Enhancing the Quality of Life for Hispanic Individuals Through Career Preparation

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Abstract: With the rapid population increase of Hispanic (Spanish, Latin American, or Spanish Indian heritage) individuals in the United States, ensuring economic prosperity and stability of this group is critical. This should include increasing their dwindling participation in agriculture-related fields. Hispanic youths often overlook an agriculture-related career, which promises economic prosperity and stability. This census study, using an ex post facto research design and a mailed survey, identified factors regarding Hispanic and African American (native U.S. citizens of African descent) college graduates' decisions to choose or decline an agriculture-related career prior to and/or after college.

Resumen: Asegurar prosperidad y estabilidad económica de la población Hispana (Española, Latinoamericana o de ascendencia Española-India) es crítico debido al incremento numérico rápido de estos individuos en los Estados Unidos. Esto deberá incluir el incremento de los números declinantes de los participantes en el campo de las disciplinas relacionadas con la agricultura. Jóvenes Hispanos usualmente ignoran carreras relacionadas con la agricultura, las cuales prometen prosperidad económica y estabilidad. Este estudio de censo usó un diseño de investigación ex post facto y un cuestionario por correo, identificando factores que estudiantes graduados Hispanos y Áfrico americanos (ciudadanos nativos de descendencia Africana) usaron en la toma de decisiones para escoger o rechazar carreras relacionadas con la agricultura antes y/o después de ser estudiantes universitarios.

Keywords: agriculture; economic prosperity; Hispanic quality of life

Traditionally, the majority of those enrolled in agriculture college programs (which include the fields of business, communication, education, engineering, animal, dairy, food and environmental sciences, horticulture, and natural resources) have been White, non-Hispanic male students with farm backgrounds (Zoldoske, 1996). But Talbert and Larke (1992) suggested that based on the rapidly changing national demographics, wherein the current minority population soon would be the majority population, agricultural

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professions had become dependent disproportionately on a shrinking White (native U.S. citizens of European descent) population for a future workforce. Therefore, if agriculture and related fields were to be sustained at their current levels, a new type of student needed to be recruited to fill agricultural positions in the future (Hicks & Bruening, 1991).

Preparing Hispanic individuals to enter and succeed in these careers would have a twofold benefit—to enhance economic stability and prosperity of that population as well as help the United States to maintain its preeminence in the world. To sustain agriculture at its current status, recruitment of outstanding individuals had to be enhanced. To enhance recruitment, more effective recruitment strategies were needed. To develop effective recruitment strategies, it was necessary to research students' decision-making processes and their images of agriculture (Lucas, 1993).

Background

The *Agriculture Fact Book* (U.S. Department of Agriculture [USDA], 1998) indicated that one of the major challenges facing the United States in the next decade was improving the quality of life for all Americans by increasing economic opportunities for all citizens. Maintaining an agricultural system that is highly competitive in the global economy was a major factor identified in achieving this objective.

With the rapid growth in numbers and overall percentage of Hispanic citizens in the U.S. population, ensuring economic prosperity and stability of this group is critical. Part of the rationale for addressing this concern is ensuring that this population has a choice of viable, prosperous career options. Also, preparing this group to lead in agriculture-related fields was considered critical to maintaining the United States' preeminence in the world in terms of agriculture (Mitchell, 1993; USDA, 1998).

Bowman (1997) predicted that by 2006, the labor force would become increasingly diverse in that the number of Hispanic and African American employees was expected to increase faster than White employees; overall, however, White individuals still would outnumber Hispanic and African American individuals. White individuals were predicted to compose 73% of the workforce in 2006, compared with 80% in 1986 and 75% in 1996.

Incidentally, continued rapid growth of the Hispanic population (compared with the slower growth rate of the African American population) has led to the Hispanic population's becoming the second largest ethnic group in the United States, replacing the African American population as the second largest ethnic group (U.S. Census Bureau, 2003).

