The history of the United States helped in defining the methods of how people should be treated. Counseling psychologists were among the first to define the value of how someone should be treated and developed strategies in preparing individuals to be come, first, culturally competent, followed by multicultural competent. The medical, law enforcement, and education profession all provide training in the development of a multicultural competence.

To help teachers become multicultural competent, an individual must first identify where they are in the stages of the MMDCC. When multicultural competence exists, unique possibilities are experienced. Multiculturally competent teachers experience a diverse population of students and are influential in their future job experiences. However, limited knowledge of one's own culture can create racial color-blindness that are unnecessary and harmful to perceptions, experiences, and future outcomes.

In a 2000 study, Larke wrote, "We need teachers who will personally make a commitment to reach out to students of color or at least find someone of color for whom they can be a mentor." (p. 8) Attitudes must change and practices must become more congruent in order to fulfill the desires of Larke. Although Larke may believe we need teachers, it is evident that students of different cultures need a profession that will make a commitment to reach out. Will agricultural education heed the call?

## **CHAPTER 3**

### **METHODOLOGY**

A description of the research methodology and procedures in this study is the primary focus of chapter three. In this chapter is a presentation of the research objectives, research design, the population and subject selection, instrumentation, data collection, and data analysis procedures. Prior to the data collection stage of this research, yet after the development of the questionnaires, the researcher submitted a plan outlining the details of the research study and all related material to the University of Missouri Institutional Review Board (IRB). Completion of the data collection stage followed receipt of “exempt” approval from the IRB, approval number 1154138.

#### **Purpose of the Study**

The purpose of this study was four-fold. First, this study sought to describe the sub-constructs of multicultural competence in school-based agriculture teachers and their relationship to the ethnic diversity of local FFA membership in selected high schools. Additionally, this study examined the racial color-blindness of school-based agriculture teachers and their students and its relationship to the ethnic diversity of local FFA membership. This study compared multicultural competence and racial color-blindness between teachers and students. Finally, this study described relationships between teacher and student characteristics in terms of the ethnic diversity of local FFA memberships.

#### **Research Objectives**

The following research objectives were developed to guide the study:

1. Describe selected characteristics of school-based agriculture teachers by the ethnic diversity of the local FFA membership. Specifically: age, number of years teaching agriculture, highest obtained degree, agriculture area being taught, level of effort placed on recruitment, multicultural training received, total FFA membership, percent of ethnic enrollment in chapter, total unduplicated enrollment in agriculture, and percent of ethnic enrollment in agriculture were selected.
2. Describe selected characteristics of school-based agriculture students by the ethnic diversity of the local FFA membership. Specifically: sex, race, cumulative grade point average (GPA), career aspiration, and parent's educational level were selected.
3. Describe the level of multicultural competence held by school-based agriculture teachers.
4. Describe the racial color-blindness of school-based agriculture teachers.
5. Compare the level of multicultural competence held by school-based agriculture teachers by the ethnic diversity of the local FFA membership.
6. Compare the racial color-blindness of school-based agriculture teachers by the ethnic diversity of the local FFA membership.
7. Describe the level of multicultural competence held by school-based agriculture teachers as perceived by their students.
8. Describe the racial color-blindness of school-based agriculture students.
9. Compare the level of multicultural competence held by school-based agriculture students by the ethnic diversity of the local FFA membership.

10. Compare the racial color-blindness of school-based agriculture students by the ethnic diversity of the local FFA membership.
11. Describe the relationship between selected characteristics, noted in Objective 1, multicultural competence, and racial color-blindness of school-based agriculture teachers with the ethnic diversity of the local FFA membership.
12. Describe the relationship between selected characteristics, noted in Objective 2, of school-based agriculture students with the ethnic diversity of the local FFA membership.
13. Compare the level of multicultural competence held by school-based agriculture teachers with students' perception of teachers' multicultural competence.
14. Compare the racial color-blindness levels between school-based agriculture teachers and their students.

### **Research Design**

The study utilized descriptive, correlational, and causal-comparative research methods. Descriptive, correlational research is a type of research that consists of “a set of concepts and methods used in organizing, summarizing, tabulating, depicting, and describing collections of data” (Shavelson, 1996, p. 8). Ary, Jacobs, and Razavieh (2006) explained that this type of research “uses instruments such as questionnaires and interviews to gather information from groups of subjects” (p. 31).

In addition to addressing the “*what is*” question with respect to the levels of multicultural competence and racial color-blindness, this study utilized a

correlational research design to investigate potential relationships between variables of interest. Correlational research designs “seeks to examine the strength and direction of relationships among two or more variables” (Ary, Jacobs, & Razavieh, 2006, pp 29-30). The dependent variable investigated was ethnic diversity in the local FFA membership, as reported by school-based agriculture teachers. The dependent variable had already occurred, allowing the study to investigate the antecedents. The process of investigating antecedents to a dependent variable after the fact is called *Ex post facto*. *Ex post facto* or causal-comparative research can test objectives concerning “the relationship between an independent variable and a dependent variable” (Ary et al., 2006, p. 356). In addition to the dependent variable, numerous antecedents were investigated. The antecedent variables in this study were: teachers’ multicultural competence level, teachers’ racial color-blindness, and selected characteristics including: age, years of teaching experience, highest degree obtained, agriculture area being teach, level of recruitment effort, and type of multicultural training received. Additionally, selected student characteristics served as antecedent variables to this study and included selected characteristics including: sex, race, cumulative GPA, career aspirations, and parent’s educational level. Students’ perception of their teachers’ multicultural competence level and students’ racial color-blindness also served as an antecedent.

Addressing internal and external validity is necessary when conducting descriptive research-correlational. Internal validity of a study ensures that the data or findings are true (Shavelson, 1996). To ensure internal validity, measurement error must be minimized by ensuring the data collection instrument

used is trustworthy in terms of validity and reliability (Shavelson, 1996). By contrast, external validity addresses the degree in which the findings can be generalized from the subjects investigated to the real world (Ary et al., 2006). Both internal and external validity are addressed in more detail in subsequent sections.

### **Population and Subject Selection**

The populations for this study were school-based agriculture teachers in ethnically diverse schools and students enrolled in their class during the 2009 – 2010 academic year. Teachers (and their students) at schools with a 30% minimum ethnic minority enrollment were purposefully selected. “In purposive sampling, subjects are purposefully, chosen from the population” (Ary et al., 2006, p. 174). A 30% minority enrollment was a selection criterion, because it is considered the critical mass to create an environment that supports multicultural competence (Abreu, Chung, & Atkinson, 2000).

The purpose of the study required the researcher to identify a purposive sample of agriculture teachers whose FFA membership reflected a diverse (30% minority membership) or at least the possibility of obtaining a diverse. The researcher determined that traveling to each school would help minimize risks of obtaining socially desired responses, and maximize the response rate. The researcher used a sampling technique because of its low cost, convenience, and its frequent use for attitude and opinion surveys. However, there is no reason to assume the units judged will continue to be representative of the population over a period of time (Ary et al., 2006).

Public school districts in Missouri and its contiguous states served as the frame for this study ( $N = 3,681$ ). The frame was obtained from the School District Demographic System provided by the National Center for Educational Statistics (2006) website. From the use of the School District Demographic System (website), the frame was narrowed to rural school districts, as defined by Elder (1992), that included a non-White population of at least 30% ( $N = 228$ ). Elder (1992) defines a rural school as a school that represents at least 75% enrollment of students that reside from a rural home determined by the US Census Bureau.

With assistance from staff of the National FFA Organization, the frame was narrowed to schools having an FFA chapter ( $N = 165$ ). To address potential frame error, the frame ( $N = 165$ ) was scrutinized for errors with assistance from the National FFA Organization staff. The National Center for Educational Statistics (2006), the Council of Chief State and School Officers (2009), and the National FFA Organization were vital in removing the possibility of selection error. Selection error, as defined by Ary et al. (2006), occurs when units from a population have a greater chance of being selected than other units.

Of the 165 FFA chapters in the frame, the National FFA Organization confirmed 41 schools with a diverse of non-white student FFA membership. By contrast, 124 FFA chapters had a non-diverse of non-white FFA members. After identifying a list of potential schools eligible to participate in the study ( $N = 41$ ), an additional criterion (proximity to Columbia, Missouri) was used for selecting schools. It was determined to narrow the frame to the 40 closest schools by selecting schools that were within a 462 mile radius of Columbia, Missouri.

The 40 schools selected met the previous criteria and were further sorted by the sex and ethnicity of the agriculture teachers. This study sought to examine White male agriculture teachers. Therefore, an analysis of state agriculture teacher directories and personal communication with agriculture teachers, five female agriculture teachers and one African American teacher was eliminated from the frame ( $N = 34$ ). With help of staff members from the National FFA Organization and direct contact with FFA advisors, frame error was not an issue.

The size of the purposive sample was further refined by confirming schools that were willing to participate in the study. School administrators, primarily principals, from the eligible school districts ( $N = 34$ ) were given the opportunity to reject or accept the invitation to participate in the study. To accomplish this step, the researcher sent a personalized letter to each agriculture teacher and school principal inviting his/her participation in the study (see appendix A). Eighteen principals of the 34 possible acknowledged their willingness to participate in the study by returning a signed consent form (see Appendix B).

Only ten schools were selected to comprise the sample due to cost for traveling to each school for data collection and to keep an even representation of teachers from FFA chapters with a diverse and non-diverse FFA membership. The majority of the schools selected lay along the Mississippi Delta region of the United States (see Figure 3.1) with the primary ethnic populations being White/non-Hispanic and African American.

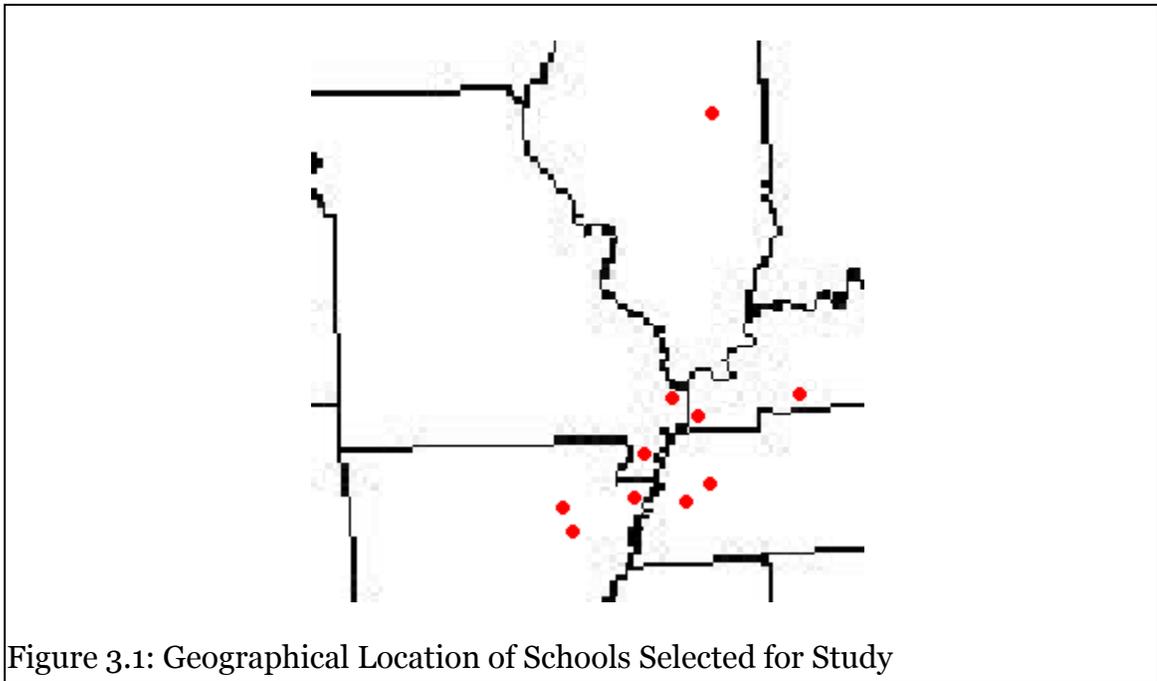


Figure 3.1: Geographical Location of Schools Selected for Study

Once schools were selected, ethnicities in the FFA membership were identified. Half of the teachers and their students were labeled diverse as defined by having a minimum of 30% ethnic diverse membership in FFA and the remaining half of teachers and their students were identified as non-diverse, defined as having less than 30% ethnic diverse membership in FFA.

In the selected schools, junior and senior students ( $n = 136$ ) who were in the process of completing or had completed three years in the agricultural education program were included in the study. Students were selected because of their classification as a Career and Technical Education (CTE) completer/concentrator (Hawley & Montrichard, 2009). The researcher assumed that these students were in the best position to assess their teacher's multicultural competence level in the classroom.

## **Instrumentation**

A researcher-developed questionnaire was used to collect data guided by the research objectives. Teachers and students completed a questionnaire that consisting of three sections: multicultural competency, characteristics, and racial color-blindness (see Appendices C & D). The three sections of the questionnaire composed of six, 8 1/2 x 11, pages and were color coded by the diverse identity of the FFA members. Teacher and student participants from selected FFA chapters with a diverse received a goldenrod colored questionnaire. Teacher and student participants from selected FFA chapters with a non-diverse received a salmon colored questionnaire. An assent page asking for the participant's honest response and signature was attached as a cover to the teacher and student questionnaires.

To assess section 1 (multicultural competence) of the teacher and student questionnaire, the researcher used the Multicultural Awareness-Knowledge-Skills Survey: Teacher Form (MAKSS-T). In section 2 of the questionnaire, a characteristic page was provided to collect personal information that described the teacher and student participants. The Color-Blind Racial Attitude Scale (CoBRAS) represented section 3 and was used to evaluate the racial color-blindness of agriculture teachers and students. The CoBRAS was placed at the end of the questionnaire because of possible discomfort in the questions asked. The researcher received permission to use the MAKSS-T and the CoBRAS from Dr. Mary Jo Noonan, University of Hawaii, and Dr. Helen Neville, University of Illinois, during the fall 2009 academic year. To meet the research objectives of the study, a teacher version and a student version of the questionnaire were

developed. Each version had a section to collect data about personal characteristics of the respondents.

### **MAKSS-T**

The Multicultural Awareness-Knowledge-Skills Survey: Teacher Form (MAKSS-T) was developed by D'Andrea, Daniels, and Noonan (1994). The MAKSS-T is a derivative of the Multicultural Awareness-Knowledge-Skills Survey: Counselor Edition (MAKSS-CE). The MAKSS-CE (D'Andrea, Daniels, & Heck, 1991) was designed to evaluate counseling psychologists' effectiveness to counsel patients who were culturally different than themselves (1991). Following the initial development of the MAKSS-CE, D'Andrea et al. (1994) created the MAKSS-Teacher Form (MAKSS-T). The MAKSS-T assesses the three constructs of multicultural competence: awareness, knowledge, and skills. The MAKSS-T is designed to assess the multicultural competence level of teachers who were or would be teaching in a classroom composed of different ethnicities (D'Andrea et al. 2003).

Modifications to the D'Andrea et al. (2003) MAKSS-T instrument were made to better suit the subjects of the study. Section 1 of the questionnaire (MAKSS-T) contained three constructs: awareness, knowledge, and skill. Page one of the questionnaire contained nine statements that evaluate a teacher's awareness of personal attitudes toward minorities (D'Andrea et al., 2003). The second page consists of 14 terms that assess the teacher's knowledge about racial prejudice. The final page of section 1 consists of 14 statements that examine cross-cultural skills used within a school setting. The teacher version of the MAKSS-T composed of 37 statements within three constructs.

The MAKSS-T instrument in the teacher version utilized a Likert scale. A 4-point Likert, frequency scale, on the MAKSS-T was modified to include the following scores and anchors: 1 = No competence; 2 = Limited competence; 3 = Good competence; and 4 = Excellent competence. When summing the scores for the 41-item MAKSS-T, scores have a potential range of 41 to 164. Constructs were scored by summing the values from each statement in that construct, then dividing by the number of statements (e.g., Awareness equals the sum of values from each statement divided by nine). The overall multicultural competency score was the sum of the three construct scores divided by three or the sum of each statement divided by 41 (i.e., sum of statement values divided by 41).

The student section of the MAKSS-T was very similar in that it too contained three pages that measure the three constructs on a 4-point Likert, frequency scale. Although the students' questionnaire also consisted of 37 statements, the statements were reworded as an assessment of their agriculture teacher. Terms utilized within the student version were defined and examples were provided to increase understanding of each question being asked. The 4-point Likert, frequency scale, on the MAKSS-T was modified for the student version to include the following values and anchors: 1 = My teacher exhibits No competence; 2 = My teacher exhibits Limited competence; 3 = My teacher exhibits Good competence; and 4 = My teacher exhibits Excellent competence. Constructs were scored by adding the values from each statement in that construct, then dividing by the number of statements (e.g., Awareness = sum of values from each statement/9). The overall multicultural competency score was the sum of the three construct scores divided by three.

## **Characteristics of Respondents**

Section two of the teacher questionnaire was designed to collect data related to selected characteristics. These data were collected because of the “relevance to the academic programs, explanation of demographic terminology, and present measures that can be used to describe a situation or analyze change or impact” (Lilley, 1982, p. 12). Data collected in this section included: age, number of years teaching agriculture, highest degree obtained, agriculture content area taught, rating level of their effort toward recruiting FFA members, current FFA membership, minority enrollment in FFA, and their overall and minority enrollment of unduplicated agriculture students. Open-ended questions were justifiable with a numbered response (e.g., How many years have you taught agriculture at the secondary level?), while the remaining questions were provided choice responses that require a simple check (e.g., What is your highest degree obtained? \_\_\_ Bachelors, \_\_\_ Masters, \_\_\_ above a Masters). Teachers were provided an opportunity to include additional information in case their response choice was missing.

Section two of the student version of the questionnaire composed of a characteristics page as well. Data collected in this section included: sex, ethnicity, cumulative grade point average, career aspiration, father’s highest education level, and mother’s highest educational level. To minimize selection error in the student sample, students provided a number for the years of courses taken under the instruction of the teacher. Open-ended questions were answered with a numbered response (e.g. what is your cumulative grade point average?), while the remaining questions were accompanied with multiple-choice responses that require a simple

check (e.g., What is your sex? \_\_\_ Male, \_\_\_ Female). Students were provided an opportunity to supply additional information in case their response choice was missing.

### **CoBRAS**

The Color-Blind Racial Attitude Scale (CoBRAS) was developed by Neville et al. (2000) to measure attitudes a person holds about individuals of a different race. Neville et al. (2000) believed that a self-evaluation of someone's color-blindness was a better analysis of an individual's attitude toward racially different individuals than an instrument assessing their level of racism. Factor analysis was used to identify three constructs from the instrument: denial of White privilege; denial of institutional racism; and denial of the present existence of blatant racial discrimination. The CoBRAS is a reflection of an individual's attitude when race becomes a topic of discussion (Neville, et al., 2000). A high score could imply that someone is racially prejudice or live under an assumption that life is just and fair for all individuals.

Modifications to the Neville et al. (2000) CoBRAS instrument were made to better suit the subjects of this study. The CoBRA assessment section consisted of 24 statements with a 5-point Likert scale response choice. The values and anchors of the five-point agreement scale were: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree. The CoBRAS represented section three of the teacher questionnaire because of the possible discomfort the statements caused. Pages five and six was composed of the CoBRAS and consisted of a total sum score ranging from 24 to 120. When calculating the CoBRAS, reverse coding of statements 1, 3, 6, 9, 11, 12, 15, 17, 18, and 20 should come first. Then a

summation of values from each statement followed by division of total number of statements (i.e., racial color-blindness equals the sum of values from each statement divided by 24). No changes were made to the CoBRAS section of the student questionnaire.

### **Measurement Error**

In social sciences research, the researcher must make a conscious effort to minimize measurement error. Measurement error can never be eliminated; however, by recognizing that both random and systematic error exists, error can be reduced. The following sections outline the steps taken to minimize measurement error by addressing issues of validity and reliability.

### **Validity of the Questionnaire**

Validity, as described by Shavelson (1996), is “the extent to which the interpretation of the results of the study follows from the study itself and the extent to which the results may be generalized to other situations with other people” (p. 19). To determine the validity of the teacher version and student version of the questionnaire, two specific types of validity – face and content were addressed. Considering the questionnaire was derived from two previously established instruments, the researcher did not address construct and criterion-related validity; rather the results of the developers’ efforts were aforementioned (D’Andrea et al., 1994; Neville et al., 2000).

