

What Kind of Students are Enrolling in a College of Agriculture and are they Staying?: A Mixed Methods Approach

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Abstract

The purpose of this study was to characterize the College of Agriculture freshman cohort at a western land grant institution and identify variables related to retention or attrition of first-year freshmen enrolled in a College of Agriculture. The relationship between retention and measured, independent variables, including demographic data and College Student Inventory (CSI) scores, was examined. Freshmen took the CSI during summer orientation and a demographic questionnaire was administered to students in four College of Agriculture (COA) classes. A cohort group of COA full-time, first-time freshmen that had taken both the CSI and the demographic questionnaire was established and tracked from the fall of 2004 through the fall of 2005, and from the fall of 2005 through the fall of 2006. Retention was defined as enrollment in the COA for a second fall semester.

The majority of the cohort group was female, white/Caucasian, graduated from high schools with enrollments less than 400 students, had been involved in 4-H or FFA, and intended to seek a graduate level degree. Mothers were more highly educated than fathers. Most students planned to work while in college. The only independent variables significantly correlated with retention were first year cumulative GPA and CSI family emotional support.

Introduction

Agriculture Industry

Agriculture is a rapidly shifting industry. Reports by the National Research Council (1988, 1995, 1996) suggested changes in agriculture curricula and colleges of agriculture at land grant universities in order to meet the human resource demands of the dynamic agriculture industry. Dyer, et al. (1999) and Ball, et al. (2001) articulated the implications of the ever-changing industry to recruiting and retention of students who will productively contribute to the advancement of agriculture. In order for colleges of agriculture to remain viable, attention must be focused on retaining qualified students and guiding them to academic success.

The agriculture industry is in dire need of graduates from colleges of agriculture. In 2002,

approximately 14.3 percent of the United States workforce was employed in farm or agricultural related jobs. Agricultural and related jobs employed 17.9 percent of this state's workforce during the year 2002 (Economic Research Service, 2005). However, according to an agricultural and natural resource employment forecast for 2005-2010 published by the Cooperative State Research, Education and Extension Service (CSREES), the number of jobs available in agriculture exceeds the number of qualified agricultural and natural resource graduates available to fill those positions by roughly 19,700 jobs. To fill the void, employers are hiring graduates in allied fields such as biological sciences and business. Even with the additional pool of graduates from which to draw, the agriculture industry will still have an excess of 2,700 positions open annually for the next five years (CSREES, 2005).

Retention Perspectives

Retention, described interchangeably in this document with student persistence, is a complex idea and has been studied from theoretical, policy, institutional, and individual perspectives (Bean, 2005). Studies have attempted to develop student profiles by examining reasons for student attrition or persistence, explored possible predictors for persistence, and evaluated specific campus programs designed for improving student retention rates. These topics have also been considered from academic as well as student affairs perspectives, both specific to certain student demographics and from a holistic institutional viewpoint. The work of Astin (1977, 1978, 1993), Tinto (1975, 1993), and Bean and Metzner (1985), among several others, underscored the complexity of college student persistence.

Definition of Retention

The definition of retention, or student persistence, has also varied between studies and institutions of higher education. According to the U.S. Department of Education (2000), retention is the institution's perspective on whether a student remains at a particular institution. Persistence, on the other hand, is defined from the student's perspective and considers whether a student has achieved a

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degree, regardless of the institution of choice (U.S. Department of Education, 2000). However, according to Moxley, et al. (2001), retention was not a simple matter of finishing a degree and gaining the skills necessary for a successful career. It was also helping students to successfully perform according to their own educational values and aspirations (Moxley, et al., 2001). Comparatively, Ball, et al. (2001) considered enrollment status at the beginning of the sophomore year to define retention.

