

Comparison of Factors Influencing the College Choice of FFA and Non-FFA Members into a College of Agriculture

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Abstract

Colleges of agriculture continually struggle with declining enrollments, creating a need to improve recruitment efforts and utilize financial resources more efficiently. Administrators have questioned the value of recruitment efforts that target agricultural youth organizations such as FFA. This study examined recruitment efforts as they relate to the college-choice decisions of former FFA members and non-members entering a college of agriculture. Results showed no notable difference existed in academic performance between former members and non-members of FFA. Differences did exist when examining the racial composition of the two groups. When examining recruitment practices, nearly 75% of former FFA members participated in events on campus compared to only 23% of matriculants with no FFA background. Furthermore, on-campus recruitment programs were used by nearly 50% of the FFA group compared to fewer than 30% of non-FFA members. University and Departmental websites played a more important role for non-FFA members. Findings suggest that web-based information is critically important to prospective students. Agriculture teachers played a more prominent role than parents among former FFA members. The researchers concluded that agriculture teachers can be very influential when equipped with current and accurate information about colleges of agriculture and potential majors for students to consider.

Introduction/Theoretical Framework

Nationwide colleges of agriculture are faced with the ongoing challenge of declining enrollments (Goeker, Whatley, Gilmore, 1999; FAEIS, 2006). Simultaneously, these colleges expend a great deal of time, energy and financial resources in their outreach and recruitment programs. This has created a situation in which university administrators are looking to increase and improve recruitment efforts and utilize financial resources more efficiently in hopes of attracting more students. This predicament could not come at a less opportune time, as the nation's agriculture industry struggles annually to fill positions (Goeker, et al., 1999).

Many institutions are still uncertain about which outreach and recruitment processes are effective (DesJardins, Dundar, & Hendel, 1999). In some anecdotal cases, administrators have begun to question the value of outreach activities that have traditionally been sponsored and coordinated by colleges of agriculture. Typically, the decision to conduct such activities is based on tradition rather than empirical evidence. Such questions have recently arisen about the importance of outreach and recruitment efforts that target agricultural youth organizations such as FFA (Park & Dyer, 2005). Do students in these organizations warrant the special attention and limited outreach resources of colleges of agriculture?

Park and Dyer (2005) found that former FFA members made important contributions to their college of agriculture. These students were not only valued members of the student body, they also benefited the college's outreach program. Nearly half of the college's ambassador team, which conducts recruitment and outreach activities, was comprised of former FFA and 4-H members. Involvement in these organizations was believed to improve the quality of the college's recruitment efforts. Many of these student ambassadors received training in leadership and communication through their participation in FFA and 4-H, which in turn made them more effective recruiters for the college. Park and Dyer (2005) also concluded that former FFA and 4-H members strengthened the college through students' extensive involvement in campus organizations. These students participated and served in more campus organization leadership positions than typical students in the college.

Dyer, Lacey, and Osborne (1996) concluded that recruiting FFA members was a wise investment by colleges of agriculture. Former FFA members were more likely to complete a degree in the college of agriculture than students who had not had those experiences. Ultimately, Dyer, et al., (1996) recommended recruiting a greater number of students who were FFA members.

To implement such a recommendation, it becomes important to understand what recruitment practices and materials are most effective in recruiting FFA members into a college of agriculture. "Is there a difference in recruitment information needs between FFA members and non-FFA members considering four-year institutions?" A review of literature produced a void in prior research on this topic. As a result, research is needed to determine which recruitment strategies are most effective in assisting these two different groups of students in their college-choice decision process.

To conceptualize the college-choice decision process of FFA and non-FFA members, the researchers examined the literature related to student recruitment into colleges of agriculture. Previous studies focusing on recruitment issues in colleges of agriculture identified parents as a strong influence in students' decisions regarding post-secondary education (Washburn, Garton & Vaughn, 2002; Cole & Thompson, 1999; Scofield, 1995; Taylor & Johnson, 1993). Participation in on-campus programs and events and conversations with a professor were found to have the most influence on the college-choice process of postsecondary agriculture students (Washburn et. al, 2002). The same study also supported earlier findings by Cole and Fanno (1999) and Scofield (1995) that campus visits were beneficial to students during their selection process. Findings by Scofield (1995), and later by Cole and Thompson (1999), identified printed recruitment literature as being helpful in students' decision-making processes. While many of these studies provide insight into the information sources used by students college-wide in selecting an institution, most failed to give attention to the pathways students follow to enroll at the four-year institution.

