AN ANALYSIS OF INCLUSIVE PEDAGOGICAL PRACTICES WITHIN NORTH CAROLINA SECONDARY AGRICULTURAL EDUCATION PROGRAMMING

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Abstract

Objective: In this study the state of inclusion within North Carolina Secondary Agricultural Education programming was examined. **Background:** In 2012 The North Carolina State Board of Education established a vision of assuring a strong, flexible, and sound educational system that serves all students and additionally promotes the public interest. This vision includes its secondary agricultural education programs as well. **Methodology:** The research design for this study consisted of a descriptive survey research design, encompassing a random sample of 196 North Carolina Secondary Agricultural Educators. The final return rate yielded a usable sample of 90 respondents (45% return rate). **Findings:** North Carolina Secondary Agricultural Educators indicated that agricultural education was beneficial to women and minority populations. Various barriers to inclusion were noted. Uncertainty in working with various dimensions of inclusion were found. Solutions to improving inclusion were identified. **Conclusion:** Overall, it was found that inclusion was critical for secondary agricultural education in North Carolina. **Application:** Findings from this study will aid North Carolina Secondary Agricultural Educators and officials in developing more inclusive learning environments.

Introduction

In 2012 The North Carolina State Board of Education adopted the "Vision of Public Education in North Carolina: A Great Public Education System for a Great State" as the document to guide their vision of assuring a strong, flexible, and sound educational system that serves all students and additionally promotes the public interest (Fiske & Ladd, 2012). During the 2011-2012 academic year, the Public Schools of North Carolina served over 1.4 million students across the state (North Carolina Department of Public Instruction, 2012). 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, 2012).

Diversity greatly impacts all sectors of American society. According to Hymowitz (2005), diversity in business is not just a matter of business, but an imperative. The same can be said for the American public school 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.

In 2010-2011, there were more than 45,700 students taking agricultural classes in North Carolina. With respect to FFA Membership, there were 18,643 members in 243 chapters across North Carolina. In relation to the demographics of the membership 86% of FFA members were Caucasian, 7% were African-American, and 6% were Asian, Native American or Hispanic. In terms of place of residence 27% of North Carolina FFA members lived in rural farm areas, 40% lived in rural non-farm areas, 14% lived in small towns, and 17% lived in urban/suburban areas (North Carolina FFA Association, 2011). Given the aforementioned demographics and the North Carolina State Board of Education's mandate to educate all children, how are North Carolina Secondary Agricultural Educators addressing inclusion within their respective programs?

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.

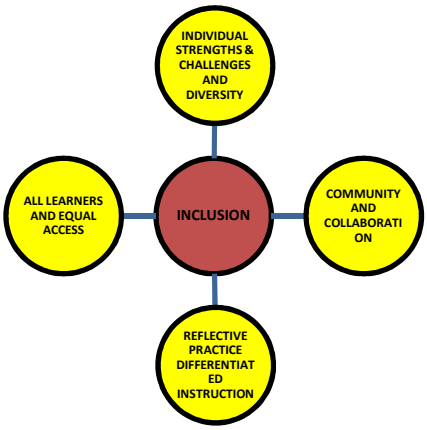

Figure 1. *Inclusion Conceptual Framework*

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 emphasize 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 Salend (2008), 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 study was to gauge the state of inclusion in North Carolina Secondary Agricultural Education Programs. In order to guide this study the following research questions were developed:

1. What are the demographic characteristics of North Carolina Secondary Agricultural Educators?
2. What are the perceived benefits of inclusion in secondary agricultural education programs as viewed by North Carolina secondary agricultural educators?
3. What are the perceived barriers to inclusion in secondary agricultural education programs as viewed by North Carolina secondary agricultural educators?
4. What are the perceived solutions to facilitating inclusive learning environments in secondary agricultural education programs as viewed by North Carolina secondary agricultural educators?
5. To what extent are North Carolina Secondary Agricultural Educators prepared to work with selected dimensions of diversity?

Methods

The population for this study consisted of secondary agriculture teachers in North Carolina that were listed in the 2011-12 North Carolina Agricultural Education Directory (N = 420). Based on Krejcie and Morgan's (1970) formula for a 5% margin of error, a random sample of 196 would be required for a population of this size. The survey utilized for this descriptive survey study was adapted from a previous study conducted by Warren & 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 teachers' 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 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 10 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.

