

# PREPARATION OF AGRICULTURAL EDUCATION STUDENTS TO WORK WITH DIVERSE POPULATIONS

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## Abstract

*This study investigated how agricultural education programs prepare teacher education students for work in diverse situations. It assessed the extent to which agricultural education programs are infusing diversity, multiculturalism, and pluralism into their curriculum as courses, field experiences, and in-service for current teachers. This census study included all universities with an agricultural education program as identified in the 2005 Directory of Agricultural Education on the American Association for Agricultural Education (AAAE) website. The instrument was web based and was accessed by 57 program leaders. The program leaders indicated their agricultural education programs provided students with instruction on diversity through required courses, optional courses, or infusion of these topics into agricultural education courses. Results showed that students are involved in early field experiences and student teaching in settings where agricultural education undergraduates interact with people different from themselves. Coursework on diversity and in-service offerings for current teachers showed more mixed results.*

## Introduction and Conceptual Framework

The rapid change in the demographics of the United States has made diversity one of its most significant social aspects. According to the National Center for Educational Statistics (2005), 42% of students in public schools in 2003 were from a racial or ethnic minority group. However, less than 30% of students in postsecondary education were from a racial or ethnic minority group. Within agricultural education, teachers and students from racial or ethnic minority groups were even more underrepresented. The 1999-2001 supply and demand study (Camp, Broyles, & Skelton, 2002) showed that less than 10% of newly qualified teachers of agricultural education and less than 7% of current teachers were from a racial or ethnic minority group. The same study showed that 43% of newly qualified teachers of agricultural education and 22% of current teachers were female. The increase in the number of public school students from

minority groups points to a complex dynamic of diversity occurring in the teaching environment, thus creating a need for agricultural education graduates to be more diverse in their role as teachers and advisors.

It is a challenge for schools to help youth from diverse cultures and groups attain the necessary knowledge, skills and attitudes to function effectively in the 21st century. Banks (1995) stated that teachers impact the development of democratic racial attitudes and behaviors of their students. This impact is enhanced through the implementation of multicultural education. Banks cautioned that "because teachers bring their own cultural perspectives, values, hopes, and dreams to the classroom, they are in a position to strongly influence the views, conceptions, and behaviors of students" (p. 333).

Efforts by instructors, when they actively acknowledge and address diversity, may not initially accomplish the goal of addressing the needs of all students since

change takes time. However, the rate of change can be positively influenced if instructors are persistent and students are encouraged to stay engaged. On the postsecondary level, these efforts can yield a transformative educational experience in which faculty and students share the roles of learner and teacher and the content is understood in deeper and more complex ways (Gaff, 1997). If this transformation occurs within a teacher education program, then the graduates of that program can impact secondary education as well.

Graduates of teacher education programs are called upon to teach more than subject matter to their students. Malherbe (2004) stated that the purposes of education include preparing learners for life, meaningful interaction with other human beings, constructive civic and political involvement, and successful economic participation. Christiansen (2001) proposed three factors that agricultural educators should have knowledge of when preparing students with respect to their outlook of the world. These factors are

- 1) they need to understand, accept, and live with increasing globalization, 2) they need to know how to function in the culture in which they find themselves, and 3) they need to break the shackles of provincialism that many, through no fault of their own, bring to the university and unfortunately, possibly may take into the work place (p. 3).

To address these factors, students need knowledge and experiences. As early as 1974, Hilliard espoused that teacher education students need clinical experiences in diverse settings and coursework in multicultural education to be successful as teachers.

Zeichner (1995) found through a literature review and his own work that teacher education programs prepared students for teaching in a multicultural society through either an infusion approach or a segregated approach. In the infusion approach, diversity is integrated throughout the courses and field experiences of the teacher education program. The segregated

approach, on the other hand, uses a stand-alone diversity course or field experience while other courses and parts of the program are left untouched by a diversity emphasis. He concluded that although the infusion approach is educationally preferred, the segregated approach was the most common.

Zeichner (1995) went on to describe five curricular and instructional approaches used by teacher education programs. These are biography to help the teacher education student better understand their own culture; attitude change to help students examine their attitudes, assumptions, and beliefs; countering low expectations for public school students by exposing teacher education students to research and examples of successful teaching; cultural knowledge including history, characteristics, and learning styles of various cultures; and field experiences to sensitize students to cultural differences and provide them experiences in culturally-diverse settings. A decade later, the Association of American Colleges and Universities (AACU, 2005) emphasized that all college students need to become culturally proficient, informed about their communities, and empowered to act responsibly in this ever-changing society.