Chapman's (1981) model of student college-choice served as the theoretical basis for this study. Chapman's model suggests that significant persons such as parents, friends, role models, and school personnel influence students' perceptions of a college. The model also identifies the fixed college characteristics that are meaningful in student's college-choice decisions. These

fixed characteristics include cost, availability of financial aid, location, and availability of particular academic programs. The fixed characteristics of the college, combined with the influence of significant people and the college's efforts to communicate with the student, have been found to have significant impact on students' expectations of college life at a particular institution, thereby impacting their final choice of institution. Adapted to this study, Chapman's model would suggest that gaining a better understanding of the role of influential people, the effectiveness of recruitment practices, and the institutional characteristics important to prospective students would enable colleges of agriculture to more efficiently use their recruiting resources.

Purpose and Objectives

The purpose of this study was to examine recruitment efforts as they relate to the college-choice processes of former FFA members and non-member matriculants entering the College of Agricultural Sciences and Technology at California State University, Fresno. The following research objectives guided the study:

1. Determine whether former FFA member matriculants were different from matriculants who were not former FFA members based on cumulative grade point average, race and selection of major
2. Determine if a difference existed between former FFA member matriculants and those who were not FFA members in terms of their use of information sources and their perceived usefulness of those sources.
3. Determine if a difference existed between former FFA member matriculants and those who had not FFA members in terms of the influence of degree program characteristics, institutional characteristics and selected individuals on their college-choice.

Methods/Procedures

This descriptive census study focused on a target population that consisted of all enrollees (matriculants) into a College of Agricultural Sciences and Technology at California State University, Fresno for the Fall Semester, 2006 ($N = 1180$), students who had been members of the FFA ($n = 159$) and students who were not FFA members ($n = 233$).

Data were collected using an instrument modified from Washburn, Garton, and Vaughn's (2002) questionnaire, used to assess the use and usefulness of recruitment information sources and to examine when students began and finalized their college decisions. To establish face and content validity, the instrument was reviewed by an expert panel consisting of college of agriculture admissions personnel and teacher educators. A pilot test ($n = 34$) was conducted to determine the internal consistency of the instrument (Washburn et al., 2002). A Spearman-Brown Split-half reliability analysis was performed resulting in a reliability of .70 (coefficient alpha).

For this study, the questionnaire consisting of 74 items was administered online and participation was requested via email to all students in the population. After the initial email request directing students to the questionnaire URL, two additional follow-up email messages

were sent at two-week intervals. A total of 392 usable instruments were received, resulting in a response rate of 33%. Non-response error was controlled for by comparing non-respondents with respondents on student information obtained a priori (Miller & Smith, 1983). A comparison of cumulative grade point average reflected that non-respondents ($M = 2.83$, $SD = .54$) were practically the same as the respondents ($M = 3.02$, $SD = .52$). In addition, the non-respondent group had no notable differences when compared to respondents on race or selected major.

Results/Findings

To assess objective one, student data were collected from a report available from the University's student advising system. Evaluation of student data revealed that virtually no difference existed between matriculants who had been FFA member and those who had not been members with regard to their cumulative grade point average. FFA members ($n = 128$) had an average cumulative grade point average of 2.94 ($SD = .52$), while non-FFA members ($n = 188$) had an average cumulative grade point average of 3.08 ($SD = .50$). Data were not available for the 95 freshman respondents since these students had not yet completed university course work.

A comparison of student race was also completed using the University's student data for respondents. An analysis of the data reported notable differences in the proportions of the specified ethnicities (see Table 1). The majority of matriculants who had been FFA members were Caucasian (61%), while non-FFA members appear to represent a more ethnically diverse group based on the higher percentages of minority students, however Caucasian students still represent 44% of the non-FFA member matriculant population.