Factors Affecting Persistence

A number of specific factors have been identified and studied as possible reasons students fail to persist in post-secondary education. Some examples in order of importance include commuter status, high school grades, desire to finish college, financial security, intellectual interests, parental education, desire to transfer, degree aspirations, college prep level, family emotional support, study habits, receptivity to social enhancement, and receptivity to academic assistance (Miller, 2005). Common admissions criteria, such as ACT/SAT scores or class rank, along with academic achievement and performance, have consistent support as important components of college student persistence.

However, the research strongly suggested that there is much more to retention than just grade point averages or admissions criteria. Indeed, Terenzini and Pascarella (1977) studied Tinto's (1975, 1993) integrational model of student attrition and discovered evidence that both academic and social factors are important to voluntary freshman attrition. Psychosocial characteristics, personality traits, academic and social integration into the institutional environment, and various demographic and background variables have also been used to develop models of attrition or shown to have predictive value for different student groups (Bean and Metzner, 1985; Brown and Kurpius, 1997; Dyer, et al., 2000; Gerdes and Mallinckrodt, 1994; Pascarella and Chapman, 1983; Tinto, 1975, 1993). Student populations, and naturally their attrition risk factors, differ depending on the institution and vary according to academic divisions or colleges within the institution itself. To accurately address retention, this variation dictates the need for describing the College of Agriculture student body.

Agriculture Students and Retention

A study by Garton, et al. (2002) examined the value of traditional admissions criteria, including ACT score, high school core GPA, and high school class rank, for predicting the academic performance and retention of College of Agriculture students. The only traditional admissions variable able to successfully predict the first-year, cumulative college GPA was high school core GPA. The typical admissions criteria studied had limited value for predicting retention of College of Agriculture students. Another study found that for agriculture students, prior

agriculture experience and enrollment in high school agriculture classes were better predictors of student retention when compared to other factors such as gender, GPA, ACT score, geographical background, class rank, and 4-H and FFA membership. In fact, students ranking higher in their high school graduating class were actually more likely to drop out of colleges of agriculture than students with a background of agricultural experience or a high school agriculture class. Additionally, freshman students were more likely to complete an agriculture degree if they had agriculture experience, were a 4-H or FFA member, lived in a rural setting, or enrolled in a high school agriculture class (Dyer, et al., 2000). These findings raised the issue of the effectiveness of standard college admissions variables as applied to persistence of agriculture students.

College Student Inventory

At the researchers' university, the Dean of Students office uses the College Student Inventory (CSI) to identify students at-risk for attrition early in their college careers. The CSI measures academic motivation, social motivation, general coping skills, and receptivity to support services. As part of the results, a summary of academic motivation is comprised of scores for dropout proneness, predicted academic difficulty, educational stress, and receptivity to institutional help. Results also incorporate student background information that has been shown to be of importance to early intervention strategies and student retention, including senior year GPA, ethnic origin, mother's and father's education levels, when the student decided to enroll, what degree the student plans to seek, and how many hours per week the student expects to work (Noel-Levitz, 2001).

Early identification strategies such as the College Student Inventory seem to be preferred choices for retention programming in many academic arenas. It was worthwhile to consider the CSI in this study because of its application to first-time freshmen. The results of the CSI were also helpful in building a preliminary description of students entering the College of Agriculture.

Student persistence is a complex topic concerning all sizes and types of colleges and universities. Because of this complexity, research is voluminous and approaches the topic from many angles. Different retention challenges and issues are likely to be found depending on the individual institution and with respect to individual academic situations within the institution. As the agriculture industry is faced with labor challenges and universities struggle with rising costs and growing expectations, the need for discovery of viable retention activities is obvious. By retaining and graduating competent individuals with agriculture degrees, this College of Agriculture can positively contribute to the agriculture industry by fulfilling the critical, national need for qualified workers.

Purpose and Objectives

The purpose of this study was to characterize the College of Agriculture freshman cohort at a western land grant institution and identify variables related to retention or attrition of first-year freshmen enrolled in a College of Agriculture. The specific objectives of this study were to: (1) Develop a preliminary description of College of Agriculture freshmen at a land grant university based on College Student Inventory data and demographic variables identified in the literature as important to College of Agriculture students' persistence; and (2) Determine the nature and extent of the relationship between retention of College of Agriculture students and the measured, independent variables included in the student characterization.

