

Recruitment and Retention of Underrepresented Groups: A Model for Success

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Abstract

Due to educational barriers and group perceptions, few underrepresented groups are pursuing careers in agriculture. Traditionally, underrepresented groups have perceived agriculture as limited to farming, ranching and related careers. The purpose of this article is to present the evaluation of a successful recruitment and retention program for underrepresented groups by a college of agriculture. Students rated most of the program components as positive, identified other programs which had helped them, and rated their perception of the environment as positive. From interviews with the students involved in the program, both recruitment and retention models are presented.

Introduction

Between 1995-2000, there will be a 4.7 percent shortage of college graduates for employment in agriculture, natural resources and veterinary medicine (Goecker, et al., 1995). Underrepresented groups should be included in the recruitment and retention efforts of colleges of agriculture for these careers. A 1970 report issued by the United States Department of Agriculture (USDA) and National Association of State Universities and Land-Grant Colleges decried the decreasing percentage of minority youth having firsthand connections with agriculture and interactions with agriculture professionals. The report specifically addressed the limited contact individuals in 1890 institutions (predominantly African-American institutions established under the Morrill Land Grant Act of 1890) had with USDA personnel and programs. Although this report is more than 25 years old, the issues it addressed

are still concerns. In a more recent article, Taylor, Powers, and Johnson (1990) stated that historically African-American institutions have a better rate of retention and attainment among African-Americans than other institutions. They partially credited this success to the "high technology, high touch" emphasis of the 1890 institutions whereby students are able to learn using the most recent technology while still receiving personal attention from faculty and staff.

From 1920 to 1978, the number of farms owned by African-Americans declined 95 percent while the number of farms owned by Whites declined 63 percent (Browning, 1983). The decline in numbers of African-Americans involved in production agriculture may have influenced the decline in the number of African-American students taking agriculture courses. Conversely, the decline in the number of African-American students taking agriculture courses may have contributed to the decline of African-American farm owners. Findley and Rawls (1984) in a study of students in agricultural disciplines at Alabama's historically African-American four-year institutions, found that the students' immediate families were the most influential in decision-making, occupational choice, and development of student self-confidence. In a study of pre-veterinary students, parents and the local veterinarian were identified as the most influential persons in choosing a career (Dunkelberber, et al, 1981). This study implies that recruitment efforts also need to involve local agricultural professionals.

The literature also identified role models as positive influences on the decision-making process. Reed and Flores (1987) emphasized that agricultural education must have role models to attract minority students into agriculture. Mallory and Sommer (1986) studied high school eleventh and twelfth graders who identified exposure to agriculture through field trips and minority guest speakers in agricultural careers as

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positive influences on enrollment. The researchers also recommended that colleges of agriculture work with high school counselors and science teachers to influence minority students.

The barriers to minorities enrolling in agriculture in college are similar to those for high school students. Flores and Kellogg (1989) found that minority students, especially Hispanics, did not want to travel from their urban homes to the college. Recruitment efforts must consider the extended family for minority students. The researchers also found that the image of agriculture as unskilled and menial labor was a barrier. Flores and Kellogg stated that the lack of minority students and faculty also served as barriers to enrollment. Neyland (1990) identified the negative images associated with agriculture and the desire to major in liberal arts and sciences as barriers that prevented African-American students from majoring in agriculture at 1890 institutions.

The Study

The study was conducted by the College of Agriculture and Life Sciences (COALS) at Texas A&M University, College Station, Texas to increase the number of underrepresented groups entering the College of Agriculture and Life Sciences. The Ag Jumpstart Program was developed in Summer 1991 to allow African-American and Hispanic high school graduates from the local area to enroll provisionally at the University during the summer academic session, since these students lacked at least one of the requirements for full admission (standardized test score or class rank). Targeted students had little or no interest in agriculture as a career, but in an effort to enhance their interest in agriculture, the students were exposed to agriculture-related careers during their provisional enrollment. The program's goal was to increase the number of underrepresented students enrolled and retained in the College, and to have the students become contributing professionals in the field of agriculture as graduates of COALS.