Table 1
Race of FFA Member and Non Member Matriculants

Race	FFA Members ($n = 159$)		Non-members ($n = 233$)	
	f (rank)	Percent	F (rank)	Percent
Caucasian	97 (1)	61.0	103 (1)	44.2
Not Reported	30 (2)	18.9	30 (4)	12.9
Hispanic	14 (3)	8.8	49 (2)	21.0
Asian	6 (4)	3.8	36 (3)	15.5
Other	5 (5)	3.1	7 (4)	3.0
Native American	5 (6)	3.1	1 (5)	0.4
African American	2 (7)	1.3	7 (4)	3.0

To accomplish the final part of objective one, the researchers compared the major of FFA members and non-FFA members. In doing so, more notable differences were found between the two groups of respondents (see Table 2). Of the FFA members, 73% selected one of three majors (Agricultural Education, Animal Science, and Agricultural Business) compared to 30% of non-FFA member matriculants selecting these same majors. The greatest proportion of non-FFA

members was found to be in Industrial Technology majors, while the Agricultural Education major had the greatest proportion of FFA members.

Table 2
Major of FFA Member and Non Member Matriculants

Major	FFA Members (<i>n</i> = 157)		Non-members (<i>n</i> = 217)	
	<i>f</i> (rank)	Percent	<i>f</i> (rank)	Percent
Agricultural Education	42 (1)	26.8	7 (7)	3.2
Animal Science	40 (2)	25.5	33 (3)	15.2
Agricultural Business	32 (3)	20.4	24 (4)	11.1
Plant Science	11 (4)	7.0	7 (7)	3.2
Industrial Technology	9 (5)	5.1	37 (1)	17.1
Agricultural Communication	6 (6)	3.8	0 (9)	0.0
Food and Nutritional Science	5 (7)	3.2	34 (2)	15.7
Child Development	4 (8)	2.5	34 (2)	15.7
Viticulture	4 (9)	2.5	6 (8)	2.8
Enology	3 (10)	1.9	19 (5)	8.8
Family and Consumer Science	2 (11)	1.3	16 (6)	7.4

In objective two, the researchers set out to answer two questions, the first being to determine if a difference existed between FFA member and non-FFA member matriculants in regards to the sources of information they most frequently utilized when deciding to attend the University. Secondly, the researchers examined whether any differences existed between FFA member and non-FFA member matriculants in terms of the level of usefulness of the sources of information. In the questionnaire, both groups of matriculants were asked to indicate whether they had or had not used each of seventeen different sources of information. Additionally, respondents indicated the level of usefulness they attributed to each source of information they had used.

As shown in Table 3, “visit to campus,” “participation in student activity events on campus”, and “University information on a website” were found to be the three most commonly used sources of information for FFA members. Non-FFA member matriculants reported “University information on a website,” “degree program information on a website,” and “visit to campus” as their most used sources of information. Fifteen of the 17 sources of information were used more frequently by FFA member matriculants than by non-FFA members. Non-FFA members used “University information on a website” and “letter and/or information mailed from a College representative” slightly more frequently than students who had been FFA members. The most notable difference between the two groups was in the items dealing with visits to campus. FFA member matriculants were found to have used these types of information sources 18% to 53% more frequently than non-FFA members.

When examining the level of usefulness of the 17 sources of information, FFA members identified the following sources as the most useful: “participation in student activity events on campus,” “visit to campus,” and “personal conversation with a professor.” Non-FFA member matriculants identified “personal conversation with a professor,” “University information on a website,” and “degree program information on a website” as the most useful sources of information. Both groups indicated the least useful source of information was “TV, radio, newspaper, or magazine advertisements.”

Regarding the usefulness of information, the most notable differences were on the following sources of information: “participation in student activity events on campus” (FFA members $M = 4.34$, non-FFA members $M = 3.77$) and “participation in an on-campus recruitment program” (FFA members $M = 4.13$, non-FFA members $M = 3.65$). Twelve of the seventeen sources of information were rated more useful by non-FFA member matriculants than their FFA member counterparts.