### **Purpose and Objectives**

This study was conducted to determine the degree to which agricultural education programs are preparing their teacher education students to work with diverse populations. This census study should give the profession a snapshot in time of the diversity-related experiences and courses taken by students in postsecondary agricultural education programs.

The objectives of the study were to:

1. Describe the field experiences agricultural education teacher education programs provide to students in preparing them to teach or work in diverse environments.
2. Describe the extent to which agricultural education programs are infusing diversity, multiculturalism, and pluralism into their curriculum.

3. Describe the extent to which agricultural education programs are providing in-service activities and graduate courses on diversity.

### Methods

Using a census of university agricultural education programs, a web-based survey on Zoomerang was carried out for this study. The census consisted of the 89 universities with agricultural education programs as identified in the Directory of Agricultural Education published annually by the American Association for Agricultural Education (AAAE). At the onset of the survey, all leaders of agricultural education programs listed in the directory were contacted to participate in the survey. Three responded that they no longer offer training in agricultural education. In February 2005, the leaders of the agricultural education programs of the remaining 86 were emailed a user name to enable them access to the web-based questionnaire. During the next two months, follow-ups including email and telephone calls were made to nonrespondents. A final follow-up included mailing a print version of the web based questionnaire in June. By July 2005, 57 of 86 agricultural education programs had responded for a 66% response rate.

The questionnaire used for this survey was revised from one developed by Wakefield and Talbert (1999), which established content and face validity through a panel review of experts consisting of agricultural education faculty, faculty teaching multicultural education, and members of their university's Department of African American Studies. Revisions included formatting for a web-based survey, updating language, focusing only on teacher education students, and rewording questions that were confusing in the original survey. The questionnaire consisted of five sections with multiple questions under each section. Sections A and B are reported in this article. Section A was designed to discover what types of preparation and experiences were provided for agricultural education undergraduate students to teach or work in diverse situations (ethnicity, gender, special

needs and geography). Section B asked what types of experiences and preparation were provided as in-service or graduate education for agricultural education teachers to teach or work in diverse situations (ethnicity, gender, special needs and geography). Each section had text-based fields for respondents to provide explanation or additional information.

Data were analyzed using SPSS for Windows. Descriptive parameters included frequencies, percentages, means, and standard deviations. Qualitative responses were placed into categories; however, no further coding was conducted. Qualitative responses reported under results represent the most frequent responses and are presented to add clarity to the quantitative results.

### Results

#### *Field Experiences*

Table 1 shows that 91% of responding agricultural education programs conducted early field experiences at schools with somewhat or a great extent of diversity in gender. In addition, 63% conducted early field experiences at schools with somewhat or a great extent of diversity in ethnicity, 77% conducted early field experiences at schools with somewhat or a great extent of diversity in socio economic status (SES), and 79 % conducted early field experiences at schools with somewhat or a great extent of diversity in rural/urban (geography).

Qualitative questions asked respondents to provide clarification about diversity and early field experiences. The comments included "Students are required to complete [60] hours of early field experience in schools that are culturally diverse." "In addition to the three-hour course requirement, students must complete a 40 hr. practicum in a school with minority population of at least 30%." "All placements are contingent on diversity of the school population. It is a requirement for participation in the early field experience." "During internships, students required to observe in a school with a diverse population." "The diversity alluded [to in the survey questions] are considered for placement upon request of the student.

Table 1  
*Field Experiences Conducted at Schools with a Diverse Population (n = 57)*

	Response	%	<i>M</i> <sup>a</sup>	<i>SD</i>
Early Field Experiences at Schools with Diversity in Gender			3.47	0.76
	Not at all	3.5		
	Little	5.3		
	Somewhat	31.6		
	To a great extent	59.6		
Early Field Experiences are at Schools with Diversity in Ethnicity			2.88	0.94
	Not at all	7.0		
	Little	29.8		
	Somewhat	31.6		
	To a great extent	31.6		
Early Field Experiences are at Schools with Diversity in SES			3.19	0.87
	Not at all	3.5		
	Little	19.3		
	Somewhat	31.6		
	To a great extent	45.6		
Early Field Experiences are at Schools with Diversity in Rural / Urban			3.02	0.76
	Not at all	3.5		
	Little	17.5		
	Somewhat	52.6		
	To a great extent	26.3		

<sup>a</sup>Scale: 1 = Not at all, 2 = Little, 3 = Somewhat, 4 = To a great extent

### *Student Teaching*

Concerning student teaching, 93% of the responding agricultural education programs stated they placed student teachers at schools with somewhat or a great extent of diversity in gender. In addition, 63% placed student teachers at schools with somewhat or a great extent of diversity in ethnicity

(Table 2). There were 82% of the agricultural education programs that placed student teachers at schools with somewhat or a great extent of diversity in SES. The table also shows that 79% of the agricultural education programs placed student teachers at schools with somewhat or a great extent of diversity in rural/urban.