#### **Evidences of validity.**

A panel of experts reviewed the two questionnaires for face and content validity of Section 1, which sought to measure teachers’ multicultural competence: awareness, knowledge, and skill. Similarly, the panel of experts reviewed Section 3

(racial color-blindness) for face and content validity. Section 2 of the questionnaires collected characteristic information and was reviewed by the panel of experts for word choice and ambiguous statements only. Talab (2008) explained that a panel of experts should compose of no more than five individuals who represent content validity while the remaining experts offer feedback on statistical and face validity issues.

The panel of experts consisted of eight university faculty members representing Departments of Agricultural Education and Teacher Development Programs at the University of Missouri, Purdue University, the University of Illinois, and Kansas State University (see Appendix E). Four of the eight members were selected based on their knowledge and experience in teaching, research, or service to students from various ethnicities. The remaining four members were selected for their ability to examine grammatical, clarity, statistical procedures, and instrument development.

A systematic process was established for obtaining feedback on the questionnaires, thus establishing validity. Panel members received a letter via email (see Appendix F) requesting their input and feedback on the content and face validity of the two questionnaires. The teacher and student questionnaires, along with a Word document containing the research purpose and objectives, were attached to the email. Specifically, the panel members were asked to comment on visual appearance, word selection, ambiguity, content agreement, and agreement that the questionnaire sufficiently addresses the research objectives. Following the panel members' review, modifications were made to improve the readability of the teacher and student questionnaire. Also, sample

statements with responses were added to each construct in Sections 1 and 3 of the students' questionnaire in order to improve the understanding of the instructions (e.g., Please rate your FFA advisor's level of skill to advise the FFA chapter: 1 = No skill, 2 = Limited skill, 3 = Good skill, and 4 = Excellent skill). A set of terms were provided to the knowledge construct of both questionnaires in order to offer assistance in properly completing section 1. Three additional attitude statements were developed that were better suited for the subjects of the study.

### **Reliability of the Questionnaire**

Reliability is referred to as "the consistency or dependability of a behavioral measurement" (Shavelson, 1996, p. 473). Although it is difficult to create, design, and efficiently utilize a measure that is perfectly reliable, a researcher should put-forth efforts in ensuring that the questionnaire is reliable.

#### **Evidence of reliability.**

The reliability of the questionnaire was established using a pilot test group. Literature supports pilot testing a questionnaire to help clarify or eliminate items (Ary et al., 2006). Ary et al. (2006) provides the following issues that a researcher should address:

1. Do the respondents seem comfortable with the questionnaire and motivated to complete it?
2. Are certain items confusing?
3. Could some items result in hostility or embarrassment on the part of respondents?
4. Are the instructions clear?
5. How long will it take a respondent to complete the questionnaire?

6. Do all respondents interpret the items in the same way? (p. 432)

A pilot study of the questionnaires was conducted in October of 2009 with secondary agriculture teachers ( $n = 32$ ) and students ( $n = 21$ ) in public school districts in the state of Kentucky (see Appendix G). Teachers and students were selected based upon their similarity to the study sample. In particular, the researcher attempted to locate teachers with similar school demographics of the target population and an agriculture classroom with students enrolled in a school with similar demographics. Teachers received the questionnaire as a Word document attachment by email and were asked to send their responses back by postage mail or email within a week. A randomly selected teacher from the teacher pilot was asked to administer the questionnaire to a classroom of junior and senior agriculture students. The selected teacher received the student questionnaire by email and made the necessary copies for the students. The researcher provided the teacher steps for administering the questionnaire to the pilot students. Once the students completed the questionnaire, the selected teacher sent their responses to the researcher by postal mail.

The researcher provided additional time for participating teachers and students to share concerns and/or suggestions for improving the questionnaire. As a result, modifications made were on directions for completing the questionnaire and the verbiage of the statements in each section. The changes added to face validity and readability of the questionnaire, but neither interrupted nor damaged the validity of the content or constructs.

A Cronbach's alpha serves as the most common form of internal consistency as an estimate for reliability for summated Likert items (Ary et al.,

2006). The original MAKSS-T resulted in separate Cronbach's alpha reliability coefficients comprised of: awareness at .73, knowledge at .86, and skill at .93 (D'Andrea et al., 2003). At the same token, the Cronbach's alpha coefficients for the CoBRAS (.91) were found to be acceptable following the initial factor analysis (Neville et al., 2000).

Cronbach's alpha was used to report reliability estimates for sections 1 and 3 of the teacher and student questionnaires. In section 1 of the teacher questionnaire, the results of the Cronbach's alpha was .89 for the summated overall score multicultural competence. The Cronbach's alpha for the three sub constructs of the section resulted in  $\alpha = .81$  for Awareness,  $\alpha = .92$  for Knowledge, and  $\alpha = .85$  for Skills (see Table 1). The overall racial color-blindness reliability estimate (section 3) resulted in  $\alpha = .80$  (see Table 1)

Table 1  
*Reliability Estimates of the Teacher and Student Questionnaire*

Questionnaire Section	Cronbach's Alpha
Teacher Version ( $n = 27$ )	
Section 1	
Awareness	.81
Knowledge	.92
Skill	.85
Overall	.89
Section 2	
Attitude	.80
Student Version ( $n = 21$ )	
Section 1	
Awareness	.91
Knowledge	.96
Skill	.72
Overall	.88
Section 2	
Attitude	.71

For the student version of the questionnaire, Cronbach's alpha for section 1 yielded a summated overall multicultural competence reliability estimate of .88, while the alpha level for each sub construct resulted in  $\alpha = .91$  for Awareness,  $\alpha = .96$  for Knowledge, and  $\alpha = .72$  for Skills (see Table 1). For section 3 (racial color-blindness), the reliability estimate resulted in  $\alpha = .71$  (see Table 1). Generally .70 and above is an acceptable alpha; however a lower alpha is not necessarily a detriment as it may measure several attributes rather than only one, which may result in a deflated Cronbach's alpha (Nunnally, 1978).

Section 2 of the teacher and student questionnaire asked the participants to provide personal characteristic information. Salant and Dillman (1994) recommend to not calculate reliability estimates on demographic data because very little measurement error results from asking respondents about personal attributes and behaviors.

### **Data Collection**

The researcher traveled to each school and distributed the questionnaires (see Appendix C & D) to secondary agriculture teachers and their students in the selected schools. The researcher-administered approach was utilized to minimize the risk of offering socially desired responses among the student and maximize the response rate in all three sections.

Once consent to participate was received verbally from the school principal and secondary agriculture teacher, an email (see Appendix H) from the researcher was sent officially welcoming their participation. The email set an available time for the data collection, steps to receive the school's consent form (see Appendix B), and a parental consent form for the student participants (see Appendix I). A

school's consent form to participate in the study was required by the University of Missouri IRB. Additionally, IRB required that parental consent forms be completed and available to the researcher before data could be obtained from the students.

Following the receipt of a principal's signed school consent, a teacher was issued parental consent forms to distribute and collect from every completer/concentrator student in agriculture. Prior to data collection, the teacher and researcher established a date of arrival and times that were conducive to the teacher's schedule. The researcher provided teachers with opportunities to amend the arrival date and/or time. For the convenience of the researcher, the visitation dates and times were set in January and February (see Table 2).

Table 2  
*School Visitation Dates and Times (n = 10)*

School	State	Diversity	Date	Time
School A	AR	Diverse	January 12, 2010	8:00 – 2:30
School B	KY	Diverse	January 13, 2010	8:00 – 2:30
School C	MO	Non-Diverse	January 14, 2010	8:00 – 11:00
School D	MO	Non-Diverse	January 14, 2010	11:30 – 3:15
School E	TN	Diverse	January 26, 2010	8:00 – 11:00
School F	TN	Non-Diverse	January 26, 2010	11:30 – 3:30
School G	AR	Diverse	January 28, 2010	8:00 – 11:15
School H	AR	Non-Diverse	January 28, 2010	11:45 – 4:30
School I	IL	Diverse	February 10, 2010	9:30 – 2:30
School J	KY	Non-Diverse	February 12, 2010	8:00 – 12:30

Once the researcher arrived at the site of the data collection, the school's principal and secondary agriculture teacher received a copy of the signed school consent form along with the Institutional Review Board contact information containing the research study number.

The following steps were taken toward the administration and collection of data from the students in each agriculture classroom:

1. Near the end of each class period (approximately the last 15-20 minutes), the agriculture teacher separated the students by those who completed and those who did not complete the parental consent form.
2. The agriculture teacher and students who did not return the parental consent form vacated the room.
3. The researcher distributed the student questionnaire to the remaining students.
  - a. The assent page was read aloud and questions were answered about the assent.
  - b. After signing the assent page, students removed the signed assent from the questionnaire to be collected by the researcher (allowing the responses on each instrument to stay anonymous). Students were asked not to place their name on the questionnaire.
  - c. The researcher read the instructions of the each construct in sections 1, 2, and 3 of the questionnaire, brought attention to the sample statements and rating anchors, answered student questions, and then allowed students to begin completing the questionnaire (two to three minutes per page were provided).
  - d. At the conclusion of each section and beginning of next (MAKSS-T, Characteristic, and CoBRA) the researcher returned back to the steps in the previous bullet.

4. Upon the completion of the questionnaire, students were allowed to provide additional comments and thoughts toward the questionnaire and related topics. The researcher collected and stored the student questionnaires ( $n = 136$ ) in a locked room

The researcher distributed the teacher questionnaire to each agriculture teacher during their planning time. Each teacher received the opportunity to provide additional comments and/or suggestions about the study and/or related topic on the questionnaire. The researcher stayed nearby to provide instructions to the teacher or answer any questions regarding the instrumentation. Following the site visit, the school principal and agriculture teacher received a formal thank you letter (see Appendix J) from the researcher for their willingness to participate.

### **Data Analysis**

Data were analyzed using the Statistical Package for the Social Sciences® (SPSS) 17.0 for Windows. Data analysis methods were based upon the scales of measurement for each variable. Cohen's (1988)  $d$  coefficient, as a measure of effect size, was utilized when comparing group mean scores on each variable of interest. According to Thalheimer and Cook (2002), Cohen's  $d$  is preferred over other methods for measuring effect size. Thalheimer & Cook believed effect sizes were important because they allow researchers to compare magnitude differences. Effect sizes were interpreted according to Thalheimer and Cook's (2002) descriptors (see Table 3).

Table 3  
*Thalheimer and Cook's (2002) Descriptors for Cohen's d Effect Size*

Value of Cohen's <i>d</i>	Effect Size Descriptor
< 0.15	Negligible effect
< 0.40	Small effect
< 0.75	Medium effect
< 1.10	Large effect
< 1.45	Very large effect
> 1.45	Huge effect

All statistical analyses are subject to assumptions. Table 4 displays the statistical method, the assumptions, and the analysis utilized to examine the assumption. The scale of measurement (nominal, ordinal, interval, and ratio) of the data guided all statistical analyses. An alpha level of .05 was established *a priori*.

Table 4  
*Assumptions by Statistical Analysis*

Statistical Test	Assumption	Assumption Examined
Continuous Variables	Normality	PP – Plots
Independent <i>t</i> -test	Normality	PP – Plots
	Homogeneity of Variance	Levene's Test
Bivariate Correlation	Linearity	Scatter-plots
	Outliers	

### **Objective 1 – Teachers Characteristics**

Describe the characteristics of the secondary agriculture teachers.

Descriptive statistics were reported to address research objective one and to analyze the characteristics of the secondary agriculture teachers by the ethnic diversity in the local FFA chapter membership. Specifically, frequency counts and percentages were used to describe nominal and ordinal data. Characteristics analyzed included: age, number of years teaching agriculture, highest obtained degree, agriculture area being taught, level of effort placed on recruitment,

multicultural training received, total FFA membership, percent of ethnic enrollment in chapter, total unduplicated enrollment in agriculture, and percent of ethnic enrollment in agriculture. In describing the teachers' reported level of recruitment, the results were divided into dichotomous variables identified as "low" (1 – 5) and "high" (6 – 10) for the ease of the reader.

### **Objective 2 – Student Characteristics**

Describe the characteristics of the school-based students enrolled at ethnically diverse schools.

Descriptive statistics were reported to address research objective two and to analyze the characteristics of students enrolled in the classrooms by the ethnic diversity in the local FFA chapter membership. Specifically, frequency counts and percentages were used to describe nominal and ordinal data. Student characteristics analyzed included: sex, race, cumulative GPA, career aspiration, and parent's educational level. For the ease of the reader and due to the variety of responses, cumulative grade point averages were collapsed into four variables that reflect secondary academic grading systems: 0.0 – 1.0 GPA, 1.1 – 2.0 GPA, 2.1 – 3.0 GPA, and 3.1 – 4.0 GPA. Due to the variety of career aspirations provided and the lack of ability to convert the responses to continuous variables, the responses were dichotomized into "Agriculture" and "Non-Agriculture".

### **Objective 3 & Objective 4 – Teachers' Level of Multicultural Competence and Racial Color-Blindness**

Describe the level of multicultural competence and racial color-blindness among school-based agriculture teachers.

Descriptive statistics, including mean, standard deviation and a minimum and maximum range were reported to address research objective three and four. The three multicultural competence constructs: awareness, knowledge, skill, and overall multicultural competence, were analyzed for objective three. In objective four, the researcher analyzed the color-blind racial attitude scores of the teachers.

**Objective 5 & Objective 6 – Teachers’ Multicultural Competence and Racial Color-Blindness by Ethnic Diversity in the Local FFA Membership**

Compare the level of multicultural competence and racial color-blindness in school-based agriculture teachers by the ethnic diversity of the FFA membership.

Objective five sought to determine a difference in multicultural competence between teachers from a diverse and non-diverse FFA chapter. Objective six sought to determine a difference in racial color-blindness between teachers from a diverse and non-diverse FFA chapter. Mean and standard deviation scores were reported to address each research objective. The multicultural competence constructs (awareness, knowledge, and skill), overall multicultural competence, and racial color-blindness were analyzed based upon the ethnic diversity in the local FFA membership. Effect sizes (Cohen’s *d*) were calculated and interpreted according to Thalheimer and Cook’s (2002).

**Objective 7 & Objective 8 – Students’ Perception of Teacher’s Multicultural Competence Level and Their Racial Color-Blindness**

Describe the level of multicultural competence of school-based agriculture teachers, as perceived by their students. Describe the level of racial color-blindness in school-based agriculture students.

Descriptive statistics, including mean, standard deviation and a minimum and maximum range were reported to address research objective seven and objective eight. The student' perception of the three multicultural competence constructs (awareness, knowledge, and skill), and overall multicultural competence were analyzed in objective seven. Objective eight analyzed the students' racial color-blindness.

**Objective 9 & Objective 10 – Students' Perception of Teacher's Multicultural Competence Level and Their Racial Color-Blindness by the Ethnic Diversity of the Local FFA Membership**

Compare the level of multicultural competence in school based agriculture teachers as perceived by their students by the ethnic diversity of the local FFA membership. Compare the racial color-blindness in school based agriculture students by the ethnic diversity of the local FFA membership.

Objective nine sought to determine a difference between teachers' multicultural competence, as perceived by students from a diverse and non-diverse FFA chapter. Objective 10 sought to determine a difference in racial color-blindness between students from a diverse and non-diverse FFA chapter. Mean and standard deviation scores were reported to address each research objective. The multicultural competence constructs (awareness, knowledge, and skill), overall multicultural competence, and racial color-blindness were analyzed based upon the ethnic diversity in the local FFA membership. Effect sizes (Cohen's *d*) were calculated and interpreted according to Thalheimer and Cook's (2002).

## **Objective 11 – Relationships between Teacher Characteristics and the Ethnic Diversity of the Local FFA Membership**

Describe the relationship between selected characteristics (age, agriculture area being taught, years of teaching experience, degree obtained, level of recruitment effort, and amount of training received in teaching diverse learners), multicultural competence (awareness, knowledge, skill, and overall), and racial color-blindness with the ethnic diversity of the local FFA membership.

To address research objective 11, a Pearson Product-Moment correlation was calculated between the reported percent of ethnic minority membership in FFA and the teachers' multicultural competence (awareness, knowledge, skill, and overall), racial color-blindness, age, years of teaching agriculture, and multicultural training received. Since the data was interval and ratio, the results from the Pearson product-moment correlation were reported with an  $r$ . Also, Spearman Rho correlation was utilized for the ordinal characteristics (level of recruitment effort and highest degree earned) being correlated with the ethnic diversity of the local FFA membership. The Spearman Rho correlations were reported with  $r_s$ . Results from the correlation coefficients were interpreted using Hopkins' (1994) descriptors (see Table 5).

Table 5  
*Hopkins' (1994) Descriptors for Describing the Magnitude of Relationship*

Value of $r$	Description
0.0 – 0.1	Trivial, very small, insubstantial
0.1 – 0.3	Low, small, minor
0.3 – 0.5	Moderate, medium
0.5 – 0.7	High, large, major
0.7 – 0.9	Very large, very high
0.9 – 1.0	Nearly perfect, distinct

Jones and Bowen (1998a) depict a difference in the agriculture classes offered to the ethnic diversity of the teacher's enrollment. However, in this study, the responses provided for the agricultural areas taught characteristic could not be collapsed into ordinal, interval, or ratio data. To provide a correlation with the multicultural trainings received, a total number was summed from each teacher's response. The responses pertaining to the teacher's highest college degree obtained were reported as Bachelor, Masters, and above a Masters and the level of recruitment effort was dichotomized into variables named high and low.

**Objective 12 – Relationships between Student Characteristics and the Ethnic Diversity of the Local FFA Membership**

Describe the relationship in the students' characteristics (sex, race, cumulative GPA, career aspiration, and parent's educational level) with the ethnic diversity of the local FFA membership.

To address research objective 12, a phi correlation ( $r_{\phi}$ ) was calculated between the level of diversity in teacher's FFA student membership and students' characteristics (sex, race, GPA, career aspiration, father's educational level, and mother's educational level). Because the data was dichotomous, the results from the phi correlation were reported ( $r_{\phi}$ ). Results from the correlation coefficients were interpreted using Hopkins' (1994) descriptors.

To calculate the correlations, nominal characteristics were converted to dichotomous variables. The nominal characteristics that were dichotomized included: race/ethnicity to non-White and White; cumulative GPA to below 2.5 and above 2.5; career preference was agriculture and non-agriculture; and parental educational level was with or without a high school diploma. The

students were separated by diverse status of the FFA chapter. Because the students were separated by the diverse of their FFA chapter and not their teacher, the percent ethnic diversity of the local FFA membership, as noted in research objective 11, was not used.

**Objective 13 and Objective 14: Difference between Teachers' Ratings and Students' Perceptions of Multicultural Competency and the difference between Teachers' and Students' Racial Color-Blindness**

Compare the multicultural competence between school-based agriculture teachers teaching at selected ethnically diverse schools and their students' perceptions. Compare the racial color-blindness between school-based agriculture teachers teaching at selected ethnically diverse schools and their students.

Objective 13 sought to determine a difference between the teachers' self-rating and the students' perception of their teacher's level of multicultural competence. Objective 14 sought to determine a difference in racial color-blindness between the teacher and students. Mean and standard deviation scores were reported to address each objective. The multicultural competency and the racial color-blindness from the student and teacher questionnaire were analyzed for differences. Effect sizes (Cohen's *d*) were calculated and interpreted according to Thalheimer and Cook's (2002).

## **CHAPTER 4**

### **FINDINGS**

#### **Purpose of the Study**

The purpose of this study was four-fold. First, this study sought to describe the sub-constructs of multicultural competence in school-based agriculture teachers and their relationship to the ethnic diversity of local FFA membership in selected high schools. Additionally, this study examined the racial color-blindness of school-based agriculture teachers and their students and its relationship to the ethnic diversity of local FFA membership. This study compared multicultural competence and racial color-blindness between teachers and students. Finally, this study described relationships between teacher and student characteristics in terms of the ethnic diversity of local FFA memberships.

#### **Research Objectives**

The following research objectives were developed to guide the study:

1. Describe selected characteristics of school-based agriculture teachers by the ethnic diversity of the local FFA membership. Specifically age, number of years teaching agriculture, highest obtained degree, agriculture area being taught, level of effort placed on recruitment, multicultural training received, total FFA membership, percent of ethnic enrollment in chapter, total unduplicated enrollment in agriculture, and percent of ethnic enrollment in agriculture were selected.
2. Describe selected characteristics of school-based agriculture students by the ethnic diversity of the local FFA membership. Specifically: sex, race,

cumulative grade point average (GPA), career aspiration, and parent's educational level were selected.