Selected students who met the program's academic requirements at the end of the summer academic session, were fully admitted to COALS in the Fall Semester. Students had the option of continuing enrollment in COALS or switching to another major. Of the 15 students who have participated in the Ag Jumpstart Program since its inception in 1991, two have graduated from COALS, six are currently enrolled in COALS, three students have switched to other majors at the university, and four students discontinued college enrollment. Student participation in the program each year was as follows: three students in 1991, three students in 1993, six students in 1994, and three students in 1995. The program was not conducted in 1992 because it underwent a transition in administration, and no interested students were identified to participate.

During the summer of 1995, personal interviews were conducted with 9 of the 15 students who had participated in the Ag Jumpstart Program since its inception. The interview consisted of a questionnaire to evaluate the components of the COALS program. All students were asked the same set of questions, in order, to determine their assessment of the program. The interviews were tape recorded, transcribed, and analyzed.

Findings

Student Demographics

The ethnic makeup of the students was 11 African-Americans and four Hispanics. There were five African-American females, four Hispanic males, and six African-American males. All of the students were 18 to 22 years old and most were from communities which were within commuting distance of the land-grant university campus. The interviews were conducted with students who were accessible and consented to be tape recorded. Of the students interviewed there were one graduate, one senior, one junior, five sophomores, and one freshman. The students were employed by departments within the College of Agriculture and Life Sciences in areas of their interest. The students were employed 15-20 hours per week.

Evaluation of Program Components

The students were asked to describe their opinions toward various components of the program. These descriptions were rated as positive if the opinion was favorable toward that component, negative if the opinion was unfavorable toward that component, or neutral if the student expressed no opinion or if the opinion could not be classified into one of the other categories (Table 1). The components were seminars, discussion groups, field trips, advising, course selection, work assignments, and financial support. Seminars were conducted on subjects such as study skills and career awareness. The discussion component consisted of weekly meetings to talk about school, work, personal matters, and other topics. For some cohorts a field trip was taken to expose the students to various aspects of agriculture. Ag Jumpstart students received advising on course selection and on personal matters. For their first summer course schedule, the students were placed in selected classes, including at least one COALS course, by the Ag Jumpstart coordinator. Students were also asked about their work assignments and the financial support they received such as tuition reduction and textbook purchases. All components received an overall positive impact with the exception of field trips. Most students did not take a field trip during the duration of their first summer experience.

Table 1. Students' Evaluation of Ag Jumpstart Program Components (n=9)

Component	Positive	Negative	Neutral
Seminars	7	1	1
Discussion	6	1	2
Field Trips	1	0	8
Course Advising	9	0	0
Personal Advising	6	1	2
Selected Classes	8	0	1
Work Assignments	6	2	1
Financial Support	8	1	0

Type of Mentoring Received

Students were asked who had provided mentoring to them. Three students identified faculty members, two their peers, and four could not identify anyone as a mentor. Students also identified programs within COALS which had assisted them as follows: AGgie Mentors; Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS); and the Howard Hughes Program. AGgie Mentors is a program that pairs first-year students from underrepresented groups with upperclass students preferably from the same major. MANRRS is a student organization in some U.S. colleges of agriculture with the purpose of providing students from underrepresented groups opportunities to network with agricultural professionals. The Howard Hughes Medical Institute Undergraduate Research Intern Program provides the opportunity for undergraduate students in the colleges of Agriculture and Life Sciences, Veterinary Medicine, and Science to take advantage of campus employment, laboratory experience and paid summer research to enhance their education and to prepare them for the possibility of graduate school. Students identified the ExCEL (Excellence uniting Culture, Education, and Leadership) program at the University as very helpful. ExCEL is a year-long program designed especially, but not exclusively, for ethnic minority first-year students. Its goals are to assist new first-year students with the sometimes difficult transition from high school to college and to provide special programs and workshops which facilitate retention of these students. The annual Southwestern Black Student Leadership Conference (SBSLC), hosted at Texas A&M University was identified as very instrumental in the students' success. The conference incorporates history, unity, self-improvement techniques, leadership skills, and moral values with support and involvement of corporate America-

can collegians to be productive leaders of tomorrow.