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 of university researchers with experience in the area of inclusion reviewed the original instrument for content validity. The same panel of experts was 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 web-based data collection method was utilized following conventions established by Dillman (2009) for email surveys. The final response rate was 45% (N = 90). 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

With regard to the demographic characteristics of respondents in this study, the majority were white males, age 38, who held a graduate degree (Table 1). Moreover, respondents had taught secondary agricultural education for an average of 13 years. With respect to hours of inclusion training within the past five years respondents had taken an average of 9.5 hours.

Table 1

Demographics (N = 90)

Demographics	N	Mean/Percentage
Age (mean)		38.95
Gender:		
Female	32	35.56%
Male	58	64.44%
How many years have you taught secondary agricultural education?		
1 – 5	18	20%
6 – 10	27	30%
11 – 15	40	44.5%
20 - 25	5	5.5%
26 - 30	0	0%
Degree:		
Bachelor	33	36.67%
Master's	55	61.11%
Specialist	1	1.11%
Doctorate	1	1.11%
How many hours of training/professional development have you taken in relation to inclusion in the past five years?		
0 - 9	8	8.8%
10 – 19	57	63.3%
20 - 29	20	22.4%
30 - 39	5	5.5%

Research Question Two Findings

In Table 2 respondents agreed that agricultural education is beneficial to minorities and women in terms of character and leadership development. It was found that inclusion is beneficial for secondary agricultural education programs and FFA in general, broadening teachers' perspectives and sharpening the students' critical thinking skills.

Table 2

Benefits of Inclusion

Benefits To Inclusion	Mean	SD

Secondary agricultural education provides women with the opportunity for leadership development.	4.87	.384
Secondary agricultural education provides women with the opportunity for character development.	4.71	.444
The inclusion of diverse populations in agricultural education is a benefit for all agricultural education stakeholders.	4.66	.635
Inclusion broadens the perspectives of agricultural students.	4.58	.547
Inclusive learning environments can sharpen students' critical thinking skills.	4.57	.594
Inclusive learning environments can broaden the perspectives of secondary agricultural teachers.	4.53	.552
Secondary agricultural education provides minorities with the opportunity for leadership development.	4.52	.591
There are many benefits for FFA programs which foster inclusive learning environments.	4.50	.522
There are many benefits for secondary agricultural education programs which foster inclusive learning environments.	4.44	.512
Secondary agricultural education provides minorities with the opportunity for character development.	4.41	.631

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

Research Question Three Findings

With respect to the perceived barriers to inclusion in secondary agricultural education, it was agreed that the perception of agriculture itself hinders the participation of minorities in agriculture, a lack of role models, and stereotypes (Table 3). Respondents also agreed the failure to understand a student's unique learning style and the impact guidance counselors have, can influence inclusion in secondary agricultural education. North Carolina Secondary Agricultural Educators were undecided if the lack of special education training and school administrators' support were factors that affect agricultural education inclusion. They were in disagreement about sexual harassment being a limitation to agricultural education inclusion.

Table 3

Barriers to Inclusion

Barriers To Inclusion	**Mean**	**SD**

A lack of role models hinders the participation of minorities in agricultural education.	4.12	.737
The perception of agriculture itself influences the participation of minorities in agricultural education.	4.05	.718
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.	3.95	.824
Guidance counselors influence the participation of ethnic minorities in agricultural education.	3.90	.923
Guidance counselors are a barrier in relation to creating inclusive learning environments in secondary education.	3.68	1.042
The perception of agriculture itself hinders the development of inclusive learning environments within secondary education.	3.61	.956
Stereotypes are a primary reason why minorities do not enroll in secondary agricultural education.	3.55	1.052
A lack of training in special education hinders the participation of special needs populations in secondary agricultural education.	3.23	1.210
School administrators are a barrier in relation to creating inclusive learning environments in secondary education.	3.13	.974
Sexual harassment is a factor as to why women do not enroll in secondary agricultural education courses.	1.84	.856

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

Research Question Four Findings

The perceived solutions to inclusion in North Carolina secondary agricultural education programming are displayed in Table 4. Respondents were in agreement that relationships with guidance counselors, administrators, community groups, and other diverse groups could facilitate inclusive learning environments in agricultural education. Factors such as differentiated instruction and in-service and pre-service training in multicultural education were agreed upon as solutions to creating inclusive learning environments in secondary agricultural education, in addition to content analysis of curriculum materials.

