## A Perceptual Analysis of the Benefits and Barriers to Creating All Inclusive Learning Environments in Secondary Agricultural Education Programs

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### Abstract

The purpose of this study was to gauge the state of inclusion in American Secondary Agricultural Education programs as perceived by state directors of agricultural education. It was found agricultural education is beneficial for minorities and women. Additionally, it was perceived that inclusion overall was critical for secondary agricultural education: however, barriers to its full implementation in secondary agricultural education were found to be the lack of role models, stereotypes, the perception of agriculture itself, guidance counselor support, and understanding student learning styles. Solutions to improving inclusion in secondary agricultural education were perceived to be preservice and inservice training in multicultural education and differentiated instruction, and forming collaborative relationships with guidance counselors, school administrators, and the community in general.

#### Introduction

The United States is known as the great melting pot encompassing a unique heterogeneous mixture of races, cultures, and many other types of diversity, a mixture, which at the core, is its very strength (Booth, 1998). Currently in the United States Caucasians account for 66.4% of the population, African Americans encompass 12.8%; individuals of Hispanic or Latino Origin comprise 14.8%, and Asian, Native American, and Pacific Islanders collectively making up the remaining 6% of the population (US Census Bureau, 2009). Diversity greatly impacts all sectors of American society. According to Hymowitz (2005), diversity in business is just not a matter of business, but an imperative. The same can be said for American public school education today which is increasingly serving a plethora of children with diverse backgrounds, requiring pedagogical skills that foster inclusive learning environments. "Inclusive education is about embracing all, making a commitment to do whatever it takes to provide each student in the community—and each citizen in a democracy—an inalienable right to belong, not to be excluded. Inclusion assumes that living and learning together is a better way that benefits everyone, not just children who are labeled as having a difference" (Falvey, Givner & Kimm, 1995, p.8). "Teaching tolerance and appreciation of difference is not, of course, limited to ethnic, regional, sexual orientation, or language differences but includes differences of all types, including disabilities" (Hallahan, Kauffman, & Pullen, 2009, p. 103). The public's demand for more inclusive learning environments impacts all areas of education, and in particular agricultural education.

One major area of inclusion that effects public school education is individuals with physical and mental disabilities. According to the U.S. Census Bureau (2006), there are

51.2 million people with some level of disability, representing 18% of the population. Of this 32.5 million have a severe disability, representing 12% of the population. Soloninka (2003) stated that even though enrollment numbers in agricultural education have fluctuated over the years the enrollment numbers of students with learning disabilities in agricultural education programs continues to increase. Today, over 5% of the total American public school population have learning disabilities, accounting for the majority of students who receive special education services (Mercer & Pullen, 2005).

Socioeconomic status is another major factor that also must be considered with designing all inclusive learning environments. In the United States over 20% of children live in poverty, with percentages being higher for African Americans (30%), Latino (38%), and children with disabilities (28%) (Madrick, 2002; Park, Turnbull, & Turbull, 2002). Furthermore, Donovan & Cross, 2002b indicated that poverty is the key factor for students being labeled with an educational disability. Research has shown that when families are both members of nondominant linguistic and ethnic groups, the harmful effects of poverty have a tendency to be greater and long lasting, particularly in relation to academic performance. According to Skiba, Poloni-Staudlinger, Simmons, Feggins-Assiz & Chung (2005), socio-economic variables contribute to a disproportionate representation of minorities in special and gifted education. In relation to urban poverty 30% of all students live in poverty, while rural school districts, a population greatly served by agricultural education, serve a greater proportion of students living in poverty than do non-rural school districts and for longer time periods (Franklin, 2005).

In relation to inclusion, religion can have a major impact upon the professional environment of any organization. Within the U.S. there exist a plethora of religions that comprise the great "melting pot." Approximately 52% of the country is Protestant, 24% Roman Catholic, 2% Mormon, 1% Jewish, 1% Muslim, and other 10% (CIA The World Factbook, 2007). When working within a field such as Agricultural and Extension Education demographics such as these can greatly impact programming efforts as well as interpersonal relations between colleagues, students, and related clientele.