Perceptions of University Environment

The students were asked their perceptions of the campus environment during their tenure at the University (Table 2). Overall, the students reported that all of the components were positive. The researchers concluded that the number of students' negative perceptions indicated in the areas of overall atmosphere at the university, students in COALS, and course difficulty were not necessarily reflective of the overall environment within COALS and the University. Instead, the researchers concluded that these perceptions were reflective of isolated experiences students may have had while enrolled in the program. The researchers realize that not all students will have positive experiences 100 percent of the time in all aspects of student life at the University. However, based on student feedback in this study and the overall experiences of students in similar programs at the University, the campus environment is deemed a positive one overall.

Model for Recruitment

From a summation of the interviews, students viewed a model recruitment program to include the following components (Figure 1). Students viewed personal contact from a faculty member over time as crucial to recruitment. They also viewed scholarships or some form of financial support as essential, since many would not have knowledge of the scholarship support available to them. Students perceived that in their communities the image of agriculture was not positive. Therefore, these students did not enroll in high school agricultural science classes nor saw agriculture as a career choice. Because of this they thought that enhancing the image of agriculture would help with recruitment. Mentoring by

Table 2. Students' Perceptions of Environment (n=9)

Component	Positive	Negative	Neutral
Overall atmosphere at university	6	3	0
Professors	6	1	2
Students in COALS	5	2	2
Other students at university	8	1	0
Support Staff	8	0	1
Community	6	1	2
Employment	6	1	2
Course Difficulty	6	3	0

upperclass students was a positive attribute of these students choosing the university and entering COALS. The students perceived that a critical mass of others from underrepresented populations helped to influence them to pursue higher education. The affordability of on-campus housing and the proximity of this housing to classes and campus activities was viewed as important by these students. The students stated that field trips taken to explore the careers available in agriculture would have assisted them in selecting to major in agriculture.

Model for Retention

From a summation of the interviews, students viewed a model retention program to include the following components (Figure 2). Students viewed structured mentoring by peers as critical to their academic success and continuation at the university. They stated that the university and college should work to eliminate biases among faculty, staff, and students. Some of the students interviewed suggested that racially biased attitudes, negative perceptions and expectations held by some faculty, staff, and students on campus were responsible for some of the negative interactive experiences on campus. Such experiences include insensitivity to cultures different from their own and covert racist activities evident in such actions as unwillingness to provide "extra" mentoring or assistance needed by students from certain backgrounds.

Various types of bias exist on any campus. These biases have different effects on each individual. But researchers (Brophy and Good, 1984; Fennema and Peterson, 1986; Reyes, 1981) have determined that differences in interactions between teachers and students attributable to race/ethnicity and gender have been observed to account for differences in

student performance. Atkinson (1964), Rosenthal and Jacobson (1968) and Rogers (1969) suggested that teachers' behaviors toward students are influenced by their expectations of the students' abilities. These phenomena are defined as the Expectancy Theory and the Social Group Theory.

The students stated that they could tell when verbal support was given, but no visible support was produced. Therefore, college and university administrators need to be certain that they follow up words with actions. The students thought that career fairs offered positive reinforcement and support for the image of agriculture. By being exposed to the wide range of agricultural careers and by meeting agricultural professionals they were more likely to continue in agriculture. The social climate on the campus and activities on the weekends need to be such that the students from underrepresented populations feel a part of the student body. These students did not like the feeling of isolation and perceived that there was nothing to do on-campus or in the community. Because of monetary concerns students need to be made aware of financial support available to them and part-time employment opportunities either in agriculture within the university or other jobs close to campus. The students felt that student organizations such as MANRRS are critical to retention.