Research on the changing demographics and the role of Hispanic workers in the future workforce suggests that this group must be educated and

prepared to become leaders in agriculture-related fields to ensure the economic viability and the overall survival of the United States and the world (Mitchell, 1993; USDA, 1998).

Mitchell (1993) suggested that students of color often decided to select agriculture as a career at a later stage in their education or lives, and rather than choosing agriculture as a major in their college freshman year, they often transferred into the discipline. Mitchell indicated that this sometimes put these students, compared with other students, at a disadvantage in terms of acclimation to the basics of the field.

Related studies have been conducted by various researchers to determine students' decision processes and decision rationales. Research findings from the current census study of graduates in agriculture-related disciplines at Texas A&M University in College Station indicated that Hispanic youths often overlook a career in agriculture or related sciences as a viable option that promises prosperity and economic stability, or they enter these careers at much later stages in life than does the majority population (referring to the White population). Respondents in the study identified factors that were related to Hispanic college graduates' decisions to choose or decline a career in an agriculture-related field prior to and/or after college. Factors were found to vary depending on one's professional characteristics (career paths) and personal and situational characteristics (ethnicity, age, gender, etc.).

Research Method

The research design applied in this study was ex post facto (causal-comparative method), which was appropriate when attempting to determine cause-and-effect relationships between events that had already occurred; that is, causes were studied after they presumably had exerted their effect on another variable (Gall, Borg, & Gall, 1996).

The following research questions were asked:

1. What were factors deemed important in selecting a career in agriculture, as identified by African American and Hispanic graduates receiving an undergraduate degree from the College of Agriculture and Life Sciences at Texas A&M University?
2. In comparing African American and Hispanic graduates who received an undergraduate degree from the College of Agriculture and Life Sciences at Texas A&M University, what were the differences and similarities given for choosing a career in agriculture?
3. How did graduates of baccalaureate programs in agriculture-related fields who chose careers outside of agriculture differ from those who were involved in agriculture-related careers?

Population

The study's population was all Hispanic and African American graduates who received an undergraduate degree from the College of Agriculture and Life Sciences at Texas A&M University from May 1990 through December 1997 ($N = 551$), as identified by the university's Association of Former Students (1999). This population was selected because the researchers desired to study a group that may have had similar characteristics to prospective students in terms of career interests, background, motivation, and perceptions of agriculture-related fields. Also, the researchers sought graduates who would have had at least 1 year on the job market.

The student data attained from the alumni association did not provide the specific ethnic breakdown of the population; however, based on data from the University's Student Information Management System and on self-reported information from respondents, the ethnic breakdown of the population was determined to be Hispanic ($n = 437$; 79%), African American ($n = 94$; 17%), and biracial or some other related ethnicity ($n = 20$; 4%).

The ethnic breakdown of the responding sample somewhat mirrored the ethnic breakdown of the target population: Hispanic ($n = 95$; 68%), African American ($n = 29$; 21%), and biracial or undisclosed ($n = 15$; 11%).

Instrumentation

To gather the responses from the large number of college graduates in this study, the researchers developed a written questionnaire to identify and analyze factors related to minority student enrollment and retention in agriculture.

The survey used in this study was developed using similar questionnaires found in the literature as a guide. Career choice factors studied were those that appeared frequently in the literature. Career choice factors, as determined from a review of the literature, were incorporated into the questionnaire to gain greater insight into the factors affecting career decisions. The questionnaire used was divided into three parts.

Part I sought information about the respondents' personal characteristics, which focused mainly on demographic information. Primarily, respondents were asked to check or circle the appropriate answers or to write a numerical answer in the space provided. Specifically, the characteristics investigated were gender, age, place of birth, marital status, number of children, family background, ethnic-group membership, level of income, and grade level wherein first agriculture-related class was taken.

Part II sought information about the respondents' professional characteristics as related to their career path, particularly a career in agriculture. Questions were both fixed-response and open-ended. For the data analysis stage, opened-ended questions were categorized and grouped to facilitate coding of responses (Gall et al., 1996).