Limitations

The cohort for this study was limited to freshmen in the College of Agriculture enrolled in one of the following courses: Leadership Development for Agribusiness and Industry Employees, Microcomputers in Agriculture, Introduction to Animal Science, or Principles of Rangeland Management Lab, and present on the day of the survey administration. Surveys were administered on the World Wide Web or by paper copy in order to accommodate computer availability. Data were collected using Microsoft Access. The demographic questionnaire was administered to students who were incoming freshmen during the fall 2004 and 2005 semesters and was completed during the respective academic year. The College Student Inventory was administered during 2004 and 2005 summer orientation to all incoming freshmen by the Dean of Students office.

Methods

Population and Cohort

The target population for this study was first-time, full-time, degree-seeking freshmen entering a College of Agriculture (COA) at a land grant university in the fall of 2004 and fall of 2005. The accessible sample cohort consisted of freshmen enrolled in four College of Agriculture classes and who were present on the day the questionnaire was administered. The cohort was further limited to those students who completed both the College Student Inventory (CSI) and the demographic questionnaire. Descriptive data were gathered in the fall of 2004 through the spring of 2006. Retention data were collected in the fall of 2005 and the fall of 2006. The cohort contained 103 students and was similar to the population of College of Agriculture freshmen starting college in the fall of 2004 and 2005.

Instruments

A researcher-developed questionnaire addressed demographic variables identified in the literature as

important to persistence and motivation of agriculture students. These variables were: gender, 4-H and FFA experience, prior classroom agricultural experience, high school size, and high school grade point average.

Form B of the College Student Inventory (CSI) analyzed the scores for each of the scales measuring academic motivation, general coping, and receptivity to support services to compile a Summary of Academic Motivation consisting of scores for dropout proneness, predicted academic difficulty, educational stress, and receptivity to institutional help (Noel-Levitz, 2001). The scores were given as stanines and classified by the researchers as very low (1), low (2-3), average (4-6), high (7-8), and very high (9). The Motivational Assessment consisted of three categories: academic motivation, general coping, and receptivity to support services. Academic motivation considered study habits, intellectual interests, verbal confidence, math and science confidence, desire to finish college, and attitude toward educators. The general coping category examined sociability, family emotional support, opinion tolerance, career closure, and sense of financial security. Finally, receptivity to support services measured students' openness to academic assistance, personal counseling, social enrichment, career counseling, and financial guidance. Values for the CSI Motivational Assessment were given in percentile rankings and categorized by the researchers as low (1-25), medium low (26-50), medium high (51-75), and high (76-99). The CSI Form B scales, particularly dropout proneness and predicted academic difficulty, correlated significantly with their target criterion variables. Noel-Levitz (2001), developer of the CSI, conducted scale reliability tests and established a Cronbach's alpha coefficient of 0.79.

Data Collection and Analysis

For the cohort, high school GPA, SAT and/or ACT scores, cumulative college GPA, and enrollment status were obtained from the university's registrar. High school core GPA was calculated based on courses required for admission to the university. Comprehensive data from the College Student Inventory Form B as administered during summer orientation were obtained from the Dean of Students office and entered into a database for descriptive purposes and data analysis. Retention was determined based on enrollment status in the College of Agriculture at the beginning of the next consecutive fall semester.

Using a unique identification number, the cohort was established and tracked throughout the course of the study by matching demographic data, CSI measures, and data from the Office of the Registrar. Data were initially compiled into a Microsoft Excel spreadsheet and a Microsoft Access database. SPSS 15.0 for Windows and expert guidance were employed to analyze the data. To evaluate the objectives,

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Pearson-Product Moment Correlation Coefficients were used. The researchers a priori selected a $P = 0.05$ alpha level as the criterion for significance. The researchers also utilized descriptive statistics, including means and frequencies.