Conclusions

Colleges of agriculture must do a better job of recruiting and retaining members of underrepresented groups. Programs must be developed to afford these groups opportunities available in the large industry of agriculture. Colleges must develop offices within their domain to address diversity and implement strategies to recruit and retain underrepresented groups. Students need to be encouraged

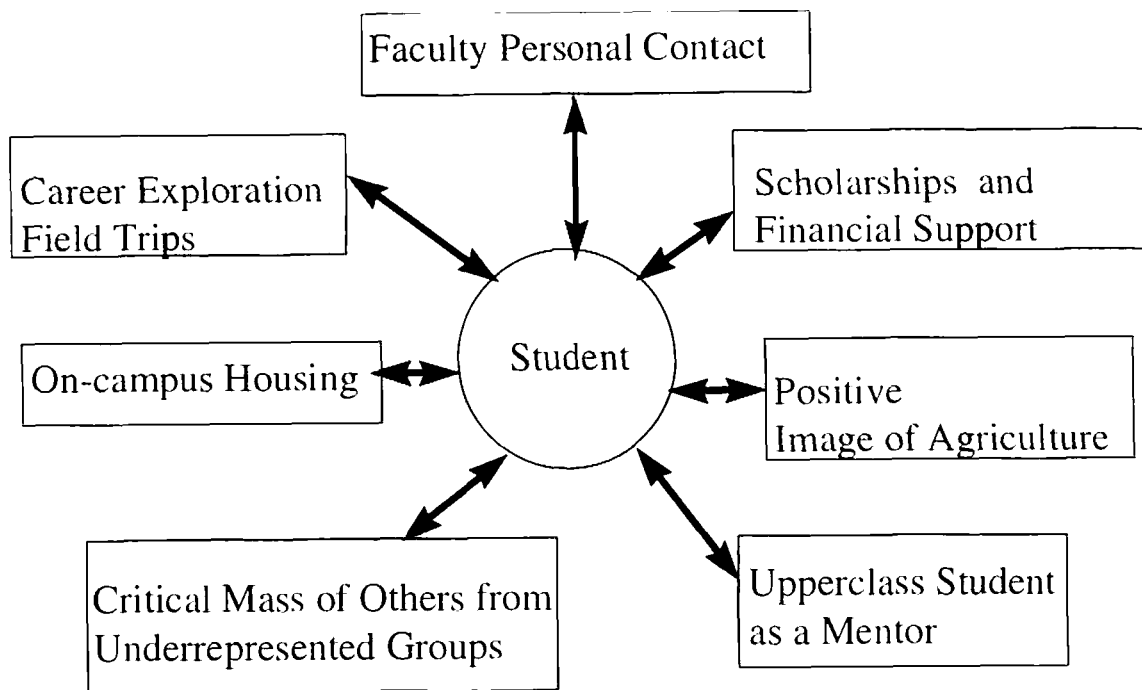


Figure 1. Model for recruitment of students from underrepresented populations.

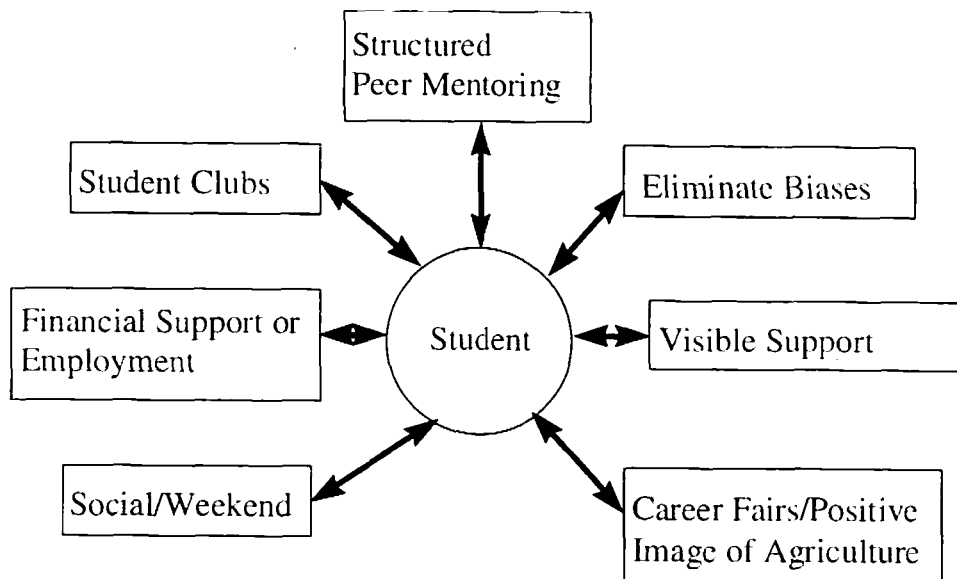


Figure 2. Model for retention of students from underrepresented populations.