Table 4

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	4.35	.642
Secondary Agricultural Educators Forming Local Community Relationships With Diverse Groups	4.26	.549
Secondary Agricultural Education Program Inclusion Marketing Efforts	4.22	.601
Local Secondary Agricultural Education Advisory Group's Support of Inclusion	4.18	.738
School Administration Support For Agricultural Education Inclusion Efforts	4.08	.760
In-service Teacher Training In Differentiated Instruction	4.04	.625
Pre-service Teacher Training In Differentiated Instruction	4.02	.608
In-service Teacher Training In Multicultural Education	3.80	.691
Content Analysis of Agricultural Education Curriculum Materials To Ensure An Inclusive Learning Environment	3.72	.771
Pre-service Teacher Training In Multicultural Education	3.65	.715

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

Research Question Five Findings

Respondents were additionally asked to provide their perception as to their level of preparation in relation to working with various dimensions of inclusion (Table 5). It was perceived that North Carolina Secondary Agricultural Educators were prepared to address socioeconomic diversity and women in agricultural education. The opposite was found with English as Second Language (ESL) students, with respondents indicating they were somewhat prepared. Lastly, respondents were undecided if they were prepared to address learning style diversity, diversity of gender identification, individuals with learning disabilities, religious diversity, special needs populations, and ethnic minorities.

Table **5**

Teacher Inclusion Preparation

Level of Preparation	**Mean**	**SD**
Women	4.10	1.03
Socioeconomic Diversity	3.56	1.22
Individuals With A Learning Disability	3.40	1.12
Learning Style Diversity	3.22	1.03
Special Needs Populations (Physical and Mental Disability)	3.04	1.09
Diversity of Gender Identification	2.83	1.42
Ethnic Minorities	2.79	1.18
Religious Diversity	2.51	1.13
English As A Second Language (ESL)	2.20	1.14

Scale: 1=Not Prepared, 2=Somewhat Prepared, 3=Undecided, 4=Prepared, 5=Very Prepared

Conclusions

North Carolina Secondary Agricultural Educators perceived that participation in agricultural education was overall beneficial for minorities and women. Additionally, it was noted that inclusive learning environments in secondary agricultural education are good for student development, specifically leadership and character development, and also the enhancement of critical thinking skills. The barriers to inclusion in agricultural education included guidance counselors, the perception of agriculture, stereotypes, and the lack of role models. Also respondents were undecided about their level of preparation for working with various areas of inclusion.

Given these findings it appears that North Carolina Agricultural Educators recognized the need for inclusive learning environments, but have a need for professional development in specific dimensions of inclusion. Moreover, given the stigma and misconceptions surrounding the discipline of agriculture, it appears secondary agricultural educators will need to work with various entities, including guidance counselors, in order to educate them about the vast academic and career opportunities available for individuals in the agricultural sciences, thus creating an avenue for a more representative student population in secondary agricultural education.

Recommendations

Based upon the findings and conclusions in this study, it is recommended that pre-service and in-service agricultural education professionals receive professional development in multicultural education and differentiated instruction, in order to facilitate the creation and continuing existence of all inclusive learning environments in secondary agricultural education. In order to foster support for inclusion efforts, secondary agricultural educators should develop relationships with guidance counselors, within the local community, and with school administrators. In developing these relationships, agricultural educators should educate all stakeholders on the discipline of agriculture, its importance in the secondary school curriculum, and options for students who pursue studies and careers in the field. Lastly, content analysis of curriculum materials to foster an inclusive learning environment should be considered as well by secondary agricultural educators.

Implications

Fulghum (2009) once stated that "We could learn a lot from a box of crayons…Some are sharp…Some are pretty…Some are dull…Some are bright…Some have weird names…and all are different colors…But they all have learned to live together in the same box." Educating students to be knowledgeable about differences, supportive of others, and being participants in changing structures that are destructive 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). Fostering and maintaining all inclusive learning environments is critical to the future of North Carolina Secondary Agricultural Education and nationally for secondary agricultural education as well.

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