Results and Discussion

Through objective one, the researchers sought to develop a preliminary description of College of Agriculture students enrolling as first-time, full-time freshmen at a land grant university in the fall of 2004 and 2005. College Student Inventory data and demographic variables identified in the literature as important to College of Agriculture students' persistence were used to characterize the college student population. The gender distribution for the cohort was almost 60% female and just over 40% male. Students were mostly 17 to 19 years of age with 67% 18 years of age. The vast majority (95.1%) were of White/Caucasian ethnic origin while 1.9% were of American Indian/Alaskan heritage.

Parental education levels ranged from completion of some high school to attainment of a doctoral degree. For mothers, one percent attended some high school and 19.4% earned a high school diploma. About 32% had attended some college and another 33% had obtained a bachelor's degree. Graduate level degrees were obtained by 14.5%. Fewer fathers than mothers had earned college degrees and fathers generally had lower levels of education than mothers. Close to two percent of fathers attended some high school and 31.1% had earned a high school diploma. The majority (34%) of fathers had attended some college, while 24.3% earned a bachelor's degree, and 8.7% earned graduate degrees.

Just less than half (48.5%) of the entering freshmen had taken some kind of agriculture course while in high school. In this cohort, 44.7% participated in FFA. Involvement in 4-H was somewhat higher at 59.2%. Approximately 33% were involved in both organizations, but 29.1% did not participate in either FFA or 4-H. Refer to Table 1 for further comparison.

School size was categorized according to the state's Department of Education classifications for high school size: 1H – greater than 1250; 2H - 401-1250; 3H – 201-400; 4H – 76-200; 5H – 75 or less. Although not all students within this cohort graduated from a high school within the state, the greatest percentage of students (27.2%) graduated from class 4H high schools. Almost 60% of the students graduated from high schools having enrollments less than 400.

The mean cumulative high school GPA for the cohort was 3.47. Between 16 and 17% of the cohort earned GPAs between 2.5 and 2.99, while 27.8% of the cohort attained GPAs between 3.0 and 3.49. Over half of the students (54.6%) had cumulative high school GPAs of 3.5 and higher. Seventy-six students took the ACT and averaged 23.54. Forty-three students took the SAT for a mean score of 1081.63.

Regarding anticipated college experiences, all but one of the students chose this university many months prior to the start of classes. The majority (52.4%) indicated they planned to pursue a bachelor's degree, although 46.6% indicated their plans included pursuing a master's or doctoral degree upon completion of the baccalaureate degree.

Respondents indicated they intended to work while attending college. Most students (35.9%) planned to work between 11 and 20 hours per week. The second largest percentage (34%) planned to work up to 10 hours per week. Just over 21% did not intend to work at all, while 7.8% indicated an intention to work between 21 to 30 hours per week. One percent planned to work between 31 and 40 hours per week.

Data for the Summary of Academic Motivation and the groups within the Motivational Assessment of the College Student Inventory (CSI) in general revealed the majority of students scored in the average range for dropout proneness, predicted academic difficulty, educational stress, and receptivity to institutional help. Just over half of the students scored average on receptivity to institutional help, while one-fourth scored low or very low and one-fourth scored high or very high.

Within the CSI academic motivation section, the respondents' highest percentile rank (65.6) was for attitude toward educators. They ranked the lowest (47.7) in verbal confidence. Other mean percentiles of note include study habits (54.3), desire to finish college (52.6), intellectual interests (58.7), and math and science confidence (59.8). For the academic motivation scales within all categories, the largest percentage of students (41.7%) ranked in the high category on the measure of attitude toward educators.