Immigration has had a major impact upon public education in America, with children of immigrants accounting for approximately 20% of the children in the United States. Based upon the students' economic, cultural, educational, and language backgrounds they go through a series of stages as they acculturate and adjust to their new country (Collier, 1996). Furthermore, educators need to culturally understand the traditions held by the parents towards educational accommodation of the student, particularly for immigrants (Cho, Singer, & Brenner, 2000; Pullen, 2004). This can have major implications upon the academic performance of students as they matriculate, often mistakenly being placed in special education (Igoa, 1995).

In relation to diversity another group that has increased in visibility over the past decade are individuals that identify themselves as either Lesbian, Gay, Bisexual, or Transgender. According to SIECUS (2007) 3% of high school students describe themselves as lesbian, gay, or bisexual, with over 5% of this population reporting they

are either lesbian, gay, or bisexual, or have had sexual experiences with individuals of the same sex. Individuals representing this population often experience high rates of discrimination and harassment, but are not usually protected by school policies.

Taylor and Williams (2003) conducted a study to identify skills that Texas public school superintendents deemed important for agricultural education teachers to possess in the classroom. They reported that superintendents perceived skills in the area of service to special populations as an important skill needed by agricultural education teachers.

#### **Conceptual Framework**

Inclusion is a philosophy that brings students, families, educators, and community members together to create schools and other social institutions based on acceptance, belonging, and community (Sapon-Shervin, 2003). The concept of inclusion is a philosophy that calls for all learners to benefit from challenging, relevant, and sufficient curriculum delivered within the context of the general education classroom and from differentiated instruction techniques that address students' unique strengths and challenges (Idol, 2006, Voltz, Sims, Nelson, & Bivens, 2005). Inclusion is based upon four major principles: 1. All Learners and Equal Access, 2. Individual Strengths and Challenges and Diversity, 3. Reflective Practices and Differentiated Instruction, and 4. Community and Collaboration.

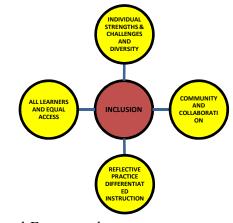


Figure 1. Inclusion Conceptual Framework

*All Learners and Equal Access* emphasizes that effective inclusion improves the educational environment for all learners by placing them together in general education classrooms, regardless of their race, linguistic ability, economic status, sexual orientation, family structure, cultural and religious background, and learning ability (Roach, Salisbury, & McGregor, 2002).

*Individual Strengths and Challenges and Diversity* emphasizes sensitivity and acceptance of individual strengths and challenges and diversity. Diversity improves the educational systems for all students by placing them in general education environments

regardless of race, ability, gender, economic status, gender, learning styles, ethnicity, cultural background, religion, family structure, linguistic ability, and sexual orientation.

*Reflective Practice and Differentiated Instruction* requires educators to examine their attitudes, teaching and classroom management practices, and curricula to accommodate individual needs. According to Burstein, Sears, Wilcoxen, Cabello, and Spagna (2004), effective educators think critically about their values and beliefs and routinely examine their own professional practice for self improvement and to ensure that all students learning needs are met.

*Community and Collaboration* involves groups of professional educators, parents, students, families, and community agencies working together to build effective learning environments (Salend, 2008). Optimal educational environments involve collaborative efforts among all educational stakeholders in order to ensure that the greatest amount of learning can take place for all students (Banks, 1994).

## **Purpose and Objectives**

The purpose of this descriptive survey census study was to gauge the state of inclusion in United States Secondary Agricultural Education Programs. In order to guide this study the following research questions were developed:

- 1. What are the perceived benefits of inclusion in secondary agricultural education programs as viewed by state directors/supervisors of agricultural education?
- 2. What are the perceived barriers to inclusion in secondary agricultural education programs as viewed by state directors/supervisors of agricultural education?
- 3. What are the perceived solutions to facilitating inclusive learning environments in secondary agricultural education programs as viewed by state directors/supervisors of agricultural education?
- 4. What are the demographic characteristics of state directors/supervisors of agricultural education?
- 5. What are the demographic characteristics of agricultural education programming in the states under study?