3. Describe the level of multicultural competence held by school-based agriculture teachers.
4. Describe the racial color-blindness of school-based agriculture teachers.
5. Compare the level of multicultural competence held by school-based agriculture teachers by the ethnic diversity of the local FFA membership.
6. Compare the racial color-blindness of school-based agriculture teachers by the ethnic diversity of the local FFA membership.
7. Describe the level of multicultural competence held by school-based agriculture teachers as perceived by their students.
8. Describe the racial color-blindness of school-based agriculture students.
9. Compare the level of multicultural competence held by school-based agriculture students by the ethnic diversity of the local FFA membership.
10. Compare the racial color-blindness of school-based agriculture students by the ethnic diversity of the local FFA membership.
11. Describe the relationship between selected characteristics, noted in Objective 1, multicultural competence, and racial color-blindness of school-based agriculture teachers with the ethnic diversity of the local FFA membership.
12. Describe the relationship between selected characteristics, noted in Objective 2, of school-based agriculture students with the ethnic diversity of the local FFA membership.

13. Compare the level of multicultural competence held by school-based agriculture teachers with students' perception of teachers' multicultural competence.
14. Compare the racial color-blindness levels between school-based agriculture teachers and their students.

## **Findings**

### **Objective One –Teacher Characteristics**

Objective one sought to describe the characteristics (age, number of years teaching agriculture, highest obtained degree, agriculture area being taught, level of effort placed on recruitment, multicultural training received, total FFA Membership, percent of ethnic enrollment in FFA chapter, total unduplicated enrollment in agriculture, and percent of ethnic enrollment in agriculture) of the secondary agriculture teachers by the ethnic diversity of the local FFA membership. Data were summarized using frequency and percentages. Table 6 displays teachers by age and years of teaching agriculture by the ethnic diversity of the local FFA membership. From the results, 60% ( $n = 3$ ) of teachers in a diverse FFA chapter setting were between the ages of 40 and 49 while 20% ( $n = 1$ ) of teachers in a diverse were between the ages of 20 and 29 as well as 50 and 59. Additionally, 40% ( $n = 2$ ) teachers in a non-diverse FFA chapter setting were between the ages of 40 and 49 as well as 50 and 59 while 20% ( $n = 1$ ) were between the ages of 30 and 39. From the overall teacher sample, 50% ( $n = 5$ ) were between the ages of 40 and 49 followed by 30% ( $n = 3$ ) between 50 and 59. Ten percent ( $n = 1$ ) of the total teacher sample were between the ages of 20 and 29 as well as 30 and 39.

Teachers' total number of years teaching agriculture was also displayed in Table 6 by the ethnic diversity of the local FFA membership. From the results, 40% ( $n = 2$ ) of teachers in a diverse FFA chapter setting reported teaching agriculture between 3 and 9 years as well as between 10 and 19 years. Twenty percent ( $n = 1$ ) of teachers in a diverse FFA chapter setting reported teaching agriculture between 20 and 29 years. Moreover, 80% ( $n = 4$ ) of teachers in a non-diverse FFA chapter setting had been teaching between 20 and 29 years followed by 20% ( $n = 1$ ) reporting between three and nine years of teaching agriculture.

Overall, the majority of the teachers reported teaching between 20 and 29 years (50%;  $n = 5$ ) followed by three and nine years (30%;  $n = 3$ ) then 10 and 19 years (20%;  $n = 2$ ).

Table 6  
*Teachers' Age and Years of Teaching Agriculture by Ethnic Diversity of the Local FFA Membership*

Characteristic	<u>Diverse</u> ( $n = 5$ )		<u>Non-Diverse</u> ( $n = 5$ )		<u>Total</u> ( $n = 10$ )	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Age						
20 - 29	1	20.00	0	00.00	1	10.00
30 - 39	0	00.00	1	20.00	1	10.00
40 - 49	3	60.00	2	40.00	5	50.00
50 - 59	1	20.00	2	40.00	3	30.00
Years of Teaching Ag						
3 - 9	2	40.00	1	20.00	3	30.00
10 - 19	2	40.00	0	00.00	2	20.00
20 - 29	1	20.00	4	80.00	5	50.00

Table 7 displays teachers' reported areas of agriculture taught by the ethnic diversity of the local FFA membership. From the descriptive results, the majority of teachers in a diverse FFA chapter setting (80%;  $n = 4$ ) teach horticulture. Sixty percent of the teachers in a diverse FFA chapter setting ( $n = 3$ ) reported to teach

wildlife/environmental and other agriculture areas. Small animal science, aquaculture, and hydroponics were reported as the other agriculture areas. Agriculture business (40%;  $n = 2$ ), agriculture science (20%;  $n = 1$ ), agriculture mechanics (20%;  $n = 1$ ), animal science (20%;  $n = 1$ ), and agronomy (20%;  $n = 1$ ) were also reported as areas being taught by the teachers in a diverse FFA chapter setting.

Table 7  
*Teachers' Agriculture Area Being Taught by Ethnic Diversity of the Local FFA Membership*

Ag Area Being Taught	Diverse ( $n = 5$ )		Non-Diverse ( $n = 5$ )		Total ( $n = 10$ )	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Horticulture	4	80.00	4	80.00	8	80.00
Animal Science	1	20.00	5	100.00	6	60.00
Agriculture Mechanics	1	20.00	4	80.00	5	50.00
Agriculture Business	2	40.00	2	40.00	4	40.00
Other Ag Areas	3	60.00	1	20.00	4	40.00
Wildlife/Environmental	3	60.00	1	20.00	4	40.00
Agromony	1	20.00	2	40.00	3	30.00
Agriculture Science <sup>a</sup>	1	20.00	0	00.00	1	10.00

<sup>a</sup>Science Credit

Every teacher from a non-diverse FFA chapter (100%;  $n = 5$ ) reported teaching animal science. Eighty percent ( $n = 4$ ) of these teachers reported to be teaching the areas of horticulture and agriculture mechanics. Forty percent ( $n = 2$ ) of the teachers in a non-diverse FFA chapter setting reported to teach in the areas of agriculture business and agronomy. Only 20% ( $n = 1$ ) of these teachers reported to be teaching a wildlife/environmental area or other agriculture areas. The other agriculture area reported was agriculture leadership.

From the overall sample of teachers, the majority (80%;  $n = 8$ ) reported to teach horticulture followed by animal science (60%;  $n = 6$ ) and agriculture mechanics (50%;  $n = 5$ ). Forty percent ( $n = 4$ ) of the teachers reported to be

teaching other agriculture areas, agriculture business, and wildlife/environmental. Additionally, the overall sample of teachers reported teaching agronomy (30%;  $n = 3$ ) and agriculture science (10%;  $n = 1$ ). The area of agriculture science served as a science credit within the high school curriculum.

The results of Table 8 display the teachers' highest degree obtained by the ethnic diversity of the local FFA membership. From the descriptive results, the majority of the teachers in a diverse FFA chapter setting hold a bachelors (40%;  $n = 2$ ) or masters degree (40%;  $n = 2$ ). The remaining teachers in a diverse FFA chapter setting (20%;  $n = 1$ ) hold a degree higher than a masters. According to the teachers in a non-diverse FFA chapter setting, 40% hold a masters degree ( $n = 2$ ) or higher than a masters degree ( $n = 2$ ) while the remaining 20% ( $n = 1$ ) hold a bachelor's degree. Altogether the teachers hold a masters degree (40%;  $n = 4$ ) followed by a degree higher than a masters (30%;  $n = 3$ ) and a bachelor's degree (30%;  $n = 3$ ).

Table 8  
*Teachers' Highest Degree Obtained Taught by Ethnic Diversity of the Local FFA Membership*

Degree Obtained	<u>Diverse</u> <u>(<math>n = 5</math>)</u>		<u>Non-Diverse</u> <u>(<math>n = 5</math>)</u>		<u>Total</u> <u>(<math>n = 10</math>)</u>	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Bachelor of Science	2	40.00	1	20.00	3	30.00
Master of Science	2	40.00	2	40.00	4	40.00
> Master of Science	1	20.00	2	40.00	3	30.00

Table 9 displays teachers' level of effort placed on recruitment by ethnic diversity of the local FFA membership. Because of the low sample size, various responses and for the researcher's convenience, the level of effort placed in recruiting students was dichotomized into low and high. From the results, the

majority of the teachers in a diverse FFA chapter setting (80%;  $n = 4$ ) place a high level of effort on recruitment while 20% ( $n = 1$ ) reported a low effort placed on recruitment. Sixty percent of the teachers from a non-diverse FFA chapter ( $n = 3$ ) place a high level of effort on recruitment appose to 40% who reported a low level of effort on recruitment. Overall, 70% of the teachers ( $n = 7$ ) place a high level of effort on recruitment and 30% ( $n = 7$ ) place a low level of effort on recruitment.

Table 9  
*Teachers' Level of Effort Placed on Recruitment by Ethnic Diversity of the Local FFA Membership*

Level of Recruitment	Diverse ( $n = 5$ )		Non-Diverse ( $n = 5$ )		Total ( $n = 10$ )	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Low (1 – 5)	1	20.00	2	40.00	3	30.00
High (6 – 10)	4	80.00	3	60.00	7	70.00

Table 10 displays teachers' source of multicultural training received by ethnic diversity of the local FFA membership. From the results, the majority of the teachers from a diverse FFA chapter (80%;  $n = 4$ ) had received multicultural training from workshops followed by 60% ( $n = 3$ ) who received multicultural training from after school professional development, undergraduate studies, and research conferences. The teachers in diverse FFA chapters also received multicultural training from research magazines (60%;  $n = 3$ ), other training (60%;  $n = 3$ ), undergraduate studies (60%;  $n = 3$ ), agriculture teachers' conference (40%;  $n = 2$ ), personal interviews (40%;  $n = 2$ ), graduate studies (40%;  $n = 2$ ). The other forms of training reported were downloadable podcasts and group discussions. When combined, the teachers in a diverse FFA chapter setting reported to have received multicultural training from 20 different sources.

Sixty percent of the teachers in non-diverse FFA chapters ( $n = 3$ ) received multicultural training from after school professional development. These teachers also reported receiving multicultural training from their undergraduate studies (40%;  $n = 2$ ), agriculture teachers' conference (20%;  $n = 1$ ), and workshops (20%;  $n = 1$ ). When combined, the teachers in a non-diverse FFA chapter setting reported to have received multicultural training from seven different sources.

After school professional development represented 60% ( $n = 6$ ) of the teachers in this study. Fifty percent ( $n = 5$ ) of the teachers received multicultural training from their undergraduate studies and workshops. Also, 30% ( $n = 3$ ) of the teachers in this study reported receiving multicultural training at research conferences. Agriculture teachers' conferences (20%;  $n = 2$ ), other training (20%;  $n = 2$ ), research magazines (20%;  $n = 2$ ), graduate studies (10%;  $n = 1$ ), and personal interviews (10%;  $n = 1$ ) were the remaining reported sources where teachers received multicultural training.

Table 10  
*Teachers' Source of Multicultural Training Received by Ethnic Diversity of the Local FFA Membership*

Multicultural Training	<u>Diverse</u> <u>(<math>n = 5</math>)</u>		<u>Non-Diverse</u> <u>(<math>n = 5</math>)</u>		<u>Total</u> <u>(<math>n = 10</math>)</u>	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
After School PD	3	60.00	3	60.00	6	60.00
Undergraduate Studies	3	60.00	2	40.00	5	50.00
Workshops	4	80.00	1	20.00	5	50.00
Research Conference	3	60.00	0	00.00	3	30.00
Ag Teacher Conference	1	20.00	1	20.00	2	20.00
Other Training	2	40.00	0	00.00	2	20.00
Research Magazines	2	40.00	0	00.00	2	20.00
Graduate Studies	1	20.00	0	00.00	1	10.00
Personal Interviews	1	20.00	0	00.00	1	10.00
Online Modules	0	00.00	0	00.00	0	00.00
Total	20		7		27	

Table 11 displays teachers' classroom enrollment, organization membership and the minority percentage by ethnic diversity of the local FFA membership. From the results, teachers in a diverse FFA chapter setting have 42.88% ( $n = 289$ ) of the FFA membership and 45.93% ( $n = 468$ ) of the unduplicated enrollment in this study. On the other hand, teachers in a non-diverse FFA chapter reported to have 57.12% ( $n = 385$ ) of FFA membership and 54.07% ( $n = 551$ ) of the unduplicated student enrollment in this study. Overall, teachers in this study compiled 1,019 unduplicated student enrollment, which produced a total of 674 FFA members. The 674 members represent 66.14% of the total unduplicated enrollment.

Although teachers in a diverse FFA chapter setting reported the least number of FFA members and unduplicated enrollment, the opposite was true for minority FFA membership and unduplicated minority enrollment. Teachers in a diverse FFA chapter setting reported 40.14% ( $n = 116$ ) of their FFA membership and 47.22% ( $n = 221$ ) of the unduplicated enrollment to be ethnic minority students. Teachers in a non-diverse FFA chapter reported 2.72% ( $n = 11$ ) of their FFA membership and 15.06% ( $n = 83$ ) of the unduplicated enrollment to be ethnic minority students. Overall, teachers in this study reported 18.84% ( $n = 127$ ) of their FFA membership and 29.83% ( $n = 304$ ) of the unduplicated enrollment to be ethnic minority students.

Table 11

*Teachers' Classroom Enrollment, Organization Membership and the Minority Percentage by Ethnic Diversity of the Local FFA Membership*

Characteristic	Diverse ( <i>n</i> = 5)		Non-Diverse ( <i>n</i> = 5)		Total ( <i>n</i> = 10)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
FFA Membership	289	42.88	385	57.12	674	66.14
Unduplicated Enrollment	468	45.93	551	54.07	1019	100.00
Minority FFA Membership	116	40.14	11	2.72	127	18.84
Minority Unduplicated Enrollment	221	47.22	83	15.06	304	29.83

### Objective Two –Student Characteristics

The second objective sought to describe participating students' characteristics (sex, race, cumulative GPA, career aspiration, and parent's educational level) by ethnic diversity of the local FFA membership. Data were summarized using frequency and percentages. Table 12 displays students' sex by ethnic diversity of the local FFA membership. From the results, 67.90% (*n* = 55) of students in diverse FFA chapters were males and 32.10% (*n* = 28) were female. From the students in non-diverse FFA chapters, 58.20% (*n* = 32) were male and 41.80% (*n* = 23) were female. Males represented 63.04% (*n* = 87) of the overall student participants while females represented 36.96% (*n* = 51).

Table 12

*Students' Sex by Ethnic Diversity of the Local FFA Membership*

Sex	Diverse ( <i>n</i> = 81)		Non-Diverse ( <i>n</i> = 55)		Total ( <i>n</i> = 136)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%
Male	55	67.90	32	58.20	87	63.04
Female	28	32.10	23	41.80	51	36.96

The results of Table 13 display students' race/ethnicity by ethnic diversity of the local FFA membership. From the descriptive results, 51.85% (*n* = 42) of

students in diverse FFA chapters and 89.10% ( $n = 49$ ) of students in non-diverse FFA chapters were White/non-Hispanic. However, 45.65% ( $n = 37$ ) of students in diverse FFA chapters were African American, as compared to 9.10% ( $n = 5$ ) of students in a non-diverse FFA chapter setting. Two (2.50%) students in diverse FFA chapters and one (1.80%) of students in non-diverse FFA chapters reported to be Hispanic.

Overall, 66.91% ( $n = 91$ ) of the students were White/non-Hispanic followed by 30.88% ( $n = 42$ ) African American and 2.21% ( $n = 3$ ) Hispanic.

Table 13  
*Students' Race/Ethnicity by Ethnic Diversity of the Local FFA Membership*

Race/Ethnicity	Diverse ( $n = 81$ )		Non-Diverse ( $n = 55$ )		Total ( $n = 136$ )	
	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
White/Non-Hispanic	42	51.85	49	89.10	91	66.91
African American	37	45.65	5	9.10	42	30.88
Hispanic	2	2.50	1	1.80	3	2.21

Students' cumulative GPA by ethnic diversity of the local FFA membership is provided in Table 14. For convenience, students' cumulative GPA was collapsed into four grade point average ranges that represent the academic letter grades (A, B, C, and D) associated with cumulative GPA. From the results, 54.40% ( $n = 41$ ) of students in diverse FFA chapters had a GPA between 2.1 and 3.0 followed by 42% ( $n = 37$ ) who had a GPA between 3.1 and 4.0 and 3.60% ( $n = 3$ ) who had a GPA between 1.1 and 2.0.

Additionally, 50.90% ( $n = 28$ ) of students in non-diverse FFA chapters have a GPA between 2.1 and 3.0. GPA's between 3.1 and 4.0 represent 37.40% ( $n = 20$ ) of the students in non-diverse FFA chapters. Lastly, 12.70% ( $n = 7$ ) of students in non-critical FFA chapters have a GPA between 1.1 and 2.0.

Overall 50.74% ( $n = 69$ ) of the student participants reported a cumulative GPA between 2.1 and 3.0 followed by 41.91% ( $n = 57$ ) between 3.1 and 4.0 and 7.35% ( $n = 10$ ) between 1.1 and 2.0.

Table 14  
*Students' Cumulative Grade Point Average by Ethnic Diversity of the Local FFA Membership*

Cumulative Grade Point Average	<u>Diverse</u> ( $n = 81$ )		<u>Non-Diverse</u> ( $n = 55$ )		<u>Total</u> ( $n = 136$ )	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
0.0 – 1.0	0	00.00	0	00.00	0	00.00
1.1 – 2.0	3	3.60	7	12.70	10	7.35
2.1 – 3.0	41	54.40	28	50.90	69	50.74
3.1 – 4.0	37	42.00	20	37.40	57	41.91

Table 15 displays students' career aspiration by ethnic diversity of the local FFA membership. Due to the variation in career aspirations responses, the career aspirations were collapsed as "Agriculture" or "Non-Agriculture". From the results, 85.20% ( $n = 69$ ) of students in diverse FFA chapters, 60.00% ( $n = 33$ ) of students in non-diverse FFA chapters, and 75.00% ( $n = 102$ ) of the overall student participants have a career aspiration that is not related to agriculture. Conversely, 14.80% ( $n = 12$ ) of students in diverse FFA chapters, 40.00% ( $n = 22$ ) of students in non-diverse FFA chapters, and 25.00% ( $n = 34$ ) of the overall student participants have an agriculture career aspiration.

Table 15  
*Students' Career Aspiration by Ethnic Diversity of the Local FFA Membership*

Career Aspiration	<u>Diverse</u> ( $n = 81$ )		<u>Non-Diverse</u> ( $n = 55$ )		<u>Total</u> ( $n = 136$ )	
	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Agriculture	12	14.80	22	40.00	34	25.00
Non-Agriculture	69	85.20	33	60.00	102	75.00

Table 16 exhibits the education level of the parents of the student participants by ethnic diversity of the local FFA membership. According to the results, 40.70% ( $n = 33$ ) of fathers and 35.75% ( $n = 29$ ) of mothers from students in diverse FFA chapters received a high school diploma or GED. The same results are represented in fathers (61.80%;  $n = 34$ ) and mothers (50.90%;  $n = 28$ ) of students in non-diverse FFA chapters as well as fathers (49.27%;  $n = 67$ ) and mothers (41.91%;  $n = 57$ ) of the entire student participants.

More fathers (16.00%;  $n = 13$ ) of students in diverse FFA chapters than fathers (7.30%;  $n = 4$ ) of students in non-diverse FFA chapters were high school dropouts. Mothers (12.70%;  $n = 7$ ) of students in non-diverse FFA chapters were reported to be high school dropouts. More so than mothers (7.40%;  $n = 6$ ) of students in diverse FFA chapters. Overall, 12.50% ( $n = 17$ ) of fathers and 9.55% ( $n = 13$ ) of mothers of the student participants were high school dropouts.

Eleven (13.60%) fathers and 13 mothers (16%) of students in diverse FFA chapters received some college. These students also reported to not know who their father was (13.60%;  $n = 11$ ) nor their mother's educational level (3.65%;  $n = 3$ ). These results were followed by bachelor's degree (6.20%;  $n = 5$ ), equivalent to or higher than a masters (6.20%;  $n = 5$ ), and an associate/technical degree (3.70%;  $n = 3$ ) as the remaining educational levels of fathers of students in diverse FFA chapters. Twenty-one percent ( $n = 17$ ) of student mothers at diverse FFA chapters received a bachelor's degree, followed by associate/technical degree (8.75%;  $n = 7$ ) or a degree that was equivalent to or higher than a masters (7.45%;  $n = 6$ ).

Only one (1.80%) student at a non-diverse FFA chapter did not know their father. In addition, it was reported that 10.85% ( $n = 6$ ) of fathers and 10.90% ( $n = 6$ ) of mothers of students in non-diverse FFA chapters had an equivalent or higher than a master's degree. Additionally, it was found that fathers of students in non-diverse FFA chapters had some college (7.25%;  $n = 4$ ), an associate/technical degree (5.50%;  $n = 3$ ), or a bachelor's degree (5.50%;  $n = 3$ ). Students in non-diverse FFA chapters reported their mothers' educational level as associate/technical degree (10.90%;  $n = 6$ ), some college (9.10%;  $n = 5$ ), or a bachelor's degree (5.50%;  $n = 3$ ).

