

**Enrollment Trends in Animal Related Courses in Texas Secondary Education Based on  
Ethnicity**

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### **Introduction**

Goecker (2015) expects that from the years 2015-2020, United States graduates with a background in agriculture, food and natural resources will be able to come across and secure careers, with nearly half of those careers being in management positions. However, with 57,900 average openings annually, and only 35,400 U.S. graduates with an expertise in the field, employers must turn to graduates of other educational backgrounds in order to fill positions.

Research has found that some of the biggest barriers to recruiting high school students into agricultural education programs are the characteristics of the course, pressure from personal connections such as peers or family, and the interest in the field (Myers et. al, 2004). Some secondary education students do not understand the importance of agriculture in their communities and its effect on their lives (Gliem, & Gliem, 2000). In Talbert & Larke's (1995) study, they predicted that while the white population in Texas would no longer be the majority, other ethnicities would still be underrepresented in the field of agriculture.

### **Theoretical Framework**

The United States greatly depends on the agricultural sector, yet with each year, less individuals go into the field (Warren, & Alston, 2007). Talbert & Larke (1995) recommended that recruiting in high school was long overdue, and recruitment should begin in elementary and middle school. By high school, most students already have a perceived idea of agriculture and whether they would pursue it as a career. However, LaVergne, Larke, Elbert, & Jones (2011) reported that there was no research progress showing a modification or change of agricultural classrooms to recruit these individuals. The purpose of this study was to describe enrollment trends based on ethnicity in animal related courses in the secondary agriculture, food and natural resource programs.

### **Methodology**

This study was designed to describe enrollment trends based on ethnicity in animal related courses and animal related secondary agriculture food and natural resource courses in Texas. The population for this study consisted of secondary students enrolled animal related courses. These were aggregate enrollment data from the public domain and no individual subjects were used for this study. Data were collected from the Texas Education Agency report on enrollment for secondary food and natural resource classes in Texas for the years 2013, 2014, and 2015. Data were analyzed and reported using descriptive statistics.

### **Results**

The percentage of American Indian or Alaska Native and Native Hawaiian/Other Pacific is less than 1% in all three academic years reported for the animal systems pathway courses. Asian student enrollment in the foundation course is less than 1%, while the percentage of Asian student enrollment increases from less than 1% to 1% in Veterinary Medical Applications and is

reported at 2% enrollment for Small Animal Management in 2013-2014, and 1% in 2014-2015 and 2015-2016. The enrollment of two or more race students is 2% in all of the animal systems career pathway courses with the exception of Advanced Animal Science. In 2013-2014, there was a 1% enrollment of two or more race students in Advanced Animal Science, and a 2% enrollment in the academic years 2014-2015 and 2015-2016.

The enrollment of black or African American students in Equine Sciences remained at a constant 8% throughout the academic years reported. The only course enrollment of black or African American students that was higher than that of the foundation course was in Small Animal Management with 9% in 2013-2014 and 11% in 2015-2016. The lowest enrollment percentage of Hispanic/Latino students was in Equine Sciences, going from a 29% enrollment from 2013-2014 and 2014-2015 to 32% in 2015-2016. In the other animal systems career pathway courses, the enrollment of Hispanic/Latino students is the second highest with over a 30% enrollment after the enrollment of white students.

The percentage enrollment of white students in both the foundation course and the courses in the animal systems career pathway decrease with each academic year. The percentage of white student enrollment was highest in Equine Science, and was lowest in Small Animal Management, with 51% enrollment in 2013-2014, 48% enrollment in 2014-2015, and 46% enrollment in 2015-2016.

### **Conclusions**

When comparing the student enrollments in AFNR and student enrollment in Texas high schools, there are some consistencies. The enrollment of American Indian/Alaska native students has decreased in the three academic years in both cases, but the enrollment rate is higher in the animal systems career pathway courses than in high school. Students of two or more races' enrollment is fairly consistent throughout the three academic years reported, with 1.80% and 1.70% enrollment in high school and AFNR, respectively. Native Hawaiian/Other Pacific student enrollments are the lowest in both cases, with 0.14% and 0.06% in high schools and the animal systems pathway, respectively. Asian student enrollment in Texas high schools was 3.80% in 2015-2016, but only 0.80% in AFNR. Similarly, black or African American student enrollment in Texas high schools in the same year was 12.78%, but only 8.43% in the animal systems pathway. In the academic year 2015-2016, the Hispanic/Latino student enrollment became half of the enrollment in Texas high schools, with the white student enrollment coming second with 30.59%. However, white student enrollment is 50.32% in the animal systems pathway in the same year, with Hispanic/Latino student enrollment coming second with 38.25%. This confirms Talbert and Larke's (1995) prediction that while the white population in Texas would not be the majority, there is still an underrepresentation of other ethnicities in the field of agriculture.

### **Recommendations**

Based on the findings, one recommendation would be to increase the opportunities to offer nontraditional animal related courses in secondary education, such as Veterinary Medical Applications and Small Animal Management. This could result in a more diverse participation overall in secondary agriculture, food and natural resources.

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