## Methods

The population for this study consisted of all state directors/supervisors of agricultural education (N = 52, including Puerto Rico and the Virgin Islands) as provided by the National Association of Supervisors of Agricultural Education. A review of the sampling frame revealed at the time of data collection that three states did not have a director currently employed, thus reducing the sampling frame to N = 49. The survey utilized for this descriptive census study was adapted from a previous study conducted by Warren and Alston (2007). Modifications were made to specific sections of the survey in order to accommodate the research focus of this particular study, with one section being added in order to gauge agricultural teacher's level of preparation for fostering inclusive learning environments. The revised survey instrument for this study consisted of five

sections: Part I. Benefits Of Inclusion, Part II. Barriers To Inclusion, Part III. Proposed Solutions To Foster Inclusion In Secondary Agricultural Education, Part IV. Level of Preparation To Foster Inclusion In Secondary Agricultural Education, and Part V. Demographic and Program Characteristics. Parts I - IV consisted of Likert-type items; Part V consisted of a series of open-ended and multiple-choice items. Sections I - III consisted of ten questions each and utilized a five-point Likert-type scale with the following responses: 1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, and 5=Strongly Agree. Section four utilized the following Likert-type scale: 1 = Not Prepared, 2 = Somewhat Prepared, 3 = Undecided, 4 = Prepared, 5 = Very Prepared. This particular manuscript will focus upon parts 1-III and section four of the research survey.

The validity of the instrument was originally established by means of content validity. Brown (1983) defined content validity as "the degree to which items on a test representatively sample the underlying content domain" (p 487). Brown recommended using expert judges as one means of establishing content validity. A panel of experts at North Carolina Agricultural and Technical State University consisting of researchers with experience in the area of inclusion reviewed the original instrument for content validity. The same panel of experts were asked to review the revised instrument for content validity. The instrument was judged to be valid in order to accomplish the specific purpose of this study. In order to establish the reliability of the revised instrument a pilot test was conducted upon randomly selected county level directors of career and technical education in North Carolina. The Cronbach's alpha reliability coefficients for the sections of the survey were Part I: .88; Part II: .91, Part III: .85, and Part IV: .84, thus the instrument was deemed to be reliable. In relation to data collection a one week-interval, three-round data collection method was utilized following conventions established by Dillman (2009) for email surveys. The final response rate was 85% (N = 42). Given the size of the population this was deemed an acceptable response rate. In order to control for non-response error, Miller and Smith (1983) recommended comparing early to late respondents. Upon completion of the study, an evaluation of the data showed that there were no significant differences found among the early respondents (respondents during the first round) and the late respondents (respondents after the first round). The statistical analysis procedures for this respective study consisted of descriptive measures such as mean, standard deviation, and percentages.

#### Results

#### **Research Question One Findings**

Table 1 shows the means and standard deviations for the perceived benefits to inclusion in secondary agricultural education. Respondants agreed that agricultural education is beneficial to minorities and women in terms of character and leadership development. It was also agreed upon that inclusion is beneficial for secondary agricultural education programs and FFA in general, sharpening the students' critical thinking skills, and broadening teachers perspectives.

