An Examination of the Differences Among White and Racial Minority Students' Motivations to Pursue a Baccalaureate Degree in Agriculture

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Introduction and Conceptual Framework

Minority populations have long been underrepresented in the agricultural industry. To complicate this issue further, the 2017 Census of Agriculture reported that 95.4 % of farm producers in the U.S. were White/Non-Hispanic (USDA, 2018). However, trends published by the National Center for Education Statistics (NCES) documented a shift in students' racial and ethnic distribution populating public schools in the U.S. over the last two decades (Aud et al., 2012). This influx of diversity has been attributed to the growth of agricultural youth organizations, such as 4-H and FFA, and other external factors (Alston et al., 2019, 2020). However, little knowledge has been advanced regarding the differences that racial minority students have compared to White students when pursuing a degree in agriculture. This study was guided by Chapman's (1981) model of student success. Chapman (1981) suggested that students were motivated to pursue a degree by their (a) personal characteristics, (b) external factors including significant persons, fixed college characteristics, and college communication efforts, (c) general college expectations, and (d) choice of college. In the current investigation, we used Chapman's (1981) model to describe differences in students' motivation to pursue an agricultural degree based on their race.

Purpose of the Study

The purpose of this study was to examine whether differences exist between racial minority and White students regarding their decision to pursue a baccalaureate degree in agriculture. One null hypothesis guided the investigation: H_0: No differences existed regarding students' race and the external factors (i.e., significant persons, fixed college characteristics, and college communication efforts) on their decision to pursue an agricultural-related degree.

Methods and Procedures

The target population of this study consisted of all students (N = 214) enrolled in the *First-Year Introduction to Agriculture* course at Louisiana State University in the 2021 fall semester. The course is required of all freshman College of Agriculture students. To collect data, we distributed an online questionnaire using Dillman et al. (2014) tailored survey design. In total, 105 students provided useable responses with a response rate of 49.06%. The web-based instrument was adapted from Rayfield et al. (2013) and Wildman and Torres (2001), who analyzed factors influencing college students' decisions. Wildman and Torres (2001) reported a priori test-retest

reliability of 75% to 100% for the instrument's first two sections. Before data collection, the instrument was reviewed by a panel of experts. The instrument consisted of 57 items that were divided into three sections: (1) external factors affecting students' academic major decisions, (2) student characteristics, and (3) demographic information. We placed items on a 10-point, Likert-type scale ranging from 1 = *Factor was Not Influential* to 10 = *Factor was Very Influential*. A post-hoc reliability analysis revealed that sections one and two had Chronbach's alphas at .70 or above. Data we analyzed using independent sample t-tests. This allowed us to analyze differences regarding students' characteristics and external influences on factors that affect their decision to pursue an agricultural-related degree. Finally, effect sizes for tests of mean differences were reported using Cohen's d (Field, 2013).

Findings

Of the respondents, most identified as female (f = 67; 63.81%) and white (f = 48; 42.86%). The respondents were also primarily animal science students (f = 37; 35.24%) who were not involved in FFA (f = 70; 66.66%) or 4-H (f = 76; 72.38%). To analyze the data regarding race, we grouped individuals identifying as a racial minority (Asian, Black, Latino, Native American, and multiple races) and compared them to White respondents. Next, we present key findings from the investigation. We tested differences regarding the importance of specific individuals on students' academic major decisions. The minority students reported statistically significant ($p < .05$) differences concerning the importance of their parent or guardian (t = -3.73, p = .000, d =.118) in influencing their academic major decisions compared to students who identified as White. Meanwhile, White students demonstrated statically significant ($p < .05$) differences regarding the influence of extension professionals (t = -2.41, p = .017, d = .077) and high school agricultural science teachers (t = -4.12, p = .000, d = .106). We also found statistically significant ($p < .05$) differences between the two groups on college-based factors. For instance, minority students reported they placed more value on two college-based sources than White students: (1) alumni from the college (t = -2.09, p = .040, d =.069), and (2) financial incentives (t = 2.33, p = .025, d = .076). Meanwhile, students who identified as White placed more value on the friendly atmosphere in the college of agricultural (t = -2.57, p = .014, d =.081).

Conclusions, Discussion, Implications, and Recommendations

By identifying potential trends and strategies that attract underrepresented groups to baccalaureate degrees in agriculture, the findings of this study could be used to introduce more diversity and employees to the agricultural industry (Alston et al., 2020). Therefore, we recommend that Louisiana State University College of Agriculture dedicate more time to communicating with the parents and minority alumni about the benefits of undergraduate programs in agriculture. Because these individuals were found to influence minority students' decisions, we also recommend that networking opportunities be created with these individuals so that high school students may more profoundly ponder a degree in agriculture. Finally, we

recommend that administrators, faculty, and recruiters more clearly articulate scholarship and funding opportunities associated with agricultural degree programs to potential minority students.

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