Overall, the student participants reported some college for fathers (11.03%;  $n = 15$ ) and mothers (13.24%;  $n = 18$ ) and associate/technical degrees for fathers (4.41%;  $n = 6$ ) and mothers (9.55%;  $n = 13$ ). Bachelor's degrees for fathers (5.88%;  $n = 8$ ) and mothers (14.71%;  $n = 20$ ) as well as equivalent to or higher than a master's degree for fathers (8.09%;  $n = 11$ ) and mothers (8.82%;  $n = 12$ ) were reported.

Table 16  
*Students' Parents' Education Level by Ethnic Diversity of the Local FFA Membership*

Parents' Education Level	<u>Diverse</u> ( <i>n</i> = 81)		<u>Non-Diverse</u> ( <i>n</i> = 55)		<u>Total</u> ( <i>n</i> = 136)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<b>Father's Educational Level</b>						
High School Dropout	13	16.00	4	7.30	17	12.50
HS Diploma/GED	33	40.70	34	61.80	67	49.27
Some College	11	13.60	4	7.25	15	11.03
Associate/Technical	3	3.70	3	5.50	6	4.41
Bachelor's Degree	5	6.20	3	5.50	8	5.88
Master's or Higher	5	6.20	6	10.85	11	8.09
Other: No Father	11	13.60	1	1.80	12	8.82
<b>Mother's Educational Level</b>						
High School Dropout	6	7.40	7	12.70	13	9.55
HS Diploma/GED	29	35.75	28	50.90	57	41.91
Some College	13	16.00	5	9.10	18	13.24
Associate/Technical	7	8.75	6	10.90	13	9.55
Bachelor's Degree	17	21.00	3	5.50	20	14.71
Master's or Higher	6	7.45	6	10.90	12	8.82
Other: Education						
Unknown	3	3.65	0	00.00	3	2.21

**Objective 3 & Objective 4 – Teachers' Level of Multicultural Competence and Racial Color-Blindness**

Objective 3 sought to describe the level of multicultural competence (awareness, knowledge, skill, and overall) held by school-based agriculture teachers. Objective 4 sought to describe the racial color-blindness held by school-based agriculture teachers. Table 17 represents the combined findings for objective 3 and objective 4. To describe the two objectives, mean, standard deviation, and range were utilized. A four-point Likert scale was used in objective 3 while a five-point Likert scale was used for objective 4. The knowledge construct of multicultural competence received the highest mean score ( $M = 3.19$ ;  $SD = 0.44$ ) followed by awareness ( $M = 3.09$ ;  $SD = 0.31$ ), overall multicultural

competence ( $M = 3.06$ ;  $SD = 0.35$ ) and the skill construct ( $M = 2.92$ ;  $SD = 0.38$ ).

Racial color-blindness received a mean of 2.76 ( $SD = 0.28$ ).

Table 17

*Teachers' Multicultural Competence and Racial Color-Blindness (n = 10)*

Construct	Mean	SD	Range
Awareness <sup>a</sup>	3.09	0.31	2.56 – 3.56
Knowledge <sup>a</sup>	3.19	0.44	2.57 – 3.79
Skill <sup>a</sup>	2.92	0.38	2.14 – 3.43
Overall <sup>a</sup>	3.06	0.35	2.49 – 3.51
Color-Blind Racial Attitude <sup>b</sup>	2.76	0.28	2.38 – 3.17

<sup>a</sup>Scale based on: 1 = None; 2 = Limited; 3 = Good; 4 = Excellent; <sup>b</sup>Scale based on: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

## **Objective 5 & Objective 6 – Teachers' Multicultural Competence and Racial Color-Blindness by Ethnic Diversity in the Local FFA**

### **Membership**

The fifth research objective sought to compare teachers' multicultural competence by ethnic diversity of the local FFA membership. Objective 6 sought to compare teachers' racial color-blindness by ethnic diversity of the local FFA membership. To compare constructs of multicultural competence (awareness, knowledge, skill, and overall) and racial color-blindness, means and standard deviations were provided. Cohen's  $d$  was utilized to determine effect size when comparing group means between the teachers' ethnic diversity of the local FFA membership. Effect sizes were calculated and interpreted using the descriptors of Thalheimer and Cooks (2002). Negligible, medium, large, and very large effect sizes were found in the group comparisons.

The results of Table 18 display teachers' multicultural competence and racial color-blindness by ethnic diversity of the local FFA membership. In each construct of multicultural competence as well as racial color-blindness, teachers in

a diverse FFA chapter reported a higher mean score. Racial color-blindness exhibited a very large effect size ( $d = 1.37$ ) in favor of teacher in a diverse FFA chapter. Regarding the multicultural competence constructs, only the skill construct ( $d = 0.81$ ) and the overall multicultural competence ( $d = 0.75$ ) displayed a large effect size. The remaining two constructs (awareness and knowledge) presented a medium ( $d = 0.73$ ) and negligible ( $d = 0.14$ ) effect size.

Table 18  
*Teachers' Multicultural Competence and Color-blind racial Attitude by Ethnic Diversity of the Local FFA Membership*

Construct	Diverse ( $n = 5$ )		Non-Diverse ( $n = 5$ )		Cohen's $d$
	Mean	$SD$	Mean	$SD$	
Awareness <sup>a</sup>	3.13	0.93	3.04	0.44	0.14 <sup>c</sup>
Knowledge <sup>a</sup>	3.32	0.36	3.04	0.49	0.73 <sup>d</sup>
Skill <sup>a</sup>	3.06	0.28	2.79	0.45	0.81 <sup>e</sup>
Overall <sup>a</sup>	3.18	0.22	2.95	0.43	0.75 <sup>e</sup>
Racial Color-Blindness <sup>b</sup>	2.91	0.30	2.62	0.18	1.37 <sup>f</sup>

<sup>a</sup>Scale based on: 1 = None; 2 = Limited; 3 = Good; 4 = Excellent; <sup>b</sup>Scale based on: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree; Thalheimer & Cook's (2002) descriptors for describing Cohen's  $d$ : <sup>c</sup> = negligible; <sup>d</sup> = medium; <sup>e</sup> = large; <sup>f</sup> = very large

## **Objective 7 & Objective 8 – Students' Perception of Teacher's**

### **Multicultural Competence Level and Their Racial Color-Blindness**

Objective 7 sought to describe multicultural competence among school based agriculture teachers as perceived by their students. Objective 8 sought to describe agriculture student participants' color-blind racial attitude. To describe objective 7 and 8, means, standard deviations, and ranges were provided.

Table 19 represents the combined findings for objective 7 and objective 8. A four-point Likert scale was obtained for objective 7 and the objective 8, racial color-blindness, utilized a five-point scale. Students perceive their teachers'

knowledge ( $M = 3.27$ ;  $SD = 0.61$ ), to be the highest of the multicultural competence constructs followed by skill ( $M = 3.18$ ;  $SD = 0.44$ ), overall multicultural competence ( $M = 3.17$ ;  $SD = 0.53$ ), and awareness ( $M = 3.06$ ;  $SD = 0.55$ ). Racial color-blindness received a mean score of 2.92 ( $SD = 0.33$ ).

Table 19  
*Students' Perception of Teachers' Multicultural Competence and Racial Color-Blindness (n = 136)*

Construct	Mean	SD	Range
Awareness <sup>a</sup>	3.06	0.55	1.00 – 4.00
Knowledge <sup>a</sup>	3.27	0.61	1.86 – 4.00
Skill <sup>a</sup>	3.18	0.66	1.15 – 4.00
Overall <sup>a</sup>	3.17	0.53	1.64 – 4.00
Racial Color-Blindness <sup>b</sup>	2.92	0.33	1.92 – 4.13

<sup>a</sup>Scale based on: 1 = None; 2 = Limited; 3 = Good; 4 = Excellent; <sup>b</sup>Scale based on: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

### **Objective 9 & Objective 10 – Students' Perception of Teacher's Multicultural Competence Level and Their Racial Color-Blindness by the Ethnic Diversity of the Local FFA Membership**

Objective 9 sought to compare the teachers' multicultural competence, as perceived by their students, by the ethnic diversity of the local FFA membership. Objective 10 sought to compare the students' racial color-blindness by the ethnic diversity of the local FFA membership. To compare the constructs of multicultural competence (awareness, knowledge, skill, and overall) and racial color-blindness, means and standard deviations were provided. Cohen's  $d$  was utilized to determine effect size when comparing group means between the students by the ethnic diversity of the local FFA membership. Effect sizes were calculated and interpreted using the descriptors of Thalheimer and Cooks (2002). Negligible, medium, large, and very large effect sizes were found in the group comparisons.

The results of Table 20 display objective 9 and objective 10. For both objective 9 and objective 10, students in diverse FFA chapters scored higher than students in non-diverse FFA chapters. In objective 9, regarding teachers' multicultural competence, as perceived by their students, only awareness ( $d = 0.51$ ) displayed a medium effect size. According to Thalheimer and Cook (2002), the students' perception of their teacher's Knowledge ( $d = 0.20$ ), Skill ( $d = 0.26$ ), and overall multicultural competence ( $d = 0.37$ ) displayed a small effect size. In objective 10, a small effect size ( $d = 0.22$ ) was exhibited in the students' racial colorblindness by the ethnic diversity of the local FFA membership.

Table 20  
*Students' Perception of Teacher's Multicultural Competence and Students' Racial Color-Blindness by Ethnic Diversity of the Local FFA Membership*

Construct	Diverse ( $n = 10$ )		Non-Diverse ( $n = 10$ )		Cohen's $d$
	Mean	$SD$	Mean	$SD$	
Awareness <sup>a</sup>	3.17	0.49	2.90	0.59	0.51 <sup>d</sup>
Knowledge <sup>a</sup>	3.31	0.70	3.20	0.45	0.20 <sup>c</sup>
Skill <sup>a</sup>	3.25	0.60	3.08	0.74	0.26 <sup>c</sup>
Overall <sup>a</sup>	3.25	0.52	3.06	0.52	0.37 <sup>c</sup>
Racial Color-Blindness <sup>b</sup>	2.95	0.36	2.88	0.27	0.22 <sup>c</sup>

<sup>a</sup>Scale based on: 1 = None; 2 = Limited; 3 = Good; 4 = Excellent; <sup>b</sup>Scale based on: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree; Thalheimer & Cook's (2002) descriptors for describing relative size of Cohen's  $d$ : <sup>c</sup> = small; <sup>d</sup> = medium;

### **Objective 11 – Relationships between Teacher Characteristics and the Ethnic Diversity of the Local FFA Membership**

The purpose of objective 11 was to examine the relationship between teacher characteristics, multicultural competency, and racial color-blindness with the ethnic diversity of the local FFA membership. Teacher characteristics examined included: age, agricultural areas being taught, years of teaching

experience, degree obtained, level of recruitment effort, and total number of training received in teaching diverse learners. Coefficients were calculated using Pearson Product Moment correlations. Because the dependent variable was continuous data (percent of ethnic diversity in the local FFA membership), an assessment of outliers and linearity was needed. The use of scatterplots provided no sign of outliers or curvilinear relationships among the variables. A Pearson Product Moment Correlation ( $r$ ) was utilized due to correlations existing between the continuous variable and interval/ratio variables. A Spearman rho, ( $r_s$ ) correlation was utilized for the ordinal and continuous variables being examined.

The largest correlation in Table 21 existed between the ethnic diversity in local FFA membership and the number of multicultural training received ( $r = .76$ ). According to Hopkins' (1994) descriptors, the correlation for attitude can be described as positive and very large. The number of years teaching agriculture received a large, negative correlation ( $r = -.60$ ). The teacher's age ( $r = -.46$ ) had a medium, negative correlation with the ethnic diversity of the local FFA membership. A medium, positive relationship was discovered between the ethnic diversity of the local FFA membership and racial color-blindness ( $r = .48$ ), overall multicultural competence ( $r = .35$ ), and the teacher's skill rating ( $r = .37$ ). A small correlations were found between the ethnic diversity of the local FFA membership and the teacher's awareness ( $r = .14$ ) and knowledge ( $r = .14$ ).

Table 21

*Pearson Product-Moment Correlation Matrix for Ethnic Diversity of the Local FFA Membership and Teachers' Characteristics, Multicultural Competence, and Racial Color-Blindness (n = 10)*

Characteristic	Ethnic Diversity of the Local FFA Membership	Magnitude
Awareness <sup>a</sup>	.14	Small
Knowledge <sup>a</sup>	.14	Small
Overall <sup>a</sup>	.35	Moderate
Skill <sup>a</sup>	.37	Moderate
Age	-.46	Moderate
Racial Color-Blindness <sup>b</sup>	.48	Moderate
Years of Teaching Agriculture	-.60	Large
Training Received	.76	Very Large

<sup>a</sup>Scale based on: 1 = None; 2 = Limited; 3 = Good; 4 = Excellent; <sup>b</sup>Scale based on: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

From the results in Table 22, an insubstantial correlation exists between the level of effort in recruitment and ethnic diversity of the local FFA membership ( $r_s = -.01$ ). According to Hopkins' (1994) descriptors, a large correlation was found between the highest degree earned and ethnic diversity of the local FFA membership ( $r_s = -.60$ ).

Table 22

*Spearman Rho Correlation Matrix for Ethnic Diversity of the Local FFA Membership and Teacher Characteristics (n = 10)*

Characteristic	Ethnic Diversity of the Local FFA Membership	Magnitude
Level of Recruitment Effort	-.01	Insubstantial
Highest Degree Earned	-.60	Large

### **Objective 12 – Relationships between Student Characteristics and the Ethnic Diversity of the Local FFA Membership**

Objective 12 sought to describe relationships in the six student characteristics (sex, race, cumulative GPA, career preference, father' educational level, and mother's educational level) with the ethnic diversity of the local FFA membership. To calculate the correlations, nominal characteristics were converted

to dichotomous variables. The nominal characteristics that were dichotomized included race/ethnicity to non-White and White; cumulative GPA to below 2.5 and above 2.5; career preference was agriculture and non-agriculture; and parental educational level was with or without a high school diploma. In addition, students were dichotomized by the diversity status of their FFA chapter (diverse and non-diverse).

Since all of the items were dichotomous, a Phi ( $r_\phi$ ) correlation was utilized and no test of linearity was needed. From the results in Table 23, the highest correlations existed with the ethnic diversity of the local FFA membership and race ( $r_\phi = .39$ ). According to Hopkins' (1994) descriptors, this correlation can be described as moderate. The correlation with race and the ethnic diversity of the local FFA membership found a positive relationship. According to Hopkins' descriptors, a small correlation exists exist among four of the variables. Three of the variables received negative correlations, cumulative GPA ( $r_\phi = -.12$ ), agriculture career ( $r_\phi = -.29$ ), and mother's educational level ( $r_\phi = -.18$ ), while sex ( $r_\phi = .10$ ) resulted in a positive correlation. The lowest correlation was found between ethnic diversity of the local FFA membership and the students' father's educational level ( $r_\phi = .03$ ). This was a positive and very small correlation according to Hopkins' descriptors.

Table 23

*Phi Correlation Matrix for Ethnic Diversity of the Local FFA Membership and Students' Characteristics of Nominal Nature (n = 136)*

Characteristic	Ethnic Diversity of the Local FFA Membership <sup>a</sup>	Magnitude
Father's Educational Level <sup>b</sup>	-.03	Very Small
Career Preference <sup>c</sup>	-.29	Small
Cumulative GPA <sup>d</sup>	-.12	Small
Mother's Educational Level <sup>b</sup>	-.18	Small
Sex <sup>e</sup>	.10	Small
Race <sup>f</sup>	.39	Moderate

<sup>a</sup>Coded: 1 = Diverse; 2 = Non-Diverse; <sup>b</sup> Coded: 1 = Without HS Diploma; 2 = With HS Diploma; <sup>c</sup> Coded: 1 = Agriculture; 2 = Non-Agriculture; <sup>d</sup>Coded: 1 = Below 2.5; 2 = Above 2.5; <sup>e</sup>Coded: 1 = Male; 2 = Female; <sup>f</sup>Coded: 1 = Non-White; 2 = White(non-Hispanic)

**Objective 13 and Objective 14: Difference in Multicultural Competence between Teachers' Ratings and Students' Perceptions and the difference between Teachers' and Students' Racial Color-Blindness**

Objective 13 compares the multicultural competence (awareness, knowledge, skill, and overall) between the selected agriculture teachers and the students' perception. Objective 14 sought to distinguish teachers' and students' racial color-blindness. To compare the constructs of multicultural competence (awareness, knowledge, skill, and overall) and racial color-blindness, means and standard deviations were provided. Cohen's *d* was utilized to determine effect size when comparing group means between the teachers and students. Effect sizes were interpreted using the descriptors of Thalheimer and Cook (2002). Negligible, small, and medium effect sizes were found.

Table 24 displays the combined results of objective 13 and objective 14. A medium effect size ( $d = 0.41$ ) was exhibited between the teachers and the students perceived teacher's skill exhibited. A small effect size was observed in the overall multicultural competence rating ( $d = 0.22$ ). Both, the knowledge ( $d = 0.13$ ) and

awareness ( $d = 0.06$ ) constructs displayed a negligible effect size. In objective 14, a medium effect size ( $d = 0.58$ ) was found between the teachers and students' racial color-blindness rating.

Table 24  
*Comparison of Teacher and Students Rating of Racial Color-Blindness and Teachers' Multicultural Competence*

Construct	Teacher ( $n = 10$ )		Student ( $n = 136$ )		Cohen's $d$
	Mean	$SD$	Mean	$SD$	
Awareness <sup>a</sup>	3.09	0.31	3.06	0.55	0.06 <sup>c</sup>
Knowledge <sup>a</sup>	3.19	0.44	3.27	0.61	0.13 <sup>c</sup>
Skill <sup>a</sup>	2.92	0.38	3.18	0.66	0.41 <sup>e</sup>
Overall <sup>a</sup>	3.06	0.12	3.17	0.53	0.22 <sup>d</sup>
Racial Color-Blindness <sup>b</sup>	2.76	0.28	2.92	0.33	0.58 <sup>e</sup>

<sup>a</sup>Scale based on: 1 = None; 2 = Limited; 3 = Good; 4 = Excellent; <sup>b</sup>Scale based on: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree; Thalheimer & Cook's (2002) descriptors for describing relative size of Cohen's  $d$ : <sup>c</sup> = negligible; <sup>d</sup> = small; <sup>e</sup> = medium

**CHAPTER 5**  
**SUMMARY, CONCLUSIONS, IMPLICATIONS, AND**  
**RECOMMENDATIONS**

**Purpose of the Study**

The purpose of this study was four-fold. First, this study sought to describe the sub-constructs of multicultural competence in school-based agriculture teachers and their relationship to the ethnic diversity of local FFA membership in selected high schools. Additionally, this study examined the racial color-blindness of school-based agriculture teachers and their students and its relationship to the ethnic diversity of local FFA membership. This study compared multicultural competence and racial color-blindness between teachers and students. Finally, this study described relationships between teacher and student characteristics in terms of the ethnic diversity of local FFA memberships.

**Research Objectives**

The following research objectives were developed to guide the study:

1. Describe selected characteristics of school-based agriculture teachers by the ethnic diversity of the local FFA membership. Specifically: age, number of years teaching agriculture, highest obtained degree, agriculture area being taught, level of effort placed on recruitment, multicultural training received, total FFA membership, percent of ethnic enrollment in chapter, total unduplicated enrollment in agriculture, and percent of ethnic enrollment in agriculture were selected.

2. Describe selected characteristics of school-based agriculture students by the ethnic diversity of the local FFA membership. Specifically: sex, race, cumulative grade point average (GPA), career aspiration, and parent's educational level were selected.
3. Describe the level of multicultural competence held by school-based agriculture teachers.
4. Describe the racial color-blindness of school-based agriculture teachers.
5. Compare the level of multicultural competence held by school-based agriculture teachers by the ethnic diversity of the local FFA membership.
6. Compare the racial color-blindness of school-based agriculture teachers by the ethnic diversity of the local FFA membership.
7. Describe the level of multicultural competence held by school-based agriculture teachers as perceived by their students.
8. Describe the racial color-blindness of school-based agriculture students.
9. Compare the level of multicultural competence held by school-based agriculture students by the ethnic diversity of the local FFA membership.
10. Compare the racial color-blindness of school-based agriculture students by the ethnic diversity of the local FFA membership.
11. Describe the relationship between selected characteristics, noted in Objective 1, multicultural competence, and racial color-blindness of school-based agriculture teachers with the ethnic diversity of the local FFA membership.