## Table 1

## Benefits of Inclusion

Benefits To Inclusion	Mean	SD
Secondary agricultural education provides women with the opportunity for leadership development.	4.83	.38
Secondary agricultural education provides women with the opportunity for character development.	4.68	.47
The inclusion of diverse populations in agricultural education is benefit for all agricultural education stakeholders.	4.63	.73
Inclusion broadens the perspectives of agricultural students.	4.59	.54
Inclusive learning environments cans sharpen students' critical thinking skills.	4.56	.59
Inclusive learning environments can broaden the perspectives of secondary agricultural teachers.	4.54	.55
Secondary agricultural education provides minorities with the opportunity for leadership development.	4.54	.59
There are many benefits for FFA programs which foster inclusive learning environments.	4.51	.55
There are many benefits for secondary agricultural education programs which foster inclusive learning environments.	4.49	.55
Secondary agricultural education provides minorities with the opportunity for character development.	4.46	.67

Note. Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, and 5 = Strongly Agree

# **Research Question Two Findings**

Table 2 shows the means and standard deviations for the perceived barriers to inclusion in secondary agricultural education. Respondents agreed that a lack of role models, stereotypes, and the perception of agriculture itself hinders the participation of minorities in agriculture. It was also agreed upon that guidance counselors have an influence upon inclusion in secondary agricultural education, and additionally the lack of understanding a student's unique learning style. State supervisors were undecided if school administrators and the lack of special education training are factors that affect agricultural education inclusion. Respondents disagreed that sexual harassment was a barrier to agricultural education inclusion.

### Table 2

#### **Barriers To Inclusion**

Barriers To Inclusion	Mean	SD
A lack of role models hinders the participation of minorities in agricultural education.	4.10	.73
The perception of agriculture itself influences the participation of minorities in agricultural education.	4.02	.72
The lack understanding a student's unique learning style can be a barrier in relation to creating an inclusive learning environment in secondary agricultural education.	3.93	.81
Guidance counselors influence the participation of ethnic minorities in agricultural education.	3.88	.90
Guidance counselors are barrier in relation to creating inclusive learning environments in secondary education.	3.66	1.03
The perception of agriculture itself hinders the development of inclusive learning environments within secondary education.	3.59	.92
Stereotypes are a primary reason why minorities do not enroll in secondary agricultural education.	3.51	1.05
A lack of training in special education hinders the participation of special needs populations in secondary agricultural education.	3.20	1.10
School administrators are a barrier in relation to creating inclusive learning environments in secondary education.	3.00	.97
Sexual harassment is a factor as to why women do not enroll in secondary agricultural education courses.	1.80	.90

*Note.* Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree

## **Research Question Three Findings**

Table 3 shows the means and standard deviations for the perceived solutions to inclusion in secondary agricultural education. It was agreed upon by respondents that relationships with guidance counselors, administrators, community groups, and other diverse groups could help foster agricultural education inclusive learning environments. Furthermore it was agreed upon that inservice and preservice training in multicultural education and differentiated instruction are solutions to creating inclusive learning

environments in secondary agricultural education. Content analysis of curriculum materials is seen as an effective solution as well.

Table 3

Solutions To Foster Inclusion

Solutions to Foster Inclusion	Mean	SD
Guidance Counselor/Agricultural Education Teacher Partnerships in Recruiting and Retaining Students Into Secondary Agricultural Education Programs	4.29	.64
Secondary Agricultural Educators Forming Local Community Relationships With Diverse Groups	4.27	.54
Secondary Agricultural Education Program Inclusion Marketing Efforts	4.20	.60
Local Secondary Agricultural Education Advisory Group's Support of Inclusion	4.17	.73
School Administration Support For Agricultural Education Inclusion Efforts	4.15	.76
Inservice Teacher Training In Differentiated Instruction	4.10	.62
Preservice Teacher Training In Differentiated Instruction	4.07	.60
Inservice Teacher Training In Multicultural Education	3.85	.69
Content Analysis of Agricultural Education Curriculum Materials To Ensure An Inclusive Learning Environment	3.83	.77
Preservice Teacher Training In Multicultural Education	3.80	.71

*Note.* Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly Agree

### **Research Question Four Findings**

Table 4 displays the demographic findings for the state supervisors of agricultural education. On the average the respondents in this study were white males, age 49 who held a graduate degree. Additionally respondents had taught secondary agricultural education for 12 years, and had served as a state supervisor for 10 years. Respondents had taken an average of 9.5 hours of inclusion training within the past five years.