to enter the lucrative and challenging majors within agriculture and related sciences. Many high schools are not providing the proper mentoring and recruitment of underrepresented groups into the agriculture field. The students in the Ag Jumpstart Program had no high school agriculture courses and had not considered a major in agriculture. Yet, because of the Ag Jumpstart Program most of the students have been successful in an agricultural or life sciences major. The two students who have graduated majored in Agricultural Science (secondary teacher education) and Agricultural Economics. Others are majoring in Poultry Science; Agricultural Development; Food Science; Recreation, Parks, and Tourism Science; and others have yet to declare a major.

These students were within driving distance of a university known for its agricultural sciences, yet they had little knowledge of the careers available in agriculture. There is a great need for colleges and universities to increase public relations in "their back yard" in addition to recruiting from distant cities and towns.

The Ag Jumpstart Program has been rated successful by both the program participants and the College administrators, and has been cited as a model in recruiting and retaining students into agriculture and related disciplines. Therefore, the recruitment and retention models presented in this article should be considered when designing such efforts at other universities and colleges of agriculture.

References

Atkinson, J. W. 1964. An introduction to motivation. Princeton, NJ: Van Nostrand.

Brophy, J. E., & T.H. Good, 1984. Teacher-student relationships: Causes and consequences. New York: Holt, Rinehart, and Winston.

Browning, P. 1983. Black farming: The erosion of a scarce resource. Perspectives, 15(1,2), 44-50.

Dunkelberber, J. E., J.J. Molner, and J.T. Vaughan, 1981. Pre-Veterinary students in agriculture at southern land-grant universities. Auburn, AL: Alabama Agricultural Experiment Station.

Fennema, E., and P. Peterson. 1986. Teacher-student interaction and self-related difference in learning mathematics. Teaching and Teacher Education, 2(1), 19-42.

Findley, H. J., and W.J. Rawls, 1984. Factors that influence agricultural career objectives among students attending historically Black four-year institutions. Journal of American Association of Teacher Educators in Agriculture, 25(1), 28-34.

Flores, B., and B. Kellogg, 1989. Twenty-six hours at Cal-Poly: A recruitment strategy targeting underrepresented groups. Paper presented at the annual convention of the American Vocational Association. Orlando, FL.

Goecker, A., K.J. Coulter, and M. Stanton, 1995. Employment opportunities for college graduates in the food and agricultural sciences: Agriculture, natural resources, veterinary medicine, 1995-2000. West Lafayette, IN: Purdue University, School of Agriculture.

Mallory, M. E., and R. Sommer. 1986. Student images of agriculture: Survey highlights and recommendations. Journal of American Association of Teacher Educators in Agriculture, 27(4), 15-17, 25.

Neyland, L. W. 1990. Historically Black land grant institutions and the development of agriculture and home economics, 1890-1990. Tallahassee, FL: Florida A&M University Foundation.

Reed, W. D., and B. Flores, 1987. A time to increase management level minorities. The Agricultural Education Magazine, 60(6), 15-17.

Reyes, L. N., 1981. Classroom process, sex of student and confidence in learning mathematics. Unpublished doctoral dissertation, University of Wisconsin-Madison.

Rogers, C. R., 1969. Freedom to learn. Columbus, OH: Charles E. Merrill Publishing Co.

Rosenthal, R., and W. Jacobson, 1968. Pygmalion in the classroom: Teacher expectations and pupils' intellectual performance. New York: Holt, Rinehart, and Winston.

Taylor, W. N., L. Powers, and D.M. Johnson, 1990. The 1890 institutions at 100. The Agricultural Education Magazine, 63(2), 8-9.

United States Department of Agriculture and National Association of State Universities and Land-Grant Colleges. 1970. Report of the USDA-NASULGC joint committee on education for government service. Washington, DC: Department of Agriculture.