Comparing general coping skills of the cohort, mean percentiles were in the medium high range for family

Table 1. Comparison of cohort involvement in student organizations

		FFA Participation			
		No	Yes	Total	
4-H Participation	No	29.1	11.7	40.8	% of Total
	Yes	26.2	33.0	59.2	% of Total
	Total	55.3	44.7	100.0	% of Total

emotional support (63.2 percentile) and career closure (62.0 percentile). Sense of financial security and opinion tolerance mean percentile rankings bordered between medium low and medium high falling at the 50.8 percentile and 45.1 percentile, respectively. Students ranked somewhat lower for sociability falling at the 43.9 mean percentile. Examining the percentiles for the receptivity to support services category of the motivational assessment, mean rankings were lower. On a percentile basis, students ranked at 60.2 for financial guidance and 53.7 for social enrichment. Students ranked in the upper end of the medium low designation for academic assistance (45.5), personal counseling (45.6), and career counseling (43.1).

Cumulative college GPA after one and two semesters of coursework is presented in Table 2. The mean GPA for these students after their first semester was 2.89. After two semesters (one year) the cumulative college GPA had increased slightly to 2.91.

For the cohort, 94.2% were retained within the College of Agriculture through the spring semester. Almost 80% (79.6) met this study's definition of retention and were still enrolled in the COA by the second fall semester.

With objective two the researchers sought to determine the nature and extent of the relationship between retention of College of Agriculture students and the measured, independent variables included in the student characterization. To evaluate this objective, each of the descriptive, independent variables and the CSI component measures was correlated with the dependent variable, retained to fall, using a bivariate Pearson's correlation matrix. Of the descriptive variables, only first year cumulative GPA ($r=0.251$, $p=0.014$) was statistically significantly correlated with cohort retention. The correlation was positive and low. Only one of the CSI measures was significantly correlated with retention to the second fall semester. The correlation for CSI

family emotional support was low and negative ($r=-0.219$, $p=0.026$).

Summary

The purpose of objective one was to characterize the freshmen cohort entering the College of Agriculture in the fall of 2004 and 2005. The demographic data yielded several noteworthy conclusions. The cohort breakdown by gender showed there were more females than males, while the ethnic origin of the cohort was overwhelmingly white/Caucasian. Mothers had more formal education than fathers. About half of students had some education in agriculture before enrolling in the College of Agriculture. A higher percentage of students were involved in 4-H than FFA. Over one-third of respondents were involved in both organizations and almost three-quarters were involved in at least one of the student organizations. Most in this cohort graduated from high schools with less than 400 students. The high school GPA for this group of students was relatively high with almost half over a 3.5 based on a 4.0 scale. Notably, just less than half the students intended to seek a graduate degree upon completion of the undergraduate degree.

The College Student Inventory provided a number of valuable characterizations of the cohort. More students in the cohort ranked at average or low for dropout proneness, predicted academic difficulty and educational stress. Almost three quarters ranked average to high in receptivity to institutional help. Compared to the national norm, this group is generally less worried about their education, less susceptible to attrition, and less likely to experience academic challenges in college. Additionally, the cohort group is relatively more amenable to intervention and assistance in areas such as career counseling, personal counseling, social enrichment, academic assistance, and financial guidance. A greater number of students ranked medium high or high for intellectual interests, attitude toward educators, family emotional support, and career closure. Compared to the national norm established by Noel-Levitz, this cohort was interested in academic pursuits, favorably viewed teachers and educational staff, and overall felt comfortable with the level of communication, respect and support shown by their families. This group was also relatively committed to their academic path and had more clearly defined career aspirations and goals than the national norm. For the desire to finish college category, a similar result was shown and a comparable conclusion can be made. This group valued a college education and expressed a strong interest in persisting to graduation.