Table 2  
*Student Teachers Placed at Schools with a Diverse Population (n = 57)*

	Response	%	<i>M</i> <sup>a</sup>	<i>SD</i>
Student Teachers at Schools with Diversity in Gender			3.61	0.62
	Not at all	0.0		
	Little	7.0		
	Somewhat	24.6		
	To a great extent	68.4		
Student Teachers are at Schools with Diversity in Ethnicity			2.84	0.92
	Not at all	7.0		
	Little	29.8		
	Somewhat	35.1		
	To a great extent	28.1		
Student Teachers are at Schools with Diversity in SES			3.28	0.79
	Not at all	1.8		
	Little	15.8		
	Somewhat	35.1		
	To a great extent	47.4		
Student Teachers are at Schools with Diversity in Rural / Urban			3.09	0.76
	Not at all	1.8		
	Little	19.3		
	Somewhat	47.4		
	To a great extent	31.6		

<sup>a</sup>Scale: 1 = Not at all, 2 = Little, 3 = Somewhat, 4 = To a great extent

#### *Coursework*

Sixty percent of responding agricultural education programs stated they require diversity classes for teacher education students (Table 3). In addition, 44% stated their department or university offered classes in diversity as optional or elective courses. Of the 57 agricultural education programs that responded, 79% stated they diffused topics in diversity to a somewhat or great extent into some or all of their agricultural education courses.

Along the same lines, Table 3 shows that 75% of responding agricultural education programs stated they require special needs classes for undergraduates and 31% stated their department or university offered classes in special needs as optional or elective courses. In addition, 84% of the agricultural education programs stated they diffused topics in special needs to a somewhat or great extent into some or all of their agricultural education courses.

Table 3  
*Diversity Coursework for Agricultural Education (n = 57)*

	Response	%	<i>M</i> <sup>a</sup>	<i>SD</i>
Required Courses in Diversity	Yes	59.6		
	No	40.4		
Elective/Optional Courses in Diversity	Yes	43.9		
	No	56.1		
Topics in Diversity Infused into Agricultural Education Courses			3.02	0.72
	Not at all	1.8		
	Little	19.3		
	Somewhat	54.4		
	To a great extent	24.6		
Required Courses in Special Needs	Yes	75.4		
	No	24.6		
Elective/Optional Courses in Special Needs	Yes	31.6		
	No	68.4		
Topics in Special Needs Infused into Agricultural Education Courses			3.12	0.65
	Not at all	0.0		
	Little	15.8		
	Somewhat	56.1		
	To a great extent	28.1		

<sup>a</sup>Scale: 1 = Not at all, 2 = Little, 3 = Somewhat, 4 = To a great extent

Qualitative questions were asked of the respondents to provide clarification about diversity and coursework. The most recurrent statements about formal coursework were related to an infusion of diversity into other courses as conveyed by the following comments.

"The diversity and special needs information is infused in other courses and experiences related to these areas are required." "Our diversity training is integrated into the curriculum in a total of 9-15 hours of Foundations and Methods courses." "Dealing with student differences and student diversity is integrated within the curriculum of six hours of Ag Ed courses." "Every [University of State] graduate must take 38 credits referred to as Council on Liberal Education. In this series, every student must have a course in Cultural Diversity." "Our graduate level alternative certification program includes a 'special populations' course which deals with diversity and special needs and at-risk learners. The concepts in an abbreviated six-hour seminar are included in the undergraduate program through our [AGED XXX]-Internship in the Secondary Schools course." "Special Needs Learners is incorporated into methods and teacher as a researcher coursework." "We suggest a 3-4 hour elective in special needs at a neighboring institution. We do not have our own separate course but have a sharing agreement with the neighboring college."

In fewer of the universities, diversity is required as a stand alone course or very

closely related course "The required diversity related course is a university requirement...struggling under a limit of 120 to graduate we have not required additional course even though we see this as a real need area." "These courses are required of every student in a secondary education teacher education program."

In other situations, options are given to the instructor to integrate diversity in his/her course. "It is up to each professor to include this information in their courses." Or it is an option for students, who may be encouraged to take a course in diversity as in this statement "It is probably not correct to say that we don't encourage students to take elective courses dealing with diversity. There just are very few courses available."