# Table 4

State Supervisor's Demographics

State Supervisor's Demographics	Ν	Mean/Percentage
Age		49
Gender:		
Female	9	21.4%
Male	33	78.5%
Race/Ethnicity		
Black	1	2.4
White	38	90.4
Hispanic	2	4.9
Native American	0	0
Asian/Pacific Islander	1	2.4
Other	0	0
How many years did you teach secondary agricultural education?		12.23
Degree:		
Bachelor	4	9.5%
Master's	24	57.1%
Specialist	6	14.3%
Doctorate	8	19.0%
How many years have you been a state supervisor of agricultural education?		10.4
How many hours of training/professional development have you taken in relation to inclusion in the past five years?		9.5

# **Research Question Five Findings**

Table 5 displays the demographic findings for the state's FFA demographics. On the average the respondents had a state membership of 7,698. The majority of FFA members were white males. With respect to agricultural education enrollment the majority of students are White, followed by Hispanic and African American.

Table 5

State FFA Demographics	Mean/Percentage
What is your state's current FFA membership?	7,698
State Agricultural Education Ethnicity:	
Black	4.6%
White	78.9%
Hispanic	8.1%
Native American	2.7%
Asian	1.0%
Other	4.5%
State FFA Ethnic Breakdown:	
Black	3.5%
White	78.6%
Hispanic	7.2%
Native American	2.4%
Asian	.57%
Other	4.2%
FFA Gender Breakdown:	
Female	39.2%
Male	60%

State FFA/Agricultural Education Demographics

#### Conclusions

It was perceived by state directors of agricultural education that participation in agricultural education was overall beneficial for minorities, but that barriers to their participation could be tied to the lack of role models, agriculture's perception, and stereotypes. Given these findings it appears that state directors recognize the need for minorities and the barriers to their participation, but as a whole have not taken the steps to encourage the elimination of these barriers. Casteel (1998) and Maholmes & Brown (2002) suggested through classroom observational studies that teachers tended to have a positive interaction with white students than minority students. Moreover it was perceived that agricultural education was beneficial for women, and that sexual harassment was not a barrier in relation to their participation. Perhaps state directors see agricultural education nationally as meeting the needs of female students. Inclusion was perceived to be an overall benefit to secondary agricultural education programs, which may indicate the increasing emphasis on inclusion is starting to permeate agricultural education leadership. Guidance counselors were perceived to be a barrier to inclusion in secondary agricultural education, while school administrators were not. This could be due to the fact that guidance counselors more directly influence the course of study of students through advisement than administrators. It was undecided if the participation of special needs populations in agricultural education is related to level of teacher training. Perhaps directors are unaware of the impact that training in this area could have upon secondary agricultural programs as a whole.

#### Recommendations

Given the aforementioned findings it is recommended that preservice and inservice agricultural education professionals receive training in differentiated instruction and multicultural education additionally, in order to foster support for inclusion efforts secondary agricultural educators should develop relationships with guidance counselors, school administrators, and within the local community, secondary agricultural educators should conduct content analysis of curriculum materials to foster an inclusive learning environment.

#### Implications

Teaching children to be knowledgeable about differences, supportive of others, and active in changing structures that are oppressive to various groups can all begin within inclusive classrooms. "It is within a classroom that openly and directly addresses the interests, needs, and possibilities of all its members that students may best experience democratic structures that empower and support all participants" (Sapon-Shevin, 1992, p. 21). Haar et al. (2002) & Timm et al. (1998) concluded that the curriculum content and delivery methods used by the teacher can discourage student achievement. Furthermore, the researchers concluded that if only one method of learning is employed by the teacher not all students will learn the material. This lack of student learning will increase the chances of an administrative referral. Ensuring inclusive learning environments is an imperative task that is vital to the future of agricultural education as a whole.

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