Table 3.
Information Source Use and Usefulness

Source of Information	FFA Members (<i>n</i> = 159)			Non-Members (<i>n</i> = 233)		
	Used ^a Percent	Usefulness ^b <i>M</i> (rank) <i>SD</i>		Used ^a Percent	Usefulness ^b <i>M</i> (rank) <i>SD</i>	
Participation in student activity events on campus	74.8	4.34 (1) 1.03		22.7	3.77 (10) 1.33	
Visit to campus	82.4	4.26 (2) 1.04		64.4	4.05 (3) 1.10	
Personal conversation with a professor	62.9	4.16 (3) 1.13		60.9	4.41 (1) .84	
Participation in an on-campus recruitment program	47.8	4.13 (4) 1.15		27.0	3.65 (11) 1.39	
Visits by College representative to your school	35.8	3.84 (5) 1.40		21.5	3.64 (12) 1.19	
University information on a website	70.4	3.80 (6) 1.19		74.2	4.08 (2) .93	
Degree program information on a website	67.9	3.77 (7) 1.18		67.0	4.08 (2) 1.03	
Printed University publications	63.5	3.71 (8) 1.11		63.1	3.79 (9) 1.06	
Personal conversation with a College representative	48.4	3.64 (9) 1.27		27.5	3.84 (7) 1.28	
College information on a website	47.8	3.59 (10) 1.39		44.6	3.82 (8) 1.13	
Letter and/or information mailed from a College representative	25.3	3.59 (10) 1.29		37.7	3.53 (14) 1.16	
Participation in athletic events on campus	36.5	3.53 (11) 1.42		25.3	3.61 (13) 1.25	
Letter and/or information mailed from a professor	32.7	3.48 (12) 1.20		29.6	3.94 (5) 1.22	
Visits by University representative to your school	38.4	3.46 (13) 1.41		29.2	3.96 (4) 1.09	
Personal conversation with a University admissions/outreach representative	47.2	3.41 (14) 1.36		36.5	3.88 (6) 1.11	
Letter and/or information mailed from a University admissions/outreach representative	45.3	3.38 (15) 1.22		32.2	3.79 (9) 1.18	
TV, radio, newspaper, or magazine advertisements.	27.7	2.80 (16) 1.47		21.5	3.08 (15) 1.31	

^aYes or No

^bScale: 5 = Very Useful ... 1 = Not Useful

Objective three sought to determine if a difference existed between FFA member matriculants and non-FFA member matriculants concerning the influence of degree program characteristics, institutional characteristics, and selected individuals on their decision to attend the university. The seven degree program characteristics examined had similar degrees of

influence on both groups of matriculants (see Table 4). In the case of both FFA and non-FFA member matriculants, the availability of career opportunities was identified as the most influential characteristic in their selection of an academic major. The most notable difference between the two groups was that FFA members reported higher degrees of influence, with the exception of “number of students in major, where non-FFA members indicated a slightly higher level of influence.

Table 4
Influence Of Degree Program Characteristics

Characteristic	FFA Members (<i>n</i> = 159)		Non-Members (<i>n</i> = 233)	
	<i>M</i> ^a (rank)	<i>SD</i>	<i>M</i> ^a (rank)	<i>SD</i>
Career opportunities available	4.15 (1)	1.15	4.05 (1)	1.19
Quality and reputation of the faculty	3.83 (2)	1.22	3.65 (3)	1.29
Quality and reputation of courses	3.82 (3)	1.17	3.71 (2)	1.26
Quality of facilities	3.81 (4)	1.17	3.58 (4)	1.28
Size of classes	3.49 (5)	1.38	3.48 (5)	1.41
Quality and reputation of the students	3.34 (6)	1.36	3.11 (6)	1.30
Number of students in major	2.91 (7)	1.47	3.08 (8)	1.43

^aScale: 5 = Very Influential ... 1 = Not Influential

Table 5 presents findings for the level of influence that characteristics of the institution had on student’s college-choice. FFA member and non-FFA member matriculants were influenced most by the same six characteristics: “opportunities after graduation,” “preparation for employment,” “cost,” “distance from home,” “quality and reputation of faculty,” and “variety of majors offered. Furthermore, both groups were influenced the least by the same five characteristics: “availability of financial aid,” “size of classes,” “campus safety and security,” “competitiveness of admissions standards,” and “prominence of university athletic teams.” Mean responses for 14 out of 17 items were greater for FFA member matriculants than for non-members. The three means that were greater for non-FFA members than FFA members included “city in which campus is located,” “competitiveness of admissions standards,” and “prominence of university athletic teams.” Additionally, the degree of influence of “scholarships awarded” was notably larger for FFA members (*M* = 3.46) than for non-FFA members (*M* = 2.87).

Table 5

Influence Of Institutional Characteristics

Characteristic	FFA Members (<i>n</i> = 159)		Non-Members (<i>n</i> = 233)	
	<i>M</i> ^a (rank)	<i>SD</i>	<i>M</i> ^a (rank)	<i>SD</i>
Opportunities after graduation	3.98 (1)	1.24	3.95 (1)	1.22
Preparation for employment	3.95 (2)	1.17	3.83 (2)	1.13
Cost	3.91 (3)	1.26	3.81 (3)	1.32
Distance from home	3.90 (4)	1.37	3.73 (4)	1.47
Quality and reputation of the faculty	3.70 (5)	1.05	3.56 (5)	1.21
Variety of majors offered	3.68 (6)	1.33	3.53 (6)	1.40
Quality of facilities	3.66 (7)	1.04	3.45 (8)	1.21
Academic reputation of the university	3.54 (8)	1.14	3.48 (7)	1.26
Scholarships awarded	3.46 (9)	1.50	2.87 (13)	1.50
City in which campus is located	3.34 (10)	1.48	3.53 (6)	1.49
Quality and reputation of the students	3.27 (11)	1.17	3.13 (10)	1.21
Prestige of the university	3.22 (12)	1.16	3.17 (9)	1.26
Availability of other financial aid	3.10 (13)	1.58	2.98 (12)	1.61
Size of classes	3.10 (13)	1.32	3.09 (11)	1.34
Campus safety and security	3.09 (14)	1.36	3.09 (11)	1.39
Competitiveness of admission standards	2.84 (15)	1.37	2.95 (13)	1.27
Prominence of university athletic teams	2.38 (16)	1.48	2.45 (14)	1.47

^aScale: 5 = Very Influential ... 1 = Not Influential

High school agriculture teachers were found to be the most influential people overall in this study ($M = 3.45$); however, there was a notable difference found between the two groups with non-FFA member reporting a mean of only 1.43 (see Table 6). Non-FFA members indicated that their parent or guardian was the most influential for non-FFA members. The level of influence of the parent or guardian was very similar across both groups. The least influential person for both FFA and non-FFA members was found to be the high school science teacher.

Several differences did exist between the two groups in this area, the most obvious of which was the level of influence of the high school agriculture teacher. Other notable differences were in found in the influence of the college's faculty and staff (FFA members $M = 2.41$, non-FFA members $M = 2.03$), current students in the college (FFA members $M = 2.10$, non-FFA member $M = 1.64$), and graduates of the college (FFA members $M = 1.96$, non-FFA members $M = 1.58$). Of the 13 categories of people, FFA members indicated higher levels of

influence from 11 categories. Non-FFA members reported higher levels of influence from community college instructors and counselors than did FFA members.

Table 6

Influence Of People In Selection Of University

	FFA Members (<i>n</i> = 159)		Non-Members (<i>n</i> = 233)	
	<i>M</i> ^a (rank)	<i>SD</i>	<i>M</i> ^a (rank)	<i>SD</i>
High school agriculture teacher	3.45 (1)	1.57	1.43 (12)	1.05
Parent or guardian	3.10 (2)	1.50	3.06 (1)	1.64
Friend in college	2.71 (3)	1.53	2.50 (2)	1.59
College faculty and/or staff	2.41 (4)	1.69	2.03 (6)	1.56
Relative who attended the University	2.36 (5)	1.63	2.31 (3)	1.65
Friend in high school	2.28 (6)	1.47	1.98 (7)	1.42
Community college instructor	2.18 (7)	1.61	2.26 (4)	1.65
Current College student	2.10 (8)	1.55	1.64 (10)	1.29
High school guidance counselor	2.09 (9)	1.40	1.88 (8)	1.35
Other high school teacher	2.04 (10)	1.51	1.69 (9)	1.32
Graduate of College	1.96 (11)	1.52	1.58 (11)	1.23
Community college counselor	1.80 (12)	1.41	2.15 (5)	1.60
High school science teacher	1.77 (13)	1.28	1.36 (13)	.92

^aScale: 5 = Very Influential ... 1 = Not Influential

Conclusions/Recommendations/Implications

The purpose of this research was to examine recruitment and career choice influence differences between matriculants into a college of agriculture who were former FFA members and those who were not former FFA members. In terms of their academic performance, no notable differences were found between former members and non-members of FFA. Interestingly however, notable differences did exist when examining the racial composition of the two groups. While only 20 percent of former FFA members who matriculated into the college were minorities, nearly 45% of the matriculants with no FFA background reported races other than Caucasian. This finding certainly warrants further investigation and replication at other institutions as the National FFA Organization works to further diversify its membership. If minority students have an interest in agricultural and related sciences, why did a larger portion of them not have FFA backgrounds? Further investigation is warranted to determine whether minority matriculants made a conscious decision to avoid FFA, or if the organization was not an option in their schools. Such research would be beneficial as agricultural education and FFA seek opportunities to expand into new schools and broaden appeal to all student populations.

While a larger number of the matriculants in this study were not former FFA members, the more “traditional” majors in the college were more heavily populated by former FFA members. Agricultural Education, Animal Science, Agricultural Business, Plant Science, and Agricultural Communication each attracted a larger proportion of FFA members than non-members. Conversely, Industrial Technology and Food and Nutrition Sciences had notably larger enrollments of students with no FFA background. Further investigation of recruitment practices in the more “traditional” majors would provide valuable insight as these programs also seek to diversify. The conclusion could be drawn that certain majors recruit from a certain pool of students. Without a doubt, FFA members are an easily accessible recruiting population, as Career Development Events and other FFA activities tend to readily segregate students into their areas of interest. It is a logical assumption that majors related to those interests would recruit from those pools of students.

The assumption could be made that the appeal to these majors can be attributed to the curriculum in place in secondary agricultural education programs. Qualitative research to examine more closely why students selected their specific majors would be very valuable to agricultural education to determine the role student experiences in agricultural education and FFA played in their selection of major. An obvious question still remains: why do comparatively fewer former FFA members migrate to majors such as Industrial Technology, Food Science, Viticulture, or Enology? These fields certainly have strong ties to the agricultural industry; are they emphasized less in the secondary agricultural education curriculum?

In terms of the recruitment practices used by the College of Agriculture addressed by this study, nearly 75% of the former FFA members participated in student activity events on campus, compared to only 23% of matriculants with no FFA background. Furthermore, on-campus recruitment programs were used by nearly 50% of the FFA group, compared to fewer than 30% of the students who were not former FFA members. This finding highlights the role FFA events play in bringing future students to campus. The college choice literature consistently underscores the important role of campus visits in the college choice process (Cunningham & Fickes, 2000; Walters, 1997; Yost & Tucker, 1995; Carnegie Foundation for Advancement of Teaching, 1986). The need for College of Agriculture administrative support of FFA events on campus is evidenced by these findings.

In examining recruitment practices that impacted former non-members of FFA, University and Departmental websites played a more important role for these students. This finding suggests that web-based information is critically important to prospective students. The implication that can be drawn from this finding is that universities and departments should take a critical look at their websites and make sure adequate resources are available to make their websites as information rich and user friendly as possible.

Interesting findings were gleaned from this comparison of former FFA members and non-members in terms of the role of other people in their college choice process. The strong influence of parents and guardians in the college choice process is well documented in the literature (Broeckemier & Seshadri, 1999, Rosato, 1993, Hossler & Stage, 1992). In the present study however, the role that agriculture teachers play in the choice decisions of FFA members is particularly intriguing. The finding that agriculture teachers play a more prominent role than

parents among former FFA members carries strong implications for practitioners. When compared to the small degree of relative influence students reported regarding high school science teachers, other school teachers, and high school guidance counselors, the role agriculture teachers play is highlighted further. Agriculture teachers should be made aware that among all high school personnel, they have the greatest potential to influence their students' college choice. Agriculture teachers should also be the targets of recruitment materials and information from colleges of agriculture. As a front line of information for their students, agriculture teachers have the opportunity to be very influential when equipped with current and accurate information about colleges of agriculture and potential majors for students to consider.

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