The measures of verbal confidence

Table 2. Frequency of cumulative college GPA for the cohort group for two semesters

Range	After One Semester		After Two Semesters	
	Frequency	Percent	Frequency	Percent
<2.0	11	10.7	10	10.5
2.0-2.49	16	15.5	14	14.7
2.5-2.99	30	29.1	26	27.4
3.0-3.49	22	21.4	24	25.3
3.5-4.0	24	23.3	21	22.1
Minimum	1.22		1.13	
Maximum	4.00		4.00	
Mean	2.86		2.91	
N	103		95	

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and confidence in math and science provided a stark contrast. For self-esteem related to reading, writing, and public speaking, more students ranked in the low and medium low percentiles, indicating this group was somewhat uncomfortable with verbally-related course work. This was interesting considering the majority of students were involved in either 4-H or FFA and thus would have had some writing and speaking experience. Conversely, a much larger number of students ranked in the high and medium high percentiles for math and science confidence.

Compared to national rankings compiled by Noel-Levitz, the cohort group was less open to personal or career counseling, but was more receptive to learning about ways to interact with other students and become involved in social activities. A greater number of students in the cohort ranked in the medium high and high percentiles for financial guidance. This indicated a strong interest in receiving assistance on financial matters.

The purpose of objective two was to identify significant relationships between retention of College of Agriculture students and the variables discussed above. The only independent variables significantly correlated statistically with retention were first year cumulative GPA and CSI family emotional support. Understandably, those students in the cohort with lower cumulative GPA's tended to not be enrolled for a second fall semester. However, students in the cohort with higher levels of family emotional support were more susceptible to attrition. Those that didn't return for a second year of college may have been under too much pressure from home or were accustomed to more focused attention than what they received as a college student.

Participating in a high school agriculture curriculum was shown to be important for choosing an agriculture major and graduating with an agriculture degree (Dyer, et al., 1996; Dyer, et al., 1999). A further review of the literature revealed that a high school agriculture class experience was important to retention of agriculture students (Dyer, et al., 2000). Additionally, Dyer, et al. (1999) reported that a student's high school agriculture instructor was the most influential person on that student's decision to choose an agriculture major. The results of this cohort study imply similar connections to enrollment, but differing implications for retention. A large number of students in the cohort with secondary agricultural education backgrounds were enrolling in the College of Agriculture, suggesting that recruiting students from high school agriculture programs would be advantageous for curricula within the College of Agriculture at this university. The lack of statistically significant correlation between enrollment in high school agriculture class and retention of this cohort also indicated the need for a systematic retention program within the college.

Tinto (1975, 1993), among others, argued that involvement in the social and academic environments

of college was a vital component of a student's withdrawal decision. Dyer, et al. (2000) implicated 4-H and FFA involvement in successful completion of an agriculture degree. Ball, et al. (2001) and Dyer, et al. (1996) demonstrated that those students involved in FFA and 4-H had better college grades and higher retention rates than those not involved in these student organizations. This cohort did not demonstrate the same relationship between involvement in 4-H and FFA and retention; however, the results indicated that a majority of students were involved in either 4-H or FFA. Wildman and Torres (2001) found that 4-H and FFA involvement influenced a student's choice of an agriculture major. This study did suggest that the cohort's involvement in 4-H and FFA may be a factor in choosing an agriculture major and enrolling in a college of agriculture.

The sizeable number of students (78.7%) that intended to work while in college suggested that financial concerns were of importance to these students. The mean percentile ranking for this cohort's sense of financial security was 50.8, which supported this conclusion. Students were fairly open to financial guidance with a mean percentile ranking of 60.2. The College of Agriculture was known for providing a large number of scholarship dollars per capita. For the 2006-2007 academic year, the College of Agriculture awarded \$245,000 incorporated into 151 scholarships, more than any other college at this university. As applied to the cohort, these results indicated a connection may exist between available funding sources and College of Agriculture enrollment.

While a large volume of research has been conducted concerning retention and attrition of college students, very little has been done to examine this topic specifically in relationship to College of Agriculture students. No research has been conducted at this particular university within the College of Agriculture. Even though the results of this study were statistically applicable only to this particular cohort, they provided a foundation and a starting point for future retention research in the College of Agriculture at this university and within other post-secondary agriculture academic institutions.