Part III was a 30-item career factor survey using a five-point Likert-type scale designed to determine level of influence that selected factors had on the respondents' choice of their current career. Values on the Likert-type scale and levels of influence, respectively, were 1 = *no influence*, 2 = *slight influence*, 3 = *moderate influence*, 4 = *high influence*, and 5 = *extreme influence*.

The instrument was reviewed by a three-member committee for content and clarity and was pilot tested by 15 master's- and doctoral-level students. The SPSS^{x} procedure reliability (SPSS, Inc., 1986) was used to determine the internal consistency of the instrument, which was sufficiently reliable in that Cronbach's coefficient alpha for the 30 career-choice factors identified was found to be .85 (Cronbach, 1951).

Procedures

A cover letter, explaining the study's purpose and how the data would be used, along with the instrument and a postage-paid return envelope, were mailed to the targeted population. Each instrument was coded with a three-digit number to track which individuals responded and to assist in follow-up with nonrespondents; however, the addressees were assured that all responses would be anonymous and that their names would not be associated with the information provided in the completed survey. A follow-up postcard was sent to nonrespondents 1 month from the initial mailing.

To enhance response rate, the researchers sought assistance from academic departments within the college to follow up with graduates, and sought assistance from colleagues who may have been able to help locate graduates. Of the 536 mailed questionnaires presumed to have been delivered to the intended addressees (15 were returned undeliverable), 139 completed questionnaires were returned by the established deadline date, in response to the initial contact letter or one of the follow-up procedures. This yielded a return rate of 26%.

Based on research by Clausen and Ford (1947), Goldhor (1972), and Newman (1962), nonrespondents were assumed to be similar to late respondents. Thus, early respondents were compared with late respondents to determine if any differences existed between respondents and nonrespondents. Using the date that the surveys were received as a variable, the researchers conducted correlation procedures. To determine if there were relationships between the date a survey was returned and the variables of interest in this study, correlation statistics were run. Date returned was examined in two ways. First, date returned was entered as an ordinal variable with each returned survey given a number from 1 (first survey returned) to 139 (last survey returned).

Spearman correlation coefficients or contingency coefficients were examined to determine the relationship between date returned and variable of interest. Only three variables had a statistically significant correlation in

terms of date returned. These variables were prior work experience ($r = .03$), physical challenge ($r = –.18$), and proximity to family ($r = –.17$). All three coefficients were "negligible" (Davis, 1971) but statistically significant ($p < .05$). None were statistically significant at an alpha of .01.

The second correlation comparison examined the relationship between early respondents (the first 44 surveys returned) and late respondents (the last 44 surveys returned). The respondent groups were coded as a dichotomous variable, which was examined to determine if it was correlated with variables of interest. The same three variables (prior work experience, physical challenge, and proximity to family) were correlated with this variable at $p < .05$. Additionally, it was correlated with job opportunities ($r = .04$) at $p < .05$.

With multiple correlation coefficients examined, the experiment-wise error rate was inflated greatly. Thus, it was not surprising that some statistically significant correlations were found. However, because these relationships were negligible and because no other statistically significant relationships were found, the researchers concluded that date returned did not influence response and that late respondents did not reveal a statistically significant difference from early respondents. Thus, the researchers concluded that respondents to the survey would not differ from nonrespondents. So the responding sample was deemed a representative sample of the target population.

Results

The age of respondents ranged from 22 to 52 years. The mean age of respondents and the mode (15% of the respondents) were 28 years old. A majority of respondents (53%) were between the ages of 27 and 30 years old, and each of these ages had a greater number of respondents than any of the other ages.

Males ($n = 73$) composed 53% of the respondents, and females ($n = 65$) composed 47% of the respondents. One subject did not provide information on gender.

The perception of having limited job opportunities in agriculture and related sciences led respondents in this study to choose other careers. Many respondents perceived that the opportunities for viable, prosperous careers in agriculture-related fields were very limited and that the careers available may have lacked the aspects that were considered important to college graduates entering the job market. Some of the factors considered moderately to extremely important to the respondents in the study included job autonomy, advancement opportunity, work conditions, decision participation, problem-solving opportunities, use of technical skills, and fulfillment of goals.

This study found that lack of academic rigor did not have a major influence on respondents' decision to enroll in agriculture-related classes or to

seek a career in the field. Also, in considering this factor, a statistically significant difference did not exist between those who chose an agriculture-related career and those who did not choose one.

According to this study and other research, Hispanic youths often possessed negative perceptions about careers in agriculture-related fields. Traditionally, the term *agriculture* created a negative image among high school and college students, particularly among students of color (Zoldoske, 1996).

Overall, job satisfaction in agriculture-related careers tended to be very high. For instance, in this study, 41 (93%) of the 44 respondents employed in an agriculture-related job indicated that they were satisfied with their job. Only 3 (7%) expressed dissatisfaction with their job.

Most of the respondents in this study did not enroll in their first agriculture-related class until college. However, this fact did not have a statistically significant impact on the respondents in this study in terms of their selecting an agriculture-related career after college.

The role of significant others (i.e., people of color who encouraged individuals to pursue agriculture as a career) was found to be especially important and statistically significant regarding the respondents' choice of an agriculture-related career. (People of color are defined as individuals whose origin is other than European descent.) This supports the suggestion that significant others, such as parents, counselors, and teachers, should gain greater understanding and appreciation for agriculture-related careers and that they should promote to a greater extent the involvement of people of color in agriculture and related fields at various stages of development. They should continue to encourage youth to consider agriculture-related fields as a viable career option.

Most respondents ($n = 53$) indicated that no people of color, regardless of their profession, had encouraged them to pursue an agriculture-related career. Family members were identified by 38 respondents, and professors were identified by 37 respondents as people of color who had encouraged them to pursue an agriculture-related career. The number of respondents who identified high school counselors as individuals who encouraged them to pursue agriculture was low ($n = 3$).

The difference between those whose father's occupation was agriculture related and those whose father's occupation was not agriculture related was found to be statistically significant ($p = .00$) at the $p < .05$ level. Of the 20 respondents whose fathers were employed in an agriculture-related occupation, 16 individuals (80%) themselves were employed in an agriculture-related occupation; only 4 (20%) whose fathers were employed in agriculture were not employed in agriculture themselves. Of the 118 respondents whose fathers were not employed in an agriculture-related occupation, 28 individuals (24%) were employed themselves in an agriculture-related occupation, whereas 90 individuals (76%) were not employed in an agriculture-related career.

This study examined the differences regarding one's father's occupation but did not examine differences regarding one's mother's occupation because only one respondent indicated that his or her mother had an agriculture-related career.

The difference between those who identified someone who encouraged them to pursue agriculture as a career compared with those who did not identify someone who encouraged them to pursue agriculture as a career was found to be statistically significant ($p = .03$) at the $p < .05$ level. However, the impact of having a person of color in an agriculture-related profession serve merely as a role model was not statistically significant ($p = .09$) at the $p < .05$ level.

The comparison of the importance of selected career factors on Hispanic youths' versus African American youths' decisions to select their current career is shown in Table 1. The data indicate the number of each ethnicity providing information on the selected factor, the mean by ethnicity, the standard deviation by ethnicity, the t value, and the level of significance based on a two-tailed test for significance at a 95% confidence interval. The career factors that revealed a statistically significant difference based on ethnicity were autonomy (0.01), decision participation (0.048), academic rigor (0.02), creativity (0.02), physical challenge (0.00), political involvement (0.02), and use of technical skills (0.04).

Compared with those employed in an agriculture-related career, those not employed in an agriculture-related career tended to be influenced to a greater extent by retirement plan (being guaranteed a comfortable retirement income) and job opportunities (unable to find suitable employment in one's previously selected "ideal" career). The differences between those employed in agriculture careers and those not employed in agriculture careers were statistically significant at the $p < .05$ level.

Discussion

Because negative perceptions exist about agriculture-related careers, the demand for graduates, particularly Hispanic graduates and other people of color, in this field continues to exceed the supply. But Goecker, Coulter, and Stanton (1995) stated that the existence of more jobs than graduates was viewed as good economic promise for individuals choosing an agriculture-related career.

Although respondents in the study perceived that limited career opportunities existed, career opportunities in agriculture and related fields were continuing to expand and were projected to increase through at least 2005 (U.S. Department of Labor, 1996); however, the number of students pursuing agricultural careers through college since the 1970s was declining continuously. It was estimated that nearly one third of agricultural job vacancies in the next 10 years would be filled by individuals trained outside of agricul-

Table 1
Comparison of the Importance of Selected Career Factors on African Americans' Decisions Versus Hispanics' Decisions to Select Their Current Career

Group	n	M	SD	t *value*	α
Societal influence					
African American	29	3.52	1.30	0.63	.53
Hispanic	94	3.34	1.32		
Salary					
African American	29	3.52	1.09	0.88	.38
Hispanic	95	3.29	1.23		
Autonomy					
African American	29	3.38	1.01	–2.50	.01*
Hispanic	94	3.86	0.88		
Prestige					
African American	29	3.17	1.07	–1.07	.29
Hispanic	95	3.42	1.10		
Advancement opportunity					
African American	29	3.59	1.38	–0.71	.48
Hispanic	95	3.78	1.24		
Work conditions					
African American	29	4.03	1.02	0.12	.91
Hispanic	95	4.01	0.94		
Decision participation					
African American	29	3.52	1.27	–2.00	.048*
Hispanic	95	3.97	0.99		
Merit pay					
African American	29	3.17	1.39	0.12	.90
Hispanic	95	3.14	1.35		
Retirement plan					
African American	29	3.45	1.24	0.60	.55
Hispanic	95	3.27	1.41		
Personal recognition					
African American	29	3.31	1.11	–0.61	.54
Hispanic	95	3.46	1.19		
Prior work experience					
African American	29	2.83	1.42	–0.64	.52
Hispanic	95	3.02	1.42		
Work environment					
African American	29	3.62	1.15	–1.41	.16
Hispanic	95	3.93	1.03		
Job opportunities					
African American	28	2.79	1.62	1.00	.32
Hispanic	93	2.46	1.47		
Academic rigor					
African American	29	2.28	1.46	2.33	.02*
Hispanic	94	1.71	1.02		
Exposure to careers					
African American	29	3.03	1.18	–0.37	.71
Hispanic	95	3.13	1.18		

(continued)

Table 1 (continued)

Group	n	M	SD	t *value*	α
Experimental exposure					
African American	29	2.62	1.24	0.74	.46
Hispanic	95	2.43	1.19		
Work environment					
African American	29	2.24	1.33	–1.27	.21
Hispanic	95	2.61	1.39		
Creativity					
African American	29	2.97	1.32	–2.43	.02*
Hispanic	95	3.58	1.14		
Interaction with others					
African American	29	3.48	1.18	–0.94	.35
Hispanic	95	3.69	1.03		
Problem solving					
African American	29	3.28	1.44	–1.80	.07
Hispanic	95	3.72	1.05		
Independent work					
African American	29	3.17	1.36	–0.62	.53
Hispanic	95	3.34	1.20		
Job convenience					
African American	29	2.00	1.28	1.18	.24
Hispanic	94	1.71	1.10		
Influence by others					
African American	29	2.52	1.21	1.43	.16
Hispanic	95	2.15	1.22		
Physical challenge					
African American	29	2.66	1.49	3.47	.00*
Hispanic	95	1.78	1.08		
Mental challenge					
African American	29	1.76	1.12	1.26	.21
Hispanic	95	1.49	0.94		
Proximity to family					
African American	29	2.69	1.49	0.27	.79
Hispanic	95	2.60	1.59		
Fulfillment of goals					
African American	28	3.61	1.23	–0.28	.79
Hispanic	95	3.67	1.10		
Use of skills					
African American	28	3.71	1.01	–0.98	.33
Hispanic	95	3.92	.94		
Political involvement					
African American	28	1.78	1.10	–2.47	.02*
Hispanic	95	2.45	1.29		
Use of technical skills					
African American	28	3.18	1.31	–2.04	.04*
Hispanic	95	3.65	1.01		

*$p < .05$.

ture (Zoldoske, 1996). These facts suggested promising opportunities for agriculture graduates in the future, and more people of color should consider agriculture-related careers as viable options.

The American Farm Bureau (1998) determined agriculture to be the United States' largest employer, with more than 22 million people (about 20%) employed in some phase, from growing food and fiber to selling agricultural products at the retail level. Thus, tremendous employment opportunities appear available.

The college experience provided individuals in this study with prior work experience in a career field and experimental exposure to careers through such experiences as internships, cooperative work programs, and career fairs. For instance, students at Texas A&M University had the opportunity to serve as congressional interns in Washington, D.C., and the state capital of Austin to assist in resolving real-world issues related to the agricultural sector and society in general.

Membership in such professional organizations like the National Society for Minorities in Agriculture, Natural Resources and Related Sciences provided an excellent avenue for college students to gain entry into top graduate schools around the country or agriculture-related careers in government, private industry, or higher education (Talbert, Larke, & Jones, 1999). These opportunities helped to increase highly satisfactory career participation in agriculture and related fields. Incidentally, members of the targeted population in this study should consider that opportunities in agriculture still are quite abundant, and salaries can be exceptionally good also.

Contrary to findings in the study by Byler (1987), lack of academic rigor was not considered a major obstacle or concern among respondents in this study. This added credence to the idea indicated in research by Bottoms, Presson, and Johnson (1992) that agriculture is not and should not be an "academic dumping ground" for individuals who cannot succeed in other disciplines. Significant others who encourage individuals to enroll in an agriculture-related class or to pursue an agriculture-related career should not do so with the expectation that the field is less academically rigorous than other disciplines.

This study suggested that having a father whose occupation was agriculture related strongly increased the likelihood that the child would pursue an agriculture-related career as well, and having a father whose occupation was not agriculture related strongly increased the likelihood that the child would not pursue an agriculture-related career. Additionally, in terms of the impact of significant others on influencing one to pursue an agriculture-related career, having someone of color (regardless of his or her profession) encourage an individual to pursue an agriculture-related career made a substantial impact on that person's decision to pursue such a career. Therefore, significant others should become more knowledgeable of and seek greater

appreciation of agriculture-related career opportunities and endeavor to play a greater role in influencing youths to pursue these careers.

Due to the dwindling participation of people of color in agriculture-related careers and the substantial demographic percentage increase that this population is expected to make in the next decade, those charged with perpetuating the United States' leadership role in the area of agriculture and related fields should continue to find ways to enhance participation of this group. Based on findings in this study, early exposure did not play a critical role in one's decision to pursue agriculture; however, people of color should continue to encourage individuals (at various stages of their career development) to pursue an agriculture-related career, because encouraging an agriculture-related career was shown to have a positive impact on promoting participation in the industry.

Many agriculture graduates are concerned that ideal job opportunities in agriculture-related fields are scarce. Therefore, individuals responsible for hiring in agriculture careers should seek to ensure that their jobs are competitive with other career fields and that they enhance agriculture graduates' exposure to the numerous "ideal" employment opportunities available in the field. Along the same line, employers of agriculture graduates should seek to make retirement benefits in their particular organizations more competitive with jobs in other careers to enhance potential participation in agriculture-related careers.

The researchers predict that enhancing the economic stability and prosperity of Hispanic individuals would assist in maintaining the United States' preeminence in agriculture in the world. Future research should seek to determine and verify the perceived benefits of following through on the recommended actions and their effects on the economic stability and prosperity for Hispanic individuals. Additionally, comparing agriculture graduates by specific degree field and their current career status (as opposed to investigating all individuals who received an agriculture-related degree as one group) may provide some useful research findings to determine which specific degree areas are most promising to Hispanic individuals and which may warrant changes or improvements.

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