12. Describe the relationship between selected characteristics, noted in Objective 2, of school-based agriculture students with the ethnic diversity of the local FFA membership.
13. Compare the level of multicultural competence held by school-based agriculture teachers with students' perception of teachers' multicultural competence.
14. Compare the racial color-blindness levels between school-based agriculture teachers and their students.

### **Research Design**

This study was descriptive, correlational, and causal-comparative in nature. The study addressed teachers' multicultural competence, teachers' racial color-blindness, and students' racial color-blindness from school-based agriculture programs. This study employed the use of a researcher-administered questionnaire that assessed multicultural competence levels, characteristics, and racial color-blindness among teachers and students.

In addition to describing "what is" with respect to color-blind racial attitudes and multicultural competence, this study also utilized a correlational and *ex post facto* research design to investigate potential relationships between variables of interest. In this study, there was one dependent variable investigated – ethnic diversity in the local FFA membership. In addition to the dependent variable, there were numerous independent variables of interest including: teachers' racial color-blindness, teachers' multicultural competence level, and selected characteristics (age, agriculture area of interest to teach, years of teaching experience, highest degree obtained, level of recruitment effort, and training

received in teaching multicultural students). Additionally, selected student characteristics served as independent variables for this study. Selected student characteristics included sex, race, career aspirations, cumulative GPA, and parent's educational level. Students' perception of their teacher's multicultural competence and students' racial color-blindness also served as independent variables in this study.

### **Population and Subject Selection**

Ten, White, male, school-based agriculture teachers and their students from rural schools containing a 30% ethnic minority school enrollment were selected to participate in this study. A frame was obtained from the National Center for Educational Statistics (2000), and filtered to 10 schools by the Council of Chief State School Officers (2009) and staff members from the National FFA Organization. Filter each school was selected evenly based upon the ethnicity of the local FFA membership. FFA chapters with an ethnic minority membership below 30% were deemed the title non-diverse while FFA chapters with a membership above the 30% ethnic minority threshold were titled diverse.

### **Instrumentation**

Selected school-based agriculture teachers and their students completed the primary data collection instrument (see Appendix C & D). The researcher distributed the questionnaires during each on-campus visit.

The teacher and student questionnaires consisted of three sections: a multicultural competency instrument, a characteristic page, and a racial color-blindness instrument. Section 1 was organized as a Likert frequency scale that assessed the multicultural competence level of the secondary agriculture teachers.

Section 1, also referred to as the MAKSS-T, was compiled of 37 statements that assessed three multicultural constructs: awareness, knowledge, and skill. Teachers were asked to indicate their level of multicultural competence for each statement using the following anchors: no competence, limited competence, good competence, and excellent competence. Students were asked to indicate their perception of the teacher's level of multicultural competence for each statement using the following anchors: My teacher exhibits no competence, My teacher exhibits limited competence, My teacher exhibits good competence, and My teacher exhibits excellent competence. Constructs were scored by adding the values from each statement in that construct, then dividing by the total number of statements

The second primary section asked teacher and student respondents to provide characteristic information. The characteristic information requested from teachers included age, number of years teaching agriculture, the highest degree obtained, the agriculture content areas that they teach, level of effort in student recruiting, their current enrollment and minority enrollment in FFA, and their overall and minority enrollment of unduplicated agriculture students.

Characteristic information requested from students included sex, ethnicity, cumulative grade point average (GPA), career aspiration, father's highest education level, and mother's highest educational level.

The final section of the questionnaire incorporated a racial color-blindness instrument, referred to as CoBRAS. Specifically, the CoBRAS, developed by Dr. Helen Neville, assessed the racial color-blindness of an individual. Twenty-four statements representing three component constructs: racial privilege, institutional

discrimination, and blatant racial issue were distributed to the teachers and students. Five-point agreement scales on the CoBRAS ranging from strongly disagree to strongly agree was used.

### **Validity and Reliability of the Teacher and Student Questionnaire**

The MAKSS-T and the CoBRAS are a research based instruments designed for use among teachers and counselors, therefore the norms reliability and validity were based upon the constructs of the two instruments (D'Andrea et al., 2000; Neville et al., 2003). Specifically construct and criterion validity were each addressed by the developers (2000; 2003).

Face and content validity of the teacher and student questionnaire for sections 1, 2, and 3 were addressed by a panel of experts consisting of eight university faculty members representing agricultural education, teacher development programs, and multicultural counseling education from across the United States (see Appendix E). Slight modifications were made to the two questionnaires because of feedback provided by the panel.

A pilot study was conducted with 32 secondary agriculture teachers and 21 secondary agriculture students in public school districts within the state of Kentucky (see Appendix F) to determine the reliability of the questionnaires. The teachers and students selected were asked to complete the instrument and share concerns or suggestions for improvement. Cronbach's alpha was calculated for section 3 and the three constructs in section 1 of the teacher and student questionnaires. Cronbach's alpha levels from the pilot test ranged from .80 to a .92 for the teacher questionnaire and a .71 to a .96 for the student questionnaire.

The pilot test results indicated that sections 1 and 3 of both teacher and student questionnaires were reliable measures of the variables of interest.

### **Data Collection**

Data were collected on site for each questionnaire to help minimize the risk of socially desired response and to eliminate non-response error. First, verbal and written consent was obtained from the school administrator and the agriculture teacher at each site. The consent was followed by an email that provided available times for the data collection and steps to distribute and collect a parental consent form for the student participants. Once parental consent forms were collected, the researcher and teacher developed arrival dates and times for the visit. Upon arrival, the researcher distributed the student questionnaire among the students and the teacher. Teachers completed the teacher questionnaire during the teacher's planning period. The head administrator and secondary agriculture teacher received a formal thank you letter (see Appendix I) for their cooperation. The thank you letter served as the final contact with the participants. The data collection process began in November 2009 and ended in February 2010.

### **Data Analysis**

Data were analyzed using the Statistical Package for the Social Sciences® (SPSS) 17.0 for Windows. In most cases, descriptive statistics including measures of central tendency and variability were calculated in order to “describe and summarize” mean scores of dichotomized groups for each variable of interest (Ary et al., 2006, p. 127).

Research objective one and two were addressed by calculating frequencies and percentages for the variables of interest. To address research objectives three,

four, seven, and eight, mean scores and standard deviations were reported from the results of sections 1 and 3 of the teacher and student questionnaire. Research objectives five and six separated and compared the mean scores from section 1 and 3 of the teachers' questionnaire by the ethnic diversity of their local FFA membership. Research objective 9 and 10 separated and compared the mean scores from sections 1 and 3 of the student' questionnaire by the ethnic diversity of their local FFA membership. Research objective 13 and 14 separated and compared the mean scores from section 1 and 3 of the teachers' and students' questionnaire. Cohen's *d* was utilized to compare mean scores and Thalheimer and Cook's descriptors were used to interpret Cohen's *d*. A Pearson Product Moment Correlation and Spearman rho correlations were used to address research objectives 11 and 12. Hopkins' (1994) descriptors were used to describe the relationship between the variables.

### **Summary of Research with Conclusions, Implications,**

### **Recommendations and Recommendations for Further Research**

#### **Objective 1 –Teacher Characteristics**

Of the 10 agriculture teachers who participated in this study, five advised a diverse FFA chapter and five advised a non-diverse FFA chapter as designated by the percent of ethnic minority membership in FFA. Sixty percent of teachers in diverse FFA chapters and 80.00% of teachers in non-diverse FFA chapter were above the age of 40. Eighty percent of teachers in diverse FFA chapter had less than twenty years of teaching experience, while 80.00% of teachers in non-diverse FFA chapters had over twenty years of agriculture teaching experience.

Agriculture teachers in this study, regardless of ethnic minority membership, taught a variety of agriculture areas to their students. Four out of five teachers in diverse and non-diverse FFA chapters taught horticulture to their students. All teachers in non-diverse FFA chapters taught animal science. Eighty percent of teachers in diverse FFA chapters reported earning a master's degree and bachelor's degree, while 80.00% of teachers in non-diverse FFA chapters reported earning a degree equivalent to or higher than, a masters degree.

Both teachers from diverse (80.00%) and non-diverse (60.00%) FFA chapters perceived that they place a higher than average level of effort on recruiting students into their agriculture programs and FFA chapters. Over fifty percent (57.12%) of the FFA membership and unduplicated agriculture enrollment (54.07%) were derived from the teachers in non-diverse FFA chapters. However, teachers in diverse FFA chapters support a larger percentage of ethnic minorities in their FFA membership (40.14%) and their unduplicated agriculture enrollment (47.22%). Sixty percent of all teacher respondents indicated that they participated in multicultural training through professional development at their high school. Teachers in diverse FFA chapters indicated they had received multicultural training from 20 different sources, while teachers in non-diverse FFA chapters reported they had received multicultural training from four different sources.

From the findings, it is concluded that teachers in both types of FFA chapters are similar in age, but teachers in non-diverse FFA chapters have more years of experience teaching agriculture. This implies that teachers from non-diverse FFA chapters received teacher education training prior to a movement in multicultural competence in higher education. Another implication is teachers

from diverse FFA chapters committed to teaching agriculture later in age and their experiences, prior to teaching, could have served as a factor in the diversity of the FFA chapter membership.

It is concluded that teachers in diverse and non-diverse FFA chapters teach a variety of agriculture content areas to their students. Specifically though, it was found that a majority of teachers in non-diverse FFA chapters taught animal science and agricultural mechanics. In addition, teachers in diverse FFA chapters taught subject areas beyond the realm of the questionnaire in areas such as aquaculture, hydroponics, and small animal science. This is consistent with a 1998 study by Jones and Bowen. They found a difference in the agriculture courses and the ethnic minority student enrollment. In their study, teachers that lacked ethnic diversity in their enrollment mostly taught courses relating to production agriculture and mechanics (Jones & Bowen, 2008a). It could be implied that course names warrant ethnic minority students from enrolling or that ethnic minority students are not interested in traditional agriculture areas. It is recommended that a content analysis examine the multicultural verbiage in course descriptions and syllabi between teachers in diverse and non-diverse FFA chapters. Another implication from the finding is that courses are not the only programmatic difference between teachers in diverse and non-diverse FFA chapters. Therefore, research is recommended to look at programmatic characteristics that attract and repel students of diverse cultures.

research takes a closer look at the agriculture courses being offered at high schools, with a diverse enrollment, and determine if a correlation exists among each.

From the findings, it is concluded that the majority of teacher respondents in this study perceive that they place a high effort on recruitment. If recruitment efforts are high for both teachers, it is posited that teachers in non-diverse FFA chapters place a high effort in recruiting students similar in ethnicity as themselves while teachers in diverse FFA chapters recruit students who reflect the ethnic composition of the school. It is also concluded that teachers in diverse FFA chapters receive multicultural training from more sources than teachers in non-diverse FFA chapters. Perhaps, teachers in diverse FFA chapters place more emphasis on teaching strategies in ethnically diverse classrooms.

### **Objective 2 –Student Characteristics**

Of the 136 students participating in the study, 81 were at a diverse FFA chapter and 55 were at a non-diverse FFA chapter. The majority of students in diverse FFA chapters (67.90%) and non-diverse FFA chapters (58.20%) were male. Of the students in non-diverse FFA chapters, 89.10% identified themselves as White/Non-Hispanic as oppose to 51.85% of the students in diverse FFA chapters. The majority of the students in diverse FFA chapters (85.20%) and non-diverse FFA chapters (60.00%) reported a non-agriculture career aspiration. Regarding cumulative GPA, over 90% of the students in diverse FFA chapters, as oppose to 88% of students in non-diverse FFA chapters, had a cumulative GPA greater than 2.1. More specifically, the majority of all student participants reported a cumulative GPA within the range of 2.1 – 3.0.

The fathers of students in diverse FFA chapters (40.70%) and non-diverse FFA chapters (61.80%) were reported to have a high school diploma/GED as their highest degree obtained. However, it should be noted that the next highest form of

education for fathers of students in diverse FFA chapters were high school dropout followed by the absence of a father. This finding was different for students in non-diverse FFA chapters. Their second highest response for a father's degree level was equivalent or higher than a college masters degree. Although not as high as the father's education level, a high school diploma/GED was the highest education level reported for mothers of students in diverse FFA chapters (35.75%) and non-diverse FFA chapters (50.90%). The majority of mothers at diverse FFA chapters (53.20%) received a post-secondary education. This percentage is higher than the mothers (46.22%) and fathers (29.41%) of students in non-diverse FFA chapters and fathers of students in diverse FFA chapters (29.70%).

From the findings, it is concluded that the majority of the student respondents come from a diverse FFA chapter. Therefore, it is further concluded that students in diverse FFA chapters represent a higher number of completers/concentrators. Earlier it was concluded that teachers in non-diverse FFA chapters have a higher unduplicated student enrollment. From these conclusions, it is implied that students in diverse FFA chapters are staying in their agriculture classes for at least three years.

It is also concluded that the majority of the student participants in this study are White/Non-Hispanic. Another conclusion is students in diverse FFA chapters reported a higher percent of cumulative grade point averages above 2.1. This is consistent with Erikson and Trautman's (1995) who found that students enrolled in ethnically diverse classrooms performed better academically, as indicated by cumulative grade point average. It is concluded that more students in

diverse FFA chapters reported that they desire a career not related to agriculture then students in non-diverse FFA chapters.

From the findings, it was concluded that a high school diploma was the highest reported education for all parents of student participants. Furthermore, it was concluded that the next highest reported education among fathers of students in diverse FFA chapters were high school dropout and an absent father. This conclusion is consistent with a study on African American fathers of urban school students (Coley & Chase-Lansdale, 1999). From the 1999 study, it was found that educated male role models helped in the future of a child when a father was absent or received less than a high school diploma. Another conclusion from the findings is more mothers received a post-secondary education of students in diverse FFA chapters than fathers of students in diverse FFA chapters, and the fathers and mothers of students in non-diverse FFA chapter.

### **Objective 3– Teachers’ Level of Multicultural Competence**

Three constructs were assessed that underpin multicultural competence (awareness, knowledge, and skill). Scores for the three constructs were summated to provide an overall multicultural competence measure. The teachers rated their knowledge ( $M = 3.19$ ;  $SD = 0.44$ ) as the highest construct followed by awareness ( $M = 3.09$ ;  $SD = 0.31$ ) and skill ( $M = 2.92$ ;  $SD = 0.38$ ). The overall multicultural competence mean score for teachers was 3.06 ( $SD = 0.35$ ).

Based upon these findings, it is concluded that agriculture teachers are more confident in their knowledge versus their awareness and skill in multicultural competence. This is consistent with previous findings regarding multicultural competence among counselors (Wang, 1998). According to Sue, to

improve their awareness and skill, an examination of self and implementation of cross-cultural practice must take place (2001). Therefore, it could be that knowledge was the highest construct because knowledge is increased through training and literature (Sue, 2001). It is recommended that agriculture teachers seek methods that help increase multicultural awareness and skill. Supervised Agricultural Experience (SAE) visits and involvement in community organizations that represent the diverse cultures in the student population are beneficial methods in improving a teacher's multicultural awareness and skill. Additionally, agriculture teacher educators should provide and seek opportunities that improve preservice teachers' knowledge, awareness, and skill levels. In doing so, research suggests that the use of theory, case studies, and immersion activities can improve the multicultural competency constructs in an individual (Bennett, 2001).

#### **Objective 4 – Teachers' Level of Racial Color-Blindness**

The racial color-blindness section of the teacher's questionnaire was rated between strongly disagree to strongly Agree. Teachers reported a mean score of 2.76 ( $SD = 0.28$ ) for racial color-blindness. It is concluded that teachers are not racially color-blind. According to Neville et al, (2000) results from the questionnaire reflect individuals' thoughts when race becomes a topic of discussion. A higher score reflects that the individual thinks society is just and fair or that racial prejudice exists (Neville et al., 2000). Teachers in this study have a racial color-blindness that portrays a lack of racial prejudice and a belief that society is not just and fair. The process of becoming multiculturally competent begins with a belief that individuals of diverse cultures are not equal (Sue & Sue, 2008). Therefore, it is concluded that teacher perceive that inequalities exist

among students of diverse ethnicities. This implies that teachers can identify the advantage White students have and how that creates an unequal fairness toward ethnically diverse students. It is recommended that teachers provide opportunities for ethnic minority students to succeed in their classroom and FFA by minimizing the disadvantages among ethnic minority students. Ethnic biases in classroom lessons and assessments that create microaggressions should be eliminated. Any university providing courses in multicultural education can prepare teachers in the development of lessons and assessments that are ethnic neutral. Through FFA, teachers should be aware that certain fundraisers, service learning events, field trips and recreational activities can be perceived as racially prejudice. FFA events such as student work auctions, roadside cleanups, and tractor pulls could intimidate ethnic minority students. Community festivities, project sales, and movie nights are all events that portray a positive image of the FFA and to an ethnic minority student. National FFA Organization events such as Washington Leadership Conference and Made For Excellence are also activities that teachers should encourage ethnic minority students to attend.

Additionally, it is recommended that research examine the racial color-blindness of agriculture teacher educators and their pre-service teachers. Racial color-blindness is a reflection of one's attitude and according to a 2006 study comparing personalities between students and professors, no significant difference existed between the personalities of the students and professors (Zimmerman et al., 2006). If students are a reflection of their professor, it is the responsibility of teacher educators as well as secondary agriculture teachers to encourage their students to expand their cultural perspectives. The expansion of

cultural perspectives can be implemented through course assignments, reflection papers, and trips that expose students to different cultures.

Because racial color-blindness reflects an attitude that society is just and fair or that racial prejudice exists, it is recommended that agricultural youth organizations, such as the National FFA Organization, evaluate their image and determine if racial color-blindness is present.

### **Objective 5 – Teachers’ Multicultural Competence by Ethnic Diversity in the Local FFA Membership**

When comparing the summated means of teachers’ multicultural competence by ethnic diversity in the local FFA membership, no effect size magnitudes of small, huge, or very large were found. In each of the multicultural competence constructs, teachers in diverse FFA chapters reflected a higher mean score than teachers in non-diverse FFA chapters. A negligible effect size ( $d = 0.14$ ) in the awareness levels and a medium effect size ( $d = 0.73$ ) in knowledge levels was found between teachers in diverse FFA chapters and teachers in non-diverse FFA chapters. A large effect size was found in the skill construct ( $d = 0.81$ ) and the overall multicultural competence ( $d = 0.75$ ) between teachers in diverse FFA chapters and teachers in non-diverse FFA chapters.

From this finding, it is concluded that teachers in a diverse FFA chapter setting expressed a greater sense of multicultural competence than did their other teaching counterparts. This finding supports Milner et al. (2000) who found characteristics of multicultural competence existing among teachers who surround themselves with culturally different students. In this study, each teacher taught at an ethnically diverse high school. However, ethnically diverse students

are enrolled in diverse FFA chapters. Therefore, it can be implied that teachers in diverse FFA chapters are more aware, knowledgeable, and have more skill with relating to students of different cultures. In order to increase the ethnic diversity in FFA chapters, it is recommended that agriculture teacher educators prepare students to become multicultural competent. This does not occur in the presence of a single course in multicultural education (Ford, 1992). Agriculture teacher educators must incorporate multicultural practices throughout undergraduate and graduate courses. Multicultural practices could include, but are not limited to, exploration of beliefs and biases toward groups who are culturally different from the student, journaling, creative projects, philosophical statements, immersion activities, and student interviews.

Another conclusion is teachers in diverse FFA chapters have a higher knowledge score than teachers in non-diverse FFA chapters. According to Milner et al. (2000), teachers with increased knowledge extend themselves beyond the realm of classroom instruction. Therefore, it is implied that teachers in a diverse FFA chapter extend beyond the classroom and into extracurricular school and community events that represent diverse ethnic cultures. Further research is recommended that differentiate the school and community involvement of teachers in diverse and non-diverse FFA chapters.

Another recommendation is that agriculture teachers strive to recruit students that mirror the ethnic cultures represented in the community and school. The recruitment of students from diverse ethnic cultures can be obtained through engagement in community activities such as churches, festivities, and events that involve the cultures of the school. Furthermore, teachers must seek after and meet

with students that are culturally different from themselves. The interaction must provide students with assurance of positive experiences and minimize negative perceptions.

Teachers in diverse FFA chapters had a larger skill rating than teachers in non-diverse FFA chapters. In other words, the conclusion suggests that when confronted with classroom issues among students who are culturally different than themselves, teachers in diverse FFA chapters have more confidence. This conclusion is consistent with D'Andrea et al. (2003). In their study, D'Andrea et al. found that teachers with a higher skill in multicultural competence were better able to relate to and manage students of cultures different from the teacher (2003). It is implied that teachers in diverse FFA chapters can relate with and manage ethnically diverse classrooms better than teachers in non-diverse FFA chapters. D'Andrea et al. (1991) suggest that increased multicultural competence comes with practice. Therefore, it is recommended that agriculture teacher educators provide preservice teachers with immersion exercises and clinical hours in ethnically diverse classrooms. Agriculture teacher educators should educate and find approaches that raise secondary agriculture teachers' multicultural competence. Collaboration is recommended between agriculture teacher educators and faculty in the field of multicultural education to create undergraduate course of studies that develop multicultural competence in students. In addition, it is recommended that these collaborations extend into research that describe, explain, and predict effective multicultural competent strategies in school-based agricultural education.

The primary ethnic minority examined in this study was African American. However, the Multidimensional Model for Developing Cultural Competence (MMDCC) entails ethnicities besides African American. Therefore, research is recommended that assess multicultural competence toward students of all races and cultures. Other races modeled in the MMDCC include Latino American, Asian American, Native American, and European American students.

Multicultural competence does not end with ethnicity. Sue's model (2001) is a reflection of race or culture and a secondary school is a complex assortment of cultures and cultural bias (Bennett, 2001; Crawley and Ritsema 2006; and Kinney 1999). It is recommended that future research examine other student populations that may not feel welcome within the doors of agriculture classrooms (Eckert, 1989; Kinney, 1993; Wilkins, 2008). Stereotypes beyond ethnicity, but more toward social identity (Perry, 2004) should be challenged.

### **Objective 6 – Teachers' Racial Color-Blindness by Ethnic Diversity in the Local FFA Membership**

Teachers in diverse FFA chapters have a higher mean rating in racial color-blindness than teachers in non-diverse FFA chapters. A very large effect size ( $d = 1.37$ ) was found between the teacher groups. This is ironic because Neville et al. (2000), believed a greater racial color-blindness score relates to racial prejudice or a belief that society is just and fair.

From the findings, it is concluded that teachers in non-diverse FFA chapters believe that society is not just and fair and less racially prejudice except they lack ethnic diversity in their local FFA membership. It could be posited that the teachers in non-diverse FFA chapters believe society is not just and fair

because it benefits people who are ethnically different from themselves. This was a limitation discovered with the CoBRAS instrument. In Neville et al. (2000) study, respondents tested were White students in colleges and universities that were predominantly White. Neville et al (2000) explained predominantly White as above 80% Caucasian. In this study, the teachers taught in a school that was not predominantly White. McAllister and Irvine (2000) believe that dominant cultures, such as the White race, sometimes experience negative attitudes when they identify inequalities from an etic perspective, or a belief that one's own culture is superior. Iyer, Leach, and Crosby (2003) explained similar findings as "White guilt in response to group based advantages" and "white guilt is associated with White privilege" and "white privilege is a result of racial prejudice" (p. 126). Therefore, teachers in non-diverse FFA chapters are not racially color-blind, but may be racially prejudice. It is recommended that teachers in non-diverse FFA chapters establish change in their actions and practice. A change in action and practice begins with the teacher recognizing their own biases followed by accepting that a problem exists in their attitude. The teacher must determine if their attitude contributes to the problem or contributes to a solution. Once these steps are established, the teacher can seek the correct professional development that can help in correcting or addressing the problem.

It is further recommended that agriculture teacher educators explain to preservice teachers about the purpose of programs that are favorable to certain cultures and how some cultures are more dominant. A clear articulation and research of special programs for underserved cultures and the history leading to their development can serve as a positive assignment for preservice teachers. In

addition, reading assignments of current conflicts arose based upon cultural differences, reflective journaling, development of lessons that includes diverse cultures, and research of cultures outside of their own are all examples of how agriculture teacher educators can decrease racial color-blindness. Furthermore, guest speakers from organizations that represent diverse cultures can provide insight as to their existence and purpose.

Racial color-blindness, prejudice and bias are barriers for an individual to become multicultural competent (Sue, 2001). Sue et al. (1998) suggested self-analysis of biases, prejudices, and misinformation as solutions to overcome barriers in becoming multicultural competent. Therefore, it is recommended that agriculture teacher educators encourage preservice teachers to reflect upon their upbringing, identify their familiarities, understand their biases, and determine their racial color-blindness. In return, agriculture teacher educators must expand their expand current assignments that require students to examine themselves for similarities and existing biases that impact classroom effectiveness (Sue et al., 1998).

### **Objective 7 – Students’ Perception of Teacher’s Multicultural Competence Level**

According to the students’ perception of their teacher’s multicultural competence (awareness, knowledge, skill, and overall), students perceive that on average, their teachers knowledge ( $M = 3.27$ ;  $SD = 0.61$ ) was the highest construct. This finding was followed by skill ( $M = 3.18$ ;  $SD = 0.66$ ), awareness ( $M = 3.06$ ;  $SD = 0.55$ ), and overall multicultural competence ( $M = 3.17$ ;  $SD = 0.53$ ).

Students' perceived that their teacher' knowledge to be the highest construct of multicultural competence. Thus, students feel their teacher is knowledgeable about multicultural situations. In addition, students perceive their teacher's multicultural skill to be higher than their multicultural awareness. The awareness construct asked students to indicate perceptions of their teacher's understanding of multicultural terminologies. Teachers' awareness was the lowest of the three construct, as perceived by their students.

From the findings it is concluded that students perceive their secondary agriculture teachers' overall multicultural competence level (summation of knowledge, awareness, and skill) as good,. Furthermore, it is concluded that students who are completers/concentrators in an agricultural program can identify their teachers' multicultural competence. Students in this study were enrolled in schools that composed of ethnically diverse students. The conclusions imply that students based their perception rating on a comparison of other teachers inside the school. Therefore, teachers should recognize that students' perceptions on cultural differences may be a reflection of their environment. In addition, teachers who are perceived to be multicultural competent among the student population should reach out to their teaching counterparts in order to better educate all students in classrooms.

Further research that observes multicultural competent practices in all teachers is recommended. In addition, it is also recommended that qualitative research seek to describe students' observations of multiculturally competent and incompetent classroom teachers.

### **Objective 8 – Students' Racial Color-Blindness**

Altogether, students' received a racial color-blindness mean score of 2.92 ( $SD = 0.33$ ). According to the anchors on the student questionnaire, the students in this study denoted a neutral racial color-blindness score that was neither prejudice to race nor a belief that society is just and fair. It is posited that the students selected neutral responses due to social desirability bias (Garland, 1991). Social desirability bias suggests that the students were uncomfortable with the statements in the CoBRAS, could be concluded that racial prejudice exists among the students. All school-based teachers and counselors need to encourage students to express their concerns and views in order to minimize prejudice, find the source for the attitude, and create a holistic and pluralistic school of culture. In the future, a similar study is recommended that utilizes an even number scale that eliminates a neutral bias.

### **Objective 9 – Students' Perception of Teacher's Multicultural Competence Level by the Ethnic Diversity of the Local FFA Membership**

Students in diverse FFA chapters perceived their agriculture teacher to be more multicultural competent (awareness, knowledge, skill, and overall) than students in non-diverse FFA chapters. A medium effect size of 0.51 was found in the awareness construct of teachers' multicultural competence as perceived between students in diverse FFA chapters and students in non-diverse FFA chapters. The effect size regarding the perception of teachers' knowledge ( $d = 0.20$ ), skill ( $d = 0.26$ ), and overall multicultural competence ( $d = 0.37$ ) was found to be small between students in diverse and non-diverse FFA chapters.

The findings suggest that students can identify a teacher who is and is not multiculturally competent. This conclusion supports findings from Constantine (2002) regarding clients' perceptions of their counselors. In Constantine's study, clients were able to identify counselors who were multiculturally competent. Perhaps students identify multicultural competence through interactions with other teachers in the school and by observing differences between teachers who are and are not multiculturally competent. It could be that multicultural competent teachers exhibit knowledge, awareness, and skill in their classroom instruction; resulting in an inviting classroom environment for all students. Therefore, it is recommended that teacher organizations, such as National Education Association, Association for Career and Technical Education, and National Association of Agricultural Educators, inquire about students' perceived strategies used by teachers deemed multicultural competent. Furthermore, these organizations are encouraged to provide opportunities for students to recognize teachers for their ability to teach students who are culturally different than themselves. Additionally the National FFA Organization should reinstall the H. O. Sargent award to students and teachers who exhibit multicultural competence.

Students perceive their teacher's multicultural competence from observations in the classroom. This is a reflection of the teacher as a professional. Because Dimension 3 of the MMDCC (Sue, 2001) is hierarchical, it can be concluded that a multiculturally competent professional is also a multiculturally competent individual (Sue, 1998). Thus, concluding that students in diverse FFA chapters perceive their teacher to be a multicultural competent individual and professional.

African American students represented the largest ethnic minority sample in this study. According to Brooks (2006), cultural differences exhibited by African Americans occur every day during cultural practices, family activities, community events, and religious ceremonies. Based upon the findings, it is concluded that African American students identified multicultural competence in the teachers in diverse FFA chapters. It is posited that these teachers are immersing themselves in activities similar to the Brooks' (2006) study, resulting in an ethnically diverse classroom and FFA chapter. As a result of the implication, recommendations are provided for immersing teachers into cultures different from their norm. Teachers should be expected to obtain a set number of after school hours in student activities beyond their discipline area and serve on organizations and attend community events that encompasses student ethnicities different from themselves. Prior to school-based teaching experiences, agriculture teacher educators should encourage preservice teachers to become members of organizations that extend beyond the realm of agriculture. In addition, research should examine activities that teachers in diverse FFA chapters immerse themselves in that would deem them multicultural competent.

#### **Objective 10 – Students’ Racial Color-Blindness by the Ethnic Diversity of the Local FFA Membership**

Students in diverse FFA chapters have a higher racial color-blindness mean rating than teachers in non-diverse FFA chapters. A small effect size ( $d = 0.22$ ) was found in the racial color-blindness between students in diverse FFA chapters and students in non-diverse FFA chapters. According to Neville et al. (2000), a greater racial color-blindness score relates to racial prejudice or a belief that

society is just and fair. Similar to the findings in research objective 6, a problem was found in the interpretation of the CoBRAS, as described by Neville et al. (2000).

It is concluded that students in non-diverse FFA chapters have less racial color-blindness than students in diverse FFA chapters. In other words, students in non-diverse FFA chapters do not believe society is just and fair. It can be conceived that students in non-diverse FFA chapters observe unfair privileges being rewarded to individuals who are ethnically different from themselves. This position is consistent with research from McAllister and Irvine (2000). McAllister and Irvine (2000), noted that an identity of being treated unfairly by race may cause racial prejudice. Therefore, it is concluded that students in non-diverse FFA chapters are developing attitudes of racial prejudice due to observed unfair privileges and a lack of awareness. From the conclusions and implications, it is recommended that school based agricultural teachers increase student awareness of cultural inequalities that exist for ethnic minority students through classroom discussion, field trips, observations, and interview assignments. Furthermore, school based agricultural teachers are encouraged to let students develop a classroom management policy and an FFA chapter code of conduct that minimizes racial prejudice and oppression. This procedure becomes ideas of the students rather than the rules from a single teacher of one ethnicity.

Furthermore, school-based agriculture teachers are encouraged to establish a classroom that expects respect for each student's self-image. In addition, school-based agriculture teachers should utilize their classroom instruction to entail successful individuals, of all ethnicities, who are noted for their success in

agriculture. Finally, students should be encouraged to develop service-learning activities that encompasses all cultures in the community.

### **Objective 11 – Relationships between Teacher Characteristics and the Ethnic Diversity of the Local FFA Membership**

Pearson Product Moment correlations and Spearman rho correlations were used to describe the relationship between the ethnic diversity of the local FFA membership and teacher characteristics, multicultural competence, and racial color-blindness. The ethnic diversity of the local FFA membership was based upon the raw percent of ethnic minority membership provided by the National FFA Organization. Hopkins' (1994) descriptors were utilized for each correlation. Of the teacher characteristics tested, a large correlation existed among the years of teaching experience ( $r = -.60$ ) and the highest degree earned ( $r_s = -.60$ ) by the ethnic diversity of the local FFA membership. A moderate ( $r = -.46$ ) correlation among age and a very large ( $r = .76$ ) correlation in the amount of training received was found for the ethnic diversity of the local FFA membership. An insubstantial correlation ( $r_s = -.01$ ) existed among the level of effort placed on recruiting students to join FFA and the ethnic diversity of the local FFA membership.

A small correlation existed among the knowledge ( $r = .14$ ) and awareness ( $r = .14$ ) constructs of multicultural competence and the ethnic diversity of the local FFA membership. In this study, the skill ( $r = .37$ ) construct of multicultural competence, overall ( $r = .35$ ) multicultural competence, and racial color-blindness ( $r = .48$ ) revealed a moderate correlation with the ethnic diversity of the local FFA membership.

Years of teaching experience, highest degree earned, and teacher's age were correlated negatively to the ethnic diversity of the local FFA membership. From this finding, it is concluded that older teachers with a higher degree level and more years of teaching agriculture have a lower ethnic diversity in the local FFA membership. It can be concluded that White, older, school-based agriculture teachers have a difficult time relating to ethnically diverse students. It is recommended that school administrators provide experienced teachers with strategies for relating to students who are ethnically different from themselves. Strategies for educating older teachers consist of development of awareness of their own beliefs, respect for other cultures, awareness of how personal beliefs affect other cultures, recognize the existence of other cultures, and develop commitment for developing interventions that are compatible to different cultures. Furthermore, it is recommended that administrators in ethnically diverse schools seek teachers of younger age with less years of teaching experience in order to increase the diverse ethnicity of the chapter FFA membership. Since a correlation exists among age, degrees received, years of teaching experience, and the ethnic diversity of the local FFA membership, it poses a question if current preservice teachers will produce an ethnically diverse FFA membership. Therefore, research is recommended to examine the age and years of teaching experience of teachers in diverse and non-diverse FFA chapters.

It is further concluded that the more sources of multicultural training received, the higher the ethnic diversity of the local FFA membership. It could be implied that teachers with a lower ethnic diversity in local FFA membership seek less multicultural training. It is recommended that legislators consider hours of

multicultural training received per year from agriculture teachers as a component for receiving federal educational funding such as grants and Carl D. Perkins vocational funding. It is also recommended that state agriculture teacher organizations provide professional development at annual teachers' conferences and new teacher workshops on strategies in teaching ethnically and culturally diverse students. Agricultural education and the National FFA Organization should seek guidance from successful multiculturally competent teachers, such as the teachers in this study, to facilitate workshops that prepare teachers with effective strategies in a multicultural classroom.

From the findings, it is concluded that both groups of teachers report placing a similar effort on student recruitment. This conclusion poses a question as to why a difference exists in the ethnic diversity of FFA chapters if both groups actually place a similar effort on recruitment. Rehm (2008) found that having cultural differences poses challenges to teachers, yet teachers also reported cultural differences in the classroom were more rewarding. Although teachers indicate that they are placing a similar effort on recruitment, it is possible that teachers with a low ethnic diversity in the local FFA membership place less effort in recruiting ethnically different students. It is recommended that agriculture teacher educators and state staff in agricultural education work to provide resources, such as teacher mentors, guest speakers, and videos that build teacher efficacy in teaching ethnically diverse classes. In addition, agriculture teacher educators should seek professionals within the school community that require multicultural competence in order to recruit all individuals. Examples of professionals in a school community could be minority student recruiters,

religious leaders of nearby buildings of worship, and university athletic coaches. Recruitment research is recommended that describes behaviors that invite or warrant ethnically diverse classroom enrollment in agriculture.

Results of this study support that teacher scores on the constructs of multicultural competence mirror the ethnic diversity of the local FFA chapter membership. Teachers with a higher score in multicultural competence have a higher ethnic diversity in the local FFA chapter. It is recommend that agriculture teacher educators apply Banks (1994), Grant & Sleeter (2003), and Robinsion's (2005) practices that properly and gradually build knowledge and awareness in multicultural education. Some of the practices recommended include self-reflection, self-assumptions, identification of stereotypes, the use of case studies, study of theory, and immersion exercises (Banks, 1994; Grant & Sleeter, 2003; and Robinsion, 2005)

The moderate correlation between racial color-blindness and FFA membership suggests that teachers with a higher ethnic diversity in the local FFA membership score higher on racial color-blindness. This is not consistent with the findings of Neville et al. (2000) and implies that teachers with a lower ethnic diversity in the local FFA membership display actions of racial prejudice. It is recommended that school districts take a proactive approach to diffuse prejudicial positions due to cultural inequalities that may exist and provide their teachers with a clear articulation as to why special programs are designed for under-served cultures. By identifying inequalities and articulating, a purpose helps decreases racial color-blindness and racial prejudice in teachers (Cochran-Smith, 1995).

From the findings, it is concluded that a higher teacher rating in skill and multicultural competence results in a higher ethnic diversity in the local FFA membership. This conclusion supports the work of Grant and Sleeter, (2003) who believe that teachers with higher multicultural competence result in higher ethnic diversity in a classroom. The multicultural competence and skills used in a classroom increase through interaction and classroom instruction among ethnically diverse classrooms (Grant & Sleeter, 2003). Therefore, it is recommended that agriculture teacher educators increase opportunities for preservice teachers to receive clinical practice and observe competent teachers in ethnically diverse classrooms.

Overall, objective 11 helps shed light on the conceptual framework investigated in this study. According to Sue's (2001) Multidimensional Model for Developing Cultural Competence, individuals developing, professionally, seek and exhibit characteristics of multicultural competence. In 1998, Sue described the characteristics of an individual who is acquiring professional multicultural competence as one who,

“(1)...acquires culture-specific training; (2) have more of a knowledge of themselves as a cultural being and the potential impact that have on others; (3) aware that the occupation and practice is culture-bound and reflects a Euro-American worldview; (4) have the skill to use culturally relevant intervention strategies that break the narrow confines imposed via encapsulation; (5) demonstrating alternative helping roles that maximizes the appropriate services to culturally different clients; and (6)

acknowledges, respects, and uses indigenous approaches that are culturally relevant to an increasingly diverse society and global world” (p. 124 – 125).

From Sue’s description of a multicultural competent professional, awareness, knowledge, skill, attitude, and training were all identified. These same descriptors were found to be correlated to teachers with a higher ethnic diversity in the local FFA membership. Based upon the correlation and Sue’s descriptors, teachers with higher ethnic diversity in FFA membership exhibit professional multicultural competence. Because Sue (2001) suggests that one who is a multicultural competent professional is also a multicultural competent individuals, it is implied that the teachers with a higher ethnic diversity in FFA membership are multicultural competent individuals and professionals.

### **Objective 12 – Relationships between Student Characteristics and the Ethnic Diversity of the Local FFA Membership**

Pearson Product Moment Correlations were used to describe the relationship between the ethnic diversity of the local FFA membership (diverse versus non-diverse) and students’ characteristics (sex, race, cumulative GPA, career preference, father’ educational level, and mother’s educational level). A positive, moderate phi correlation of .39 existed with student participants’ race by the ethnic diversity of the local FFA membership. A small correlation existed among the students’ sex ( $r_{\phi} = .10$ ), cumulative GPA ( $r_{\phi} = -.12$ ), career aspiration ( $r_{\phi} = -.29$ ), and students’ mother’s educational level ( $r_{\phi} = -.18$ ) by the ethnic diversity of the local FFA membership. A very small correlation existed between the percent of minority membership in FFA and the educational level of students’ father ( $r_{\phi} = .03$ ).

From the findings it is concluded that students in a diverse FFA chapter setting are more likely to be males with a non-agriculture career interest and hold a cumulative GPA higher than students in a non-diverse FFA chapter setting. This is consistent with Erikson and Trautman's (1995) who found that students enrolled in ethnically diverse classrooms performed better academically, as indicated by cumulative grade point average. Also from the findings of Erikson and Trautman's (1995) study, male students performed better academically when enrolled in classroom taught by a teacher of the same sex. It is posited that male students with higher academic success that are more accepting of diverse cultures gravitate to a diverse FFA chapter. In contrast, females with a lower cumulative GPA that are not as accepting of diverse cultures gravitate to non-diverse FFA chapters. It is recommended that colleges of agriculture and agriculture technical schools place resources in recruiting students in diverse, rural FFA chapters through academic scholarships, school visits, and paid campus tours. It is recommended that research examine additional characteristics of diverse FFA chapters that attract students who are accepting of diverse cultures.

Another conclusion from the findings is students in diverse FFA chapters are more likely to have a mother with an education equivalent to a high school diploma or higher. This conclusion is consistent with a study conducted on student achievement and parents' education in Germany, the United States and the Netherlands (Korupp, Ganzeboom, & Lippe, 2002). From their findings, Korupp et al. (2002) said that a mother's level of education had a practical importance as well as a value and effect on their child's education. It is implied that ethnic minority students have a deep connection with their mothers. This

posits that educated mothers of ethnic minority students are motivating influences to their child's membership in FFA. It is recommended that school-based agriculture teachers work to improve participation among mothers through home visitations, attendance as a trip chaperone, welcoming atmosphere during parent-teacher meetings, invited membership in local alumni chapter. Furthermore school based agriculture teachers are recommended to recruit ethnically diverse students by cooperating with their mothers. Teachers must have empathy for these mothers and provide them with opportunities to participate in events associated with the agriculture program and FFA chapter.

### **Objective 13: Difference in Multicultural Competence between Teachers' Ratings and Students' Perceptions**

Differences existed between teachers' self rating and their students' perceptions of the teacher regarding the three constructs of multicultural competence (awareness, knowledge, and skill) and overall multicultural competence. A negligible difference ( $d = 0.06$ ) existed among the awareness and knowledge ( $d = 0.13$ ) constructs of multicultural competence. Furthermore, a small effect size was found between students' perceptions and teachers overall multicultural competence ( $d = 0.22$ ) and a large effect size existed within the summated mean scores of the skill construct ( $d = 0.41$ ) between teachers and students.

Based upon the findings, it is concluded that for multicultural awareness and knowledge the teachers' rating reflects the students' perception of their teacher. This implies that selected agriculture teachers' awareness and knowledge in multicultural competence is showcased during their interaction with students.

Teachers should strive to increase their students' perception of their multicultural competence. Suggestions for improving a school-based agriculture teachers' awareness and knowledge are to learn as much as possible about the cultural backgrounds of each student through student interviews and SAE visits and pronounce student names correctly and understand the interpretive meaning of name. Enhancing students' self-image and motivation through encouragement to be prideful of their cultural identity and seeking help from school counselors in better understanding each student's background and learning capabilities will serve beneficial in developing a teachers' awareness and knowledge in multicultural competence.

Another conclusion from the findings is that students perceive their teachers' multicultural competence to be higher than the teachers self-rating. It is posited that the teachers have established a developed trust and respect from their completer/concentrator students, resulting in a higher student perception than teacher rating. It is recommended that secondary agriculture teachers utilize the students' higher perception for recruiting ethnically diverse students, developing a pluralistic FFA chapter, and ending racial prejudices that may exist.

Additional research is needed to determine if a significant difference exists among students and teachers in diverse and non-diverse FFA chapters. Inferential statistics could not be used because the sample size of teachers ( $n = 10$ ) and students ( $n = 135$ ) were small and not proportional. Furthermore, additional research investigating agriculture teachers multicultural competence as perceived by students not enrolled in secondary agricultural education is recommended. The

study recommended provides an understanding of ethnic minority students' perception of the agriculture teacher.

**Objective 14: Difference between Teachers and Students' Racial Color-Blindness**

A medium effect size ( $d = 0.58$ ) existed in the racial color-blindness between selected school based agriculture teachers and their students. Students provided a higher rating of racial-colorblindness than teachers did. According to Neville et al. (2000), the difference implies that students are either more racially prejudice or live more under the assumption that life is just and fair for all individuals than the teachers. This difference sheds light that students may be a larger barrier to the ethnic diversity of the local FFA membership. Whent (2003) implied that minority students are impeded from entering agricultural education because of White students' embedded biases. In order to diversify the ethnicity in the local FFA membership, which could help minimize student biases, it is recommended that teachers receive training in recruiting students of different cultures. Organizations, such as National FFA Organization, National Association of Agricultural Education (NAAE), and Association for Career and Technical Education (ACTE), should provide opportunities for teachers in diverse FFA chapters to share their strategies for recruiting students of all ethnicities. It is recommended that research take a closer look at the racial color-blindness of students representing agricultural education and the FFA from a local, state, and national level.

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## APPENDICES

APPENDIX A:  
EMAIL INVITATION TO TEACHERS

November 19, 2009

Mr. Chapman,

Thanks for volunteering to participate in my research that is examining the competence level of agriculture teachers in schools with high minority enrollment. You are one of several teachers throughout the United States participating in this study. As stated in our telephone conversation, the study will consist of a one-day visit that will include a one-on-one interview, the participation in a short survey, and your students (juniors and seniors) participation in a survey. The entirety of the visit will follow all legal regulations and each participant's response will remain confidential and anonymous.

Attached you will find two word attachments that require the following from you:

- Attachment 1: School Consent Form – Please have an administrator from your school attach the document onto an email and send back to me (stacy.vincent@mail.mizzou.edu) or attach onto a letterhead with a signature and mail to: University of Missouri, c/o Stacy Vincent, 125 Gentry Hall, Columbia, MO 65211. **I need this form back by Tuesday, December 1, 2009.**
- Attachment 2: Parental Consent Form – Please distribute this attachment to every junior and senior in your classes and gather each as they are turned in to you. **I will collect the parental consent forms upon my arrival.** The distribution and collection of the parental consent form is imperative in order to receive an honest and thorough examination of the students' collected thoughts. I cannot emphasize the importance in distributing and collecting the consent form on a daily basis. If you need compensation for the number of copies made, please let me know.

It is my desire to visit each school during the months of December and January. If a month or specific date is better for you, please let me know and I will coordinate the travel schedule to your convenience. Feel free to contact me at any time by email or my mobile number 502-507-6087.

I am looking forward to sitting in the walls of a high school agriculture classroom again and I am excited to meet and visit with you and your students!

Again, thank you!

Stacy K. Vincent  
Agricultural Education  
University of Missouri  
125 Gentry Hall  
Columbia, MO 65211  
[stacy.vincent@mail.mizzou.edu](mailto:stacy.vincent@mail.mizzou.edu)  
502-507-6087

APPENDIX B:  
SCHOOL CONSENT FORM

Dear Stacy Vincent,

As an administrator of (*HIGH SCHOOL NAME HERE*), I welcome you to our school to administer a questionnaire to the agriculture education teacher on their level of cultural understanding. In addition, I grant you permission to distribute a pencil/paper questionnaire to the agriculture students on the perception of their teacher's level of cultural understanding, once provided parental consent. I understand that the entirety of the process will take minimum time from the classroom instruction and that the students of the school are not at risk.

In addition, I understand that the teacher and students' responses are anonymous and confidential. Finally it is expected that the researcher will maintain a professional attitude and behavior at all times while at our school.

Sincerely,

(*NAME OF ADMINISTRATOR*)

(*SCHOOL NAME*)

APPENDIX C:  
TEACHER QUESTIONNAIRE

**Assent Form**

Secondary agriculture teacher,

This study will present agriculture teachers' knowledge, awareness, attitude, and skill toward teaching individuals of a different ethnicity.

Please understand that your honest response is **confidential**. There are no risks involved in your participation. In addition, completing this instrument is strictly voluntary. Therefore, realize that you can stop at anytime, but your completion is appreciable.

If you have questions regarding the purpose of this study, feel free to contact the Institutional Review Board at the University of Missouri at 573-882-9585.

By signing your name on the line below, you are consenting that your honest response is available for this research study only.

---

Your Signature

Awareness – Knowledge – Attitude – Skill Instrument  
Teacher Version

Directions: Below are questions that deal with the awareness of ethnicity in the United States. Using the four-point Likert scale below, please provide your honest rating about the level of your awareness to each statement. Please be honest in your responses; there are no right or wrong answers.

**Awareness Anchors**

- 1 – I have No (N) awareness
- 2 – My level of awareness is Limited (L)
- 3 – My level of awareness is Good (G)
- 4 – My level of awareness is Excellent (E)



	Level of Awareness			
	N	L	G	E
Please rate your level of awareness for each question	1	2	3	4
1. How would you rate your awareness in terms of understanding how your ethnic background has influenced the way you think and act?	1	2	3	4
2. How would you rate your awareness in the impact of your thinking and action when interacting with persons of different ethnic backgrounds?	1	2	3	4
3. How would you rate your level of awareness regarding different ethnic educational universities?	1	2	3	4
4. How aware are you in advising students toward a career that will be welcoming of their ethnicity?	1	2	3	4
5. How would you rate your awareness in terms of being able to accurately compare your own cultural perspective with that of a person from another ethnicity?	1	2	3	4
6. How aware are you that doubt and stress results from ethnic situations where people are not sure what to expect from each other?	1	2	3	4
7. How would you rate your awareness in changing the content of what someone thinks about another ethnicity?	1	2	3	4
8. How aware are you at handling the content of what someone thinks when conflict arises between different beliefs?	1	2	3	4
9. How aware are you in understanding the concept of "relativity" in terms of the goals, objectives, and methods of teaching ethnically different students and their families?	1	2	3	4



Awareness – Knowledge – Attitude – Skill Instrument  
Teacher Version

Directions: Below are terms relevant to multicultural education in the United States. Using the anchors below, please provide an honest rating on your degree of understanding toward each terminology. Please realize that there is no right or wrong answer

Knowledge Anchors

- 1 – I have a No (N) understanding of the term
- 2 – I have a Limited (L) understanding of the term
- 3 – I have a Good (G) understanding of the term
- 4 – I have an Excellent (E) understanding of the term



	Level of Understanding			
	N	L	G	E
Please rate your understanding of the following terms.				
1. "Culture"	1	2	3	4
Culture is a pattern of human behavior that is the same among a group of individuals (e.g., Christianity, FFA, farm life, & city life)				
2. "Ethnicity"	1	2	3	4
Ethnicity is a connectedness based upon commonalities in history and ancestry (e.g., African-American, Native-American, & Italian-American)				
3. "Racism"	1	2	3	4
Racism is a belief that a personal phenotypic appearance is superior over someone else (e.g., disliking someone for the color of their skin)				
4. "Mainstreaming"	1	2	3	4
Mainstreaming refers to providing an equal opportunity for every individual to be represented (e.g., everyone receives an equal chance to join FFA)				
5. "Prejudice"	1	2	3	4
A negative or overly positive attitude toward members of a group (e.g., negative feelings, stereotyped beliefs, & favoritism)				
6. "Ethnocentrism"	1	2	3	4
The view that one particular ethnic group is superior to all others (e.g., Asian-Americans are better than Italian-Americans)				
7. "Pluralism"	1	2	3	4
Different ethnic groups live together in mutual respect while retaining their own cultural identity (e.g., Latinos and Whites working together in order to worship in the same church)				
8. "Assimilation"	1	2	3	4
Desiring to not maintain the current cultural identity and thus seeking interaction with other cultures (e.g., a Native-American letting go of his language and customs in order to adopt the culture of new settlers)				
9. "Attribution"	1	2	3	4
Assigning a quality or character to a person or group of individuals (e.g., all blondes are dumb & all FFA members are honest)				
10. "Transcultural"	1	2	3	4
An individual or group who welcomes other cultures into their culture (e.g., an individual who brings a friend of a different race or religion to a cookout)				

	Level of Understanding			
	N	L	G	E
Please rate your understanding of the following terms.	1	2	3	4
11. "Cultural Encapsulation" Viewing the world from only one cultural lens. (e.g., training someone to cook southern style only because you are from the south)	1	2	3	4
12. "Microaggression" When words or behaviors, intentional or unintentional, communicate derogatory or negative insults that have an unpleasant impact on a person or group (e.g., using words in conversation that offends someone)	1	2	3	4
13. "Multicultural Education" Intertwining different cultures or ethnicities within a lesson (e.g., teacher creates a lesson that includes all ethnicities)	1	2	3	4
14. "Contact Hypothesis" Bringing people together who are in conflict, allowing each to understand one another (e.g., teacher brings upset students in a room to work out differences)	1	2	3	4

Awareness – Knowledge – Attitude – Skill Instrument  
Teacher Version

Directions: Below are questions that deal with the skills exemplified around students of different ethnicities in the United States. Using the four-point Likert scale, please give your honest rating by circling the level of skill you believe to possess. Please be honest in your responses; there are no right or wrong answers.

Skill Anchors:

- 1 – I believe I have No (N) skill in that area
- 2 – I believe I am Limited (L) in that skill area
- 3 – I believe I am Good (G) in that skill area
- 4 – I believe I am Excellent (E) in that skill area

	Skill Level			
	N	L	G	E
How would you rate your skill to...	1	2	3	4
1. <del>teach</del> students from a different ethnicity from your own?	1	2	3	4
2. <del>integrate</del> various cultures into a lesson without bias in favor of the mainstream culture?	1	2	3	4
3. <del>effectively</del> assess the needs of students and their families from a racial background different from your own?	1	2	3	4
4. <del>distinguish</del> "formal" and "informal" teaching strategies?	1	2	3	4
5. <del>effectively</del> deal with biases, discrimination, and prejudices directed at you by students and/or their families?	1	2	3	4
6. <del>accurately</del> articulate a student's behavioral problem when the student is from an ethnicity different from your own?	1	2	3	4
7. <del>analyze</del> an ethnicity into their component parts?	1	2	3	4
8. <del>identify</del> the strengths and weaknesses of standardized tests in terms of their use with students from different ethnic backgrounds?	1	2	3	4
9. <del>provide</del> appropriate educational services to ethnically different students?	1	2	3	4
10. <del>effectively</del> consult with another teacher concerning the educational needs of a student from a different ethnicity?	1	2	3	4
11. <del>effectively</del> secure information and resources to better serve ethnically different students?	1	2	3	4
12. <del>accurately</del> assess the behavioral and educational needs of ethnically different students?	1	2	3	4
13. <del>interact</del> and communicate among an ethnicity different from your own?	1	2	3	4
14. <del>effectively</del> discipline a student of a different ethnicity in a manner that does not imply a bias?	1	2	3	4

Awareness – Knowledge – Attitude – Skill Instrument  
Teacher Version – Characteristics

1. Age: \_\_\_\_\_ 2. # of years teaching agriculture: \_\_\_\_\_ 3. # of years at current school: \_\_\_\_\_

4. Highest degree obtained: \_\_\_\_\_

5. Agriculture area of that you teach (select all that apply):

Agricultural Business	_____	Agricultural Mechanics	_____
Agricultural Sciences	_____	Animal Science	_____
Horticulture	_____	Agronomy	_____
Wildlife/Environmental	_____	Other:	_____

6. Please rate your level of effort in recruiting students to the local FFA chapter membership.

Low				Medium					High
1	2	3	4	5	6	7	8	9	10

7. Please rate the extent of multicultural activities you have engaged your students in; activities could include foreign exchange trips, ethnic restaurants, etc.

Low				Medium					High
1	2	3	4	5	6	7	8	9	10

8. Please place a mark beside all means for which you received information on teaching ethnically diverse students

<input type="checkbox"/> Undergraduate School Classes	<input type="checkbox"/> Graduate School
<input type="checkbox"/> Professional Development	<input type="checkbox"/> Workshops
<input type="checkbox"/> Research Conference	<input type="checkbox"/> Research Magazines
<input type="checkbox"/> Agriculture Teachers Conference	<input type="checkbox"/> Online Modules
<input type="checkbox"/> Interviews	<input type="checkbox"/> Other: _____

9. Current enrollment in FFA: \_\_\_\_\_

10. % of ethnic minorities in chapter (e.g., Asian-, African-, Hispanic-American): \_\_\_\_\_

11. Total unduplicated enrollment in Agriculture department: \_\_\_\_\_

12. % of ethnic minorities in Agriculture (e.g., Asian-, African-, Hispanic-American): \_\_\_\_\_



Awareness – Knowledge – Attitude – Skill Instrument  
Teacher Version

**Directions:** Below are statements about different issues among ethnic differences in the United States. Using the five-point ~~likert~~ scale, please give your honest rating by circling your level of agreement with each statement. Please be honest in your responses; there are no right or wrong answers.

**Attitude Anchors**

- 1 – I Strongly Disagree (SD) with this statement
- 2 – I Disagree (D) with this statement
- 3 – I have Neutral (N) feeling toward this statement
- 4 – I Agree (A) with this statement
- 5 – I Strongly Agree (SA) with this statement

	Level of Agreement				
	SD	D	N	A	SA
Please rate your level of agreement with each statement.	1	2	3	4	5
1. Everyone who works hard, no matter what ethnicity they are, has an equal chance to become rich.	1	2	3	4	5
2. Ethnicity plays a major role in the type of social services (such as healthcare & welfare) that people receive in the U.S.	1	2	3	4	5
3. It is important that people begin to think of themselves as an American rather than African American, Mexican American, or Italian American.	1	2	3	4	5
4. Due to discrimination, programs such as affirmative action are necessary to help create equality.	1	2	3	4	5
5. Racism is a major problem in the United States.	1	2	3	4	5
6. English should be voted into law as the official language of the United States.	1	2	3	4	5
7. Ethnicity is very important in determining who is successful and who is not.	1	2	3	4	5
8. Students who wear clothing that could be perceived as discriminatory (rebel flag belt buckle & Malcolm X t-shirt) should receive punishment.	1	2	3	4	5
9. Racism may have been a problem in the past, but it is not an important problem today.	1	2	3	4	5
10. Racial and ethnic minorities do not have the same opportunities as White people in the U.S.	1	2	3	4	5
11. White people in the U.S. are discriminated against because of their skin color.	1	2	3	4	5
12. Talking about racial issues causes unnecessary tension.	1	2	3	4	5
13. It is important for political leaders to talk about racism to help work through or solve society's problems.	1	2	3	4	5
14. White people in the United States have certain advantages because of the color of their skin.	1	2	3	4	5

	Level of Agreement				
	SD	D	N	A	SA
1	2	3	4	5	
Please rate your level of agreement with each statement.					
15. Immigrants should try to fit into the culture and adopt the values of the U.S.	1	2	3	4	5
16. White people are more to blame for racial discrimination in the U.S. than racial and ethnic minorities.	1	2	3	4	5
17. Social policies, such as affirmative action, discriminate against White people.	1	2	3	4	5
18. It is important for public schools to teach about the history and contributions of racial and ethnic minorities.	1	2	3	4	5
19. Racial and ethnic minorities in the U.S. have certain advantages.	1	2	3	4	5
20. Racial problems in the U.S. are rare, isolated situations.	1	2	3	4	5
21. Ethnicity plays an important role in who gets sent to prison.	1	2	3	4	5
22. Most minority students are not interested in a career in agriculture because they do not come from a farm background.	1	2	3	4	5
23. It is okay if a family member of mine marries someone of a different ethnicity.	1	2	3	4	5
24. The difficulty with the concept of "integration" is its hidden bias in favor of the mainstream culture.	1	2	3	4	5

APPENDIX D:  
STUDENT QUESTIONNAIRE

**Assent Form**

Student,

This study represents high school agriculture students' perception toward their FFA advisor's knowledge, awareness, and skill level in teaching individuals of a different ethnicity.

Please realize that your honest response is **confidential**. There are no risks involved in your participation. It is strictly voluntary to complete this instrument is voluntary, but your completion is appreciable.

If you have questions regarding the purpose of this study, feel free to contact the Institutional Review Board at the University of Missouri at 573-882-9585.

By signing your name at the line below, you are granting permission that your honest response is available for this research study only.

---

Your Signature

Awareness – Knowledge – Attitude – Skill Instrument  
Student Version

Directions: Below are questions that deal with awareness of ethnicity in the United States. Using the four-point Likert scale below, please provide your honest rating by circling the appropriate number that represents the degree of awareness you perceive your FFA advisor has toward each statement. Please be honest in your responses; there are no right or wrong answers.

**Awareness Anchors**

- 1 – My FFA advisor has No (N) awareness
- 2 – My FFA advisor's awareness level is Limited (L)
- 3 – My FFA advisor's awareness level is Good (G)
- 4 – My FFA advisor's awareness level is Excellent (E)

How AWARE is your FFA advisor...	Level of Awareness			
	N	L	G	E
Example: my behavior in this class? This person feels the FFA advisor has "good" awareness of his behavior in class.	1	2	3	4
1. <input type="checkbox"/> how ethnic background can influence the way the class thinks and acts?	1	2	3	4
2. <input type="checkbox"/> the impact his thoughts and actions can make while interacting with persons of different ethnic backgrounds?	1	2	3	4
3. <input type="checkbox"/> regarding different ethnic educational universities?	1	2	3	4
4. <input type="checkbox"/> being able to accurately compare his own cultural perspective with that of a person from another ethnicity?	1	2	3	4
5. <input type="checkbox"/> understanding multicultural situations in which people are not sure what to expect from each other?	1	2	3	4
6. <input type="checkbox"/> changing the content of what someone thinks about another race?	1	2	3	4
7. <input type="checkbox"/> handling what someone thinks when conflict arises between different beliefs?	1	2	3	4
8. <input type="checkbox"/> understanding the concept of "relativity" in terms of the goals, objectives, and methods of teaching ethnically different students and their families?	1	2	3	4

Awareness – Knowledge – Attitude – Skill Instrument  
Student Version

Directions: Below are terms relevant to multicultural education in the United States. Using the anchors below, please circle the appropriate number that represents your perceptions of the FFA advisor's understanding of each terminology. Please realize that there is no right or wrong answer

**Knowledge Anchors**

- 1 – My FFA advisor has No (N) understanding of the term  
 2 – My FFA advisor has a Limited (L) understanding of the term  
 3 – My FFA advisor has a Good (G) understanding of the term  
 4 – My FFA advisor has an Excellent (E) understanding of the term



	Level of Understanding			
	N	L	G	E
Please rate your FFA advisor's understanding of the following terms.	1	2	3	4
Example: "Agriculture" This person feels her FFA advisor has "no" understanding	<b>1</b>	2	3	4
1. "Culture" Culture is a pattern of human behavior that is the same among a group of individuals (e.g., Christianity, FFA, farm life, & city life)	1	2	3	4
2. "Ethnicity" Ethnicity is a connectedness based upon commonalities in history and ancestry (e.g., African-American, Native-American, & Italian-American)	1	2	3	4
3. "Racism" Racism is a belief that a personal appearance is superior over someone else (e.g., disliking someone for the color of their skin)	1	2	3	4
4. "Mainstreaming" Mainstreaming refers to providing an equal opportunity for every individual to be represented (e.g., everyone receives an equal chance to join FFA)	1	2	3	4
5. "Prejudice" A negative or overly positive attitude toward members of a group (e.g., negative feelings, stereotyped beliefs, & favoritism)	1	2	3	4
6. "Ethnocentrism" The view that one particular ethnic group is superior to all others (e.g., Asian-Americans are better than Italian-Americans)	1	2	3	4
7. "Pluralism" Different ethnic groups live together in mutual respect while retaining their own cultural identity (e.g., Latinos and Whites working together in order to worship in the same church)	1	2	3	4
8. "Assimilation" Desiring to not maintain the current cultural identity and thus seeking interaction with other cultures (e.g., a Native-American letting go of his language and customs in order to adapt the culture of new settlers)	1	2	3	4
9. "Attribution" Assigning a quality or character to a person or group of individuals (e.g., all blondes are dumb & all FFA members are honest)	1	2	3	4

	Level of Understanding			
	N	L	G	E
<u>Please rate your FFA advisor's understanding of the following terms.</u>				
10. "Transcultural" An individual or group who welcomes other cultures into their culture (e.g., an individual who brings a friend of a different race or religion to a cookout)	1	2	3	4
11. "Cultural Encapsulation" Viewing the world from only one cultural lens. (e.g. training someone to cook southern style only because you are from the south)	1	2	3	4
12. "Microaggression" When words or behaviors, intentional or unintentional, communicate derogatory or negative insults that have an unpleasant impact on a person or group (e.g., using words in conversation that offends someone)	1	2	3	4
13. "Multicultural Education" Intertwining different cultures or ethnicities within a lesson (e.g., teacher creates a lesson that includes all ethnicities)	1	2	3	4
14. "Contact Hypothesis" Bringing people together who are in conflict, allowing each to understand one another (e.g., teacher brings upset students in a room to work out differences)	1	2	3	4

□

Awareness – Knowledge – Attitude – Skill Instrument  
Student Version

Directions: Below are statements that deal with the skills exemplified around individuals of a different ethnicity in the United States. Using the four-point Likert scale, please give your honest rating by circling the degree of skill level you perceive the FFA advisor possesses. Please be honest in your responses; there are no right or wrong answers.

Skill Anchors:

- 4 – My FFA advisor is Excellent in that skill area
- 3 – My FFA advisor is Good in that skill area
- 2 – My FFA advisor is Limited in that skill area
- 1 – My FFA advisor has No skill in that area

Please rate your FFA advisor's level of skill to...	Degree of Skill Level			
	N	L	G	E
	1	2	3	4
Example: FFA advisor? The person feels her FFA advisor has an "excellent" skill level	1	2	3	4
1. <del>teach</del> students from an ethnic background different from him?	1	2	3	4
2. <del>integrate</del> various ethnicities into a lesson without bias in favor of the mainstream culture?	1	2	3	4
3. <del>effectively</del> assess the needs of students and their families from an ethnic background different from him?	1	2	3	4
4. <del>distinguish</del> "formal" and "informal" teaching strategies?	1	2	3	4
5. <del>deal</del> with biases, discrimination, and prejudices directed at him by students and/or their families?	1	2	3	4
6. <del>identify</del> a student's behavioral problem when the student is from an ethnicity significantly different from his own?	1	2	3	4
7. <del>analyze</del> an ethnicity into their component parts?	1	2	3	4
8. <del>identify</del> the strengths and weaknesses of a test in terms of use among students from various ethnicities?	1	2	3	4
9. <del>provide</del> appropriate educational services to different ethnic students?	1	2	3	4
10. <del>effectively</del> consult with other teachers concerning the educational needs of a student whose ethnic background is significantly different from him?	1	2	3	4
11. <del>effectively</del> secure information and resources to better serve ethnically different students?	1	2	3	4
12. <del>interact</del> and communicate among an ethnicity different from his own?	1	2	3	4
13. <del>effectively</del> discipline a student of a different ethnicity in a manner that does not imply favoritism?	1	2	3	4

Awareness – Knowledge – Attitude – Skill Instrument  
Student Version - Characteristics

1. Sex: Male \_\_\_\_\_ or Female \_\_\_\_\_
2. Race/Ethnicity: \_\_\_\_\_
3. Cumulative high school GPA: \_\_\_\_\_
4. Career aspiration: \_\_\_\_\_
5. Number of years in high school agriculture (including this year): \_\_\_\_\_
6. Father's highest educational background (Please select one)
  - Less than high school diploma
  - High school degree or GED
  - Some college (no degree)
  - Associate degree
  - College bachelor's degree
  - College master's degree
  - Doctorate degree
  - Other: \_\_\_\_\_
7. Mother's highest educational background (Please select one)
  - Less than high school diploma
  - High school degree or GED
  - Some college (no degree)
  - Associate degree
  - College bachelor's degree
  - College master's degree
  - Doctorate degree
  - Other: \_\_\_\_\_
8. On any given day, the music you prefer the most is (Please select one):
  - Classic Rock Music
  - Country/Western Music
  - Rap Music
  - Other: \_\_\_\_\_
  - Contemporary Christian/Gospel
  - Pop/R&B Music
  - Rock-n-Roll Music

Awareness – Knowledge – Attitude – Skill Instrument  
Teacher Version

**Directions:** Below are statements about different issues among ethnic differences in the United States. Using the five-point Likert scale, please give your honest rating by circling your level of agreement with each statement. Please be honest in your responses; there are no right or wrong answers.

**Attitude Anchors**

- 1 – I Strongly Disagree (SD) with this statement
- 2 – I Disagree (D) with this statement
- 3 – I have Neutral (N) feeling toward this statement
- 4 – I Agree (A) with this statement
- 5 – I Strongly Agree (SA) with this statement

	Level of Agreement				
	SD	D	N	A	SA
Please rate your level of agreement with each statement.					
1. Everyone who works hard, no matter what ethnicity they are, has an equal chance to become rich.	1	2	3	4	5
2. Ethnicity plays a major role in the type of social services (such as healthcare & welfare) that people receive in the U.S.	1	2	3	4	5
3. It is important that people begin to think of themselves as an American rather than African American, Mexican American, or Italian American.	1	2	3	4	5
4. Due to discrimination, programs such as affirmative action are necessary to help create equality.	1	2	3	4	5
5. Racism is a major problem in the United States.	1	2	3	4	5
6. English should be voted into law as the official language of the United States.	1	2	3	4	5
7. Ethnicity is very important in determining who is successful and who is not.	1	2	3	4	5
8. Students who wear clothing that could be perceived as discriminatory (rebel flag belt buckle & Malcolm X t-shirt) should receive punishment.	1	2	3	4	5
9. Racism may have been a problem in the past, but it is not an important problem today.	1	2	3	4	5
10. Racial and ethnic minorities do not have the same opportunities as White people in the U.S.	1	2	3	4	5
11. White people in the U.S. are discriminated against because of their skin color.	1	2	3	4	5
12. Talking about racial issues causes unnecessary tension.	1	2	3	4	5
13. It is important for political leaders to talk about racism to help work through or solve society's problems.	1	2	3	4	5
14. White people in the United States have certain advantages because of the color of their skin.	1	2	3	4	5

Please rate your level of agreement with each statement.	Level of Agreement				
	SD	D	N	A	SA
	1	2	3	4	5
15. Immigrants should try to fit into the culture and adopt the values of the U.S.	1	2	3	4	5
16. White people are more to blame for racial discrimination in the U.S. than racial and ethnic minorities.	1	2	3	4	5
17. Social policies, such as affirmative action, discriminate against White people.	1	2	3	4	5
18. It is important for public schools to teach about the history and contributions of racial and ethnic minorities.	1	2	3	4	5
19. Racial and ethnic minorities in the U.S. have certain advantages.	1	2	3	4	5
20. Racial problems in the U.S. are rare, isolated situations.	1	2	3	4	5
21. Ethnicity plays an important role in who gets sent to prison.	1	2	3	4	5
22. Most minority students are not interested in a career in agriculture because they do not come from a farm background.	1	2	3	4	5
23. It is okay if a family member of mine marries someone of a different ethnicity.	1	2	3	4	5
24. The difficulty with the concept of "integration" is its hidden bias in favor of the mainstream culture.	1	2	3	4	5

APPENDIX E  
PANEL OF EXPERTS

Dr. Rob Terry  
Department Head  
Agricultural Education  
University of Missouri  
127 Gentry Hall  
Columbia, Missouri 65211  
573-882-7451

Dr. Robert Torres  
Director of Graduate Studies  
Agricultural Education  
University of Missouri  
126 Gentry Hall  
Columbia, Missouri 65211  
573-882-7451

Dr. Anna Ball  
Director of Undergraduate Studies  
Agricultural Education  
University of Missouri  
122 Gentry Hall  
Columbia, Missouri 65211  
573-882-7451

Dr. Eryca Neville, Assistant Director  
Teacher Development Program  
University of Missouri  
109 Hill Hall  
Columbia, MO 65211  
573-882-0560

Dr. Shannon Washburn  
Associate Professor  
Kansas State University  
301 Umberger Hall  
Manhattan, Kansas 66506-3402  
785-532-1250

Dr. Lisa Flores  
Associate Professor  
Educational, School and Counseling  
Psychology  
University of Missouri  
301 Noyes Hall  
Columbia, Missouri 65211  
573-884-9724

Dr. James Anderson  
Assistant Professor  
University of Illinois  
155 Bevier Hall, MC-180  
905 S. Goodwin Avenue  
Urbana, Illinois 61801  
217-244-0285

Dr. Allen Talbert  
Professor  
Purdue University  
Agricultural Administration Building  
Room 224615 West State Street  
West Lafayette, Indiana 47907  
765-494-8423

Dr. Levon Esters  
Assistant Professor  
Purdue University  
Agricultural Administration Building  
Room 224615 West State Street  
West Lafayette, Indiana 47907  
765-494-8423

APPENDIX F:  
LETTER TO PANEL OF EXPERTS

October 26, 2009

Panel members,

Please examine the face and content validity of the two attached instruments (teacher version & student version). It is my desire to send the most efficient/revised versions to teachers and their students for pilot testing by this weekend.

The teacher and student version of the instrument is designed to assess six different component areas. The component areas consist of:

- The first component area examines how **aware** the teacher is to ethnically different people and/or situations. (Awareness exam – Page 1)
- The second component area examines how **knowledgeable** the teacher is of words among educators identified as multicultural. (Knowledge exam – Page 2)
- The third, fourth, and fifth component area examines an individual's **attitude** toward 1) racial privilege, 2) institutional discrimination, and 3) blatant racial issue (Attitude exam – Page 3 & 4)
- The final component areas assesses the skills a multi-culturally **competent** individual would possess when among ethnically different individuals. (Skill exam – Page 5)

Also attached is a copy of the purpose and objectives for the study. Near the end of the attachment you will find a chart allowing you to match where each variable of the objectives align with the teacher and student assessments. Please read for clarity and accuracy. For example, do the instructions/directions clearly guide the respondent in completing the questionnaire? Also, read each item for clarity and appropriateness, keeping in mind that I will administer the instrument to the participants.

You will notice that the teacher version and student version are very similar in content. It is my desire to reword the student version in a manner that is understandable to the students. Therefore, I would appreciate any insight in the redevelopment of the student version that does not dilute the content validity.

I realize that it is always a difficult time, but I would be grateful for a response by the evening of **Friday, October 30, 2009**.

Thanks for all that you do!  
Stacy K. Vincent

APPENDIX G:  
NAMES OF PILOT COMMITTEE PARTICIPANTS

School	Last Name	First Name	E-mail
Lyon County	Belt	Wes	wes.belt@lyon.kyschools.us
Green County	Bonta	James	james.bonta@green.kyschools.us
Warren East	Costellow	Dan	dan.costellow@warren.kyschools.us
Muhlenberg HS	Cronin	Scott	scott.cronin@muhlenberg.kyschools.us
Campbell County	Evans	Sam	samuel.evans@campbell.kyschools.us
Calloway County	Falwell	Jacob	jacob.falwell@calloway.kyschools.us
Russell County	Garmon	Bethany	bethany.garmon@russell.kyschools.us
Casey County	Godbey	Alan	alan.godbey@casey.kyschools.us
Edmonson County	Graham	Randy	randy.graham@edmonson.kyschools.us
Nelson County	Hammond	John	john.hammond@nelson.kyschools.us
Webster County	Hankins	Jarrold	Jarrold.hankins@webster.kyschools.us
Franklin Simpson	Hendrick	Ed	ed.hendrick@simpson.kyschools.us
Central Hardin	Hendrick	Larry	larry.hendrick@hardin.kyschools.us
Nelson County	Houck	Amber	amber.houck@nelson.kyschools.us
Mercer County	Jones	Mike	michael.jones@mercerc.kyschools.us
Harrison County	Jury	Erin	erin.jury@harrison.kyschools.us
Middle	Jury	Erin	erin.jury@harrison.kyschools.us
Caldwell County	Lancaster	Kristy	kristy.lancaster@caldwell.kyschools.us
Spencer County	Matherly	DJ	Darryl.Matherly@spencer.kyschools.us
**Marion County	Mattingly	Daniel	daniel.mattingly@marion.kyschools.us
Metcalfe County	McKinney	David	david.mckinney@metcalfe.kyschools.us
Breckinridge County	Mitcham	Dwayne	Dwayne.Mitcham@Breck.kyschools.us
Boyle County	Myers	Toni	toni.myers@boyle.kyschools.us
Garrard County	Parsons	Ken	ken.parsons@garrard.kyschools.us
Fleming County	Pease	Bobby	robert.pease@fleming.kyschools.us
Montgomery County	Pence	Sheldon	sheldon.pence@montgomery.kyschools.us
Barren County	Schalk	Chris	chris.schalk@barren.kyschools.us
Jessamine County	Simpson	Matt	matt.simpson@jessamine
Hancock County	Smith	Josh	josh.smith@hancock.kyschools.us
Carlisle County	Trevathan	Michelle	michelle.trevathan@carlisle.kyschools.us
Gallatin County	Tubbs	Jonathan	jonathan.tubbs@gallatin.kyschools.us
Henderson County	Wells	Clay	clayton.wells@henderson.kyschools.us
Ballard Memorial HS	Williams	Mark	mark.williams@ballard.kyschools.us

\*\*Teacher and school location that administered the student pilot

APPENDIX H:  
TEACHER WELCOME LETTER AND VISIT ITENERARY

January 11, 2010

Distinguished gentlemen,

Thanks again for volunteering to participate in this study. I look forward to visiting with each of you and your department. It is exciting to make the drive out of the hills of central Missouri and back to the South where people know how to make real sweet tea! Below is a tentative schedule for my visit. In case you have misplaced the parental consent form, I am attaching another copy for your junior and senior students. Be aware that if a student is 18 years of age, they do not need their parent's consent.

Once I hear back from each of you, I will send a more concrete schedule. I currently have one of two days within the same week for my visit. Please look below and let me know which time and day would work best with you. It is an economic burden, as a graduate student, to stay an entire day with each of you, but I am planning a half day with each of you.

Monday or Tuesday, January 25 or 26 – Humboldt High School

Arrive: 8:00 Depart: 11:00

Mr. Causey  
2600 Viking Drive  
Humboldt, TN 38343  
731-784-2781

Arrive 11:30 Depart: At the end of visit

Haywood High School  
Mr. Butler  
1175 E. College Street  
Brownsville, TN 38012  
731-772-1845

Wednesday or Thursday, Jan 27 or 28 – Augusta High School

Arrive: 8:00 Depart: 11:00

Mr. Hurford

1011 Main Street  
Augusta, AR 72006  
870-347-2515

Arrive: 11:30 Depart: At the end of visit Newport High School  
Mr. Davis  
406 Wilkerson Drive  
Newport, AR 72112  
870-523-1321

Again thanks for all of your support and help during this study. Please let me know if which day you would prefer to stay with (it actually depends upon Mr. Causey and Mr. Butler). If everyone is satisfied with either day, then I will begin my visit on that Monday, January 25 and work from there. In case you need to reach me, I am available by email or by my mobile phone 502-507-6087. Please feel free to contact me at anytime if you have any questions, comments, or concerns.

I realize that weird weather is being predicted for January, so let me know if next week begins to look bad. I would hate to be stuck in an ice storm in the south and having to live off gravy, biscuits, and BBQ – HA! I can't wait to visit with all of you!

Thanks again for all that you do!

Stacy K. Vincent

Graduate Student

University of Missouri

APPENDIX I:  
PARENTAL CONSENT FORM

Parental Consent Form Template  
**Teacher Competence Consent Form for Parents/Guardians**

Stacy K. Vincent  
Dr. Robert Torres  
Department of Agricultural Education  
University of Missouri  
573-882-7451  
stacy.vincent@mail.mizzou.edu

Parent(s):

How exciting! Your child is invited to take part in a research study of teacher competence. This study will examine secondary agriculture teacher's level of competence in teaching a class of different culture.

**What your child will be asked to do:** Your child will be asked to participate in a 15 minute survey that describes their perceptions of the secondary agriculture teacher at the local high school. For example, a sample question could be, "How would you rate your teacher's level of awareness in identifying comments that are considered, discriminatory?"

**Risks and benefits:** Your child is subject to **no risks!** In fact, their response is anonymous (no names will be recorded). Although, there is no current benefit to your child, there is a large benefit to the future of agricultural education from your child's response

**Taking part is voluntary:** Your consent and your child's participation in this study are completely voluntary. Your child can withdraw from the study at any time without consequences of any kind, and you can withdraw your consent at any time without consequences of any kind. Your child may choose to skip any questions while participating in the survey. Participating in this study does not mean that you are or your child is giving up any legal rights.

**Your child's answers will be confidential:** The records of this study are confidential (only the researcher will have access to your child's response)! Your child's questionnaire will be destroyed after being transferred to a computer (with no names attached). Any report of this research that is available to the public will not include your child's name or any other information by which your child could be identified.

**If you have questions or want a copy or summary of the study results:** Contact the researcher at the email address or phone number above. You may receive a copy of this form to keep for your records upon request. If you have any questions about whether your child was treated in an illegal or unethical way, contact the Institutional Research Board at the University of Missouri at 573-882-9585

**Statement of Consent:** I have read the above information. I consent to allow my child to take part in the research study of teacher competence

---

Parent's/Guardian's Signature

Child's Name (Please Print)

Date

APPENDIX J:  
EMAIL THANK YOU LETTER

February 4, 2010

Gentlemen,

Thank you so much for opening your classroom to me! Never once did I feel unwelcome or that I caused you any inconvenience. The hospitality and compassion displayed in your classroom and during our discussions continues to fuel my fire for agricultural education. Each of you is exceptional in your own way. Your students, community, school, and state are very fortunate to have you as an instructor. Please extend my appreciation to your students for providing their time and honesty during my data collection. You are the reason why the best teachers are agriculture teachers!

It is my desire that our recent encounter will not be our last. Know that you now have a friend in Central Missouri upon whom you can call.

Thanks,

Stacy K. Vincent

502-507-6087

## VITA

Stacy K. Vincent was born in Bowling Green, Kentucky and was a graduate of Edmonson County High School in Brownsville, Kentucky. He received his Bachelor of Science and Master of Science from Murray State University in Agricultural Education. Stacy taught agriculture at Nelson County High School in Bardstown, Kentucky. During his tenure at Nelson County, he received his administrative degree at the University of Louisville and purchased his first farm in Edmonson County, Kentucky. Following his high school teaching experience, Stacy accepted a lecturer position for two years at Murray State University in the Agricultural Science department. Stacy served as a graduate teaching assistant at the University of Missouri-Columbia.