Based on the review of the literature, and collection and evaluation of the data, the researchers make the following recommendations. First, the researchers recommend that open and accessible lines of communication must be established and actively maintained between advisors, faculty, administrators, and student affairs personnel. The execution and results of this study, coupled with the extensive volumes of retention literature, clearly showed that retention of college students must be a university-wide, team effort.

Retention is an institutional performance indicator. It's a measure of how much student growth and learning takes place. It's a measure of how valued

and respected students feel on your campus. It's a measure of how effectively your campus delivers what students expect, need and want. ... And that makes retention everyone's business (Levitz and Noel, 2000, p. 1).

The results of this study provide legitimate arguments to stimulate discussion about the development of a comprehensive strategic retention plan for the College of Agriculture. This plan must consider academic and student affairs perspectives. The basic plan outline should consist of a mission statement, values defined according to the College of Agriculture and this university, specific objectives, and ways and means for accomplishing those objectives. The researchers recommend the establishment of a retention task force comprised of all affected stakeholders, including faculty, staff, administration, student affairs personnel, alumni, students, and agriculture industry representatives. A thorough needs assessment should first be conducted using the results of this study as a starting point. Elements of the needs assessment should include discovery of reasons students choose a major within the College of Agriculture as well as identification of why students choose to leave. Strengths and weaknesses of the College of Agriculture should be identified and documented. Retention should be considered from an institutional standpoint in addition to the individual student's point of view, incorporating strategies directed at first to second year retention and persistence to graduation. Targeted retention goals for gender, ethnic background, county, state and country of origin should be established. A user-friendly, low-maintenance method for tracking students throughout their college experience at the university and within the College of Agriculture should be created as a tool for coordinating the strategic plan. Other factors for consideration include: use of the College Student Inventory; faculty and staff involvement and collaboration; academic advising programs and methods; establishing partnerships and retention work groups with other colleges at this university; filling the gaps between recruiting expectations and retention; scholarships and financial assistance; student research opportunities; and student and faculty involvement in clubs and organizations.

Pascarella and Terenzini (1980) identified student-faculty relationships as an important factor in student persistence. Tinto's (1975, 1993) model placed faculty/staff interactions in the academic system of institutional experiences as one of two means of academic integration; with that integration, or lack thereof, being the pivotal step toward a departure decision. Astin (1993) reported relationships with faculty as one of four critical areas of measuring student satisfaction and includes degree of faculty interest in students and student/administration relationships in rating a student's perception of the college environment. Miller (2005) implicated receptivity to academic assistance

as a risk factor for attrition. The College Student Inventory provides recommendations for individual students and relies on advising and student/staff interactions for implementation. For a number of reasons, student advising within the College of Agriculture, especially with incoming freshmen, is handled differently across the departments. The **results of this study**, literature, and experiences of college faculty, staff, and students strongly showcase the importance of good advising. The researchers recommend that the College of Agriculture initiate and facilitate ongoing training for academic advisors to help achieve consistency and establish best practices to build upon the existing strength of faculty-student interactions revealed by this study. Further, that new students have the opportunity to build relationships with faculty as soon as possible after starting their college careers, whether through early advising sessions, research opportunities, student organizations, or innovative teaching methods. Exploration and evaluation of different advising models used at this institution and other land-grant colleges of agriculture would be beneficial in developing a proactive, effective advising program for the College of Agriculture.

Annually, the agriculture industry will have more than 2,700 open positions due to a lack of qualified graduates in agriculture and allied fields (CSREES, 2005). Over the past ten years, enrollments in this College of Agriculture have been stagnant, while the general undergraduate population has steadily increased. Stakeholders in the agriculture industry and agricultural education at all levels should carefully consider the results and implications of this study. The numbers clearly illustrate that enrollment and retention in the College of Agriculture should be a concern of all faculty, staff and administration. Graduating qualified agriculture students should be of further concern to the entire agriculture industry. This study provides a basis for productive, provocative dialogue and preliminary development of a strategic recruiting, enrollment, and retention management plan.

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