

A Comparison of Traditional and Non-traditional Students' Reasons for Enrolling in an Agricultural Education Course