#### *In-service Experiences and Graduate Coursework Provided by Agricultural Education Programs*

Analyzing the binary responses regarding graduate education, 61% of responding agricultural education programs stated that either they or their university offered graduate courses in diversity, pluralism, or multiculturalism, while 70% offered courses in special needs (Table 4). Fifty-one percent of the agricultural education programs provide graduate seminars in diversity topics. Table 4 also shows 37% of the agricultural education programs provided workshops in diversity, pluralism, or multiculturalism while 47% provided workshops in special needs.

Table 4  
*In-Service and Graduate Coursework in Diversity Provided by Universities (n = 57)*

	Response	%
Graduate Course in Diversity, Pluralism, or Multiculturalism	Yes	61.4
	No	35.1
	Not Sure	3.5
Graduate Seminar in Diversity	Yes	50.9
	No	38.6
	Not Sure	10.5
Workshops in Diversity Provided by Department	Yes	36.8
	No	54.4
	Not Sure	8.8
Graduate Course in Special Needs	Yes	70.2
	No	26.3
	Not Sure	3.5
Workshops in Special Needs Provided by Department	Yes	47.4
	No	45.6
	Not Sure	7.0

### Conclusions and Recommendations

The following conclusions and recommendations are based on the 57 responding institutions. In the four categories of diversity explored in this study, there is a higher placement of teacher education students for early field experiences in schools with diversity in gender. This may be explained by the fact that gender cuts across all the other diversity categories. Less than eight percent of the responding programs do not provide early field experiences at schools with any of the four diversity categories (i.e. gender, ethnicity, SES, and geography). The results indicate that the responding agricultural education programs have become aware of

the importance of diversity in student development and are taking the appropriate steps in providing the needed experience as part of their teacher education. Field experiences, including student teaching, provide the students with both first hand information and hands-on experience which are more cognitively lasting than just theoretical knowledge (Bell, 2000). In respect to field experiences, responding agricultural education programs are using an infusion approach (Zeichner, 1995) to prepare their students for teaching in a multicultural society.

Field experience has the potential to go beyond intellectualization about cross-cultural issues to change in one's own behavior in a cross-cultural setting (Bell,

2000). Through field experiences, students have many opportunities to gain practical experience in the field of agricultural education and at the same time be exposed to issues of diversity in their every day activities. Therefore, it is recommended that all programs of agricultural education provide their teacher education students with at least one field experience that has diversity in each of the categories explored in this study. The qualitative information provided in this study shows that agricultural education programs are moving toward this direction, as field experience with a diversity component is becoming a requirement for placement.

In the 57 responding institutions, agricultural education undergraduate students are receiving instruction on diversity, multiculturalism, and pluralism whether through required courses, optional courses, or infusion of these topics into agricultural education courses. Learning to value diversity (be it ethnicity, gender, geography, or socio-economic status) is the appreciation of how variations in culture and background may affect teachers' views and behaviors (Banks, 1995). University coursework in diversity provides students with the skills to negotiate effective communication, a heightened awareness of their own attitudes, and sensitivity to issues of stereotyping, prejudice and racism (Kai, Spencer, Wilkes, & Gill, 1999). Incorporating diversity into curricula raises challenges and the need to manage change, but there are increasing opportunities within the changing context of agricultural education.

Appropriate preparation for pre-service teachers can inform attitudes and yield refinement of learners' core skills that are generic and transferable to most educational and teaching encounters. Care must be taken to avoid a narrow focus upon cultural differences alone, as all aspects of diversity are important to teachers. Although the level of infusion of diversity issues into

agricultural education programs in the university is less than desirable, the fact that it is being infused is an indication of at least a minimal commitment to diversity.

University agricultural education programs provide some opportunities for current agricultural teachers' diversity training, but this study yielded mixed results. Diversity courses (61%) and special needs courses (70%) are offered by the universities, but this study did not explore the degree to which teachers are taking advantage of these opportunities. Less than one-half of the responding agricultural education programs offer workshops, which typically are more focused on the needs of the audience.

Although classroom preparation of teachers is required and learning must be explicitly linked to assessment and professional accreditation, it is important that students in agricultural education receive preparation on diversity that prepares them to go beyond a knowledge level of diversity to a process level. The next step in this line of inquiry is to seek an answer to the question, "For agricultural education pre-service and in-service teachers, do coursework and field experiences in diversity lead to changes in attitudes and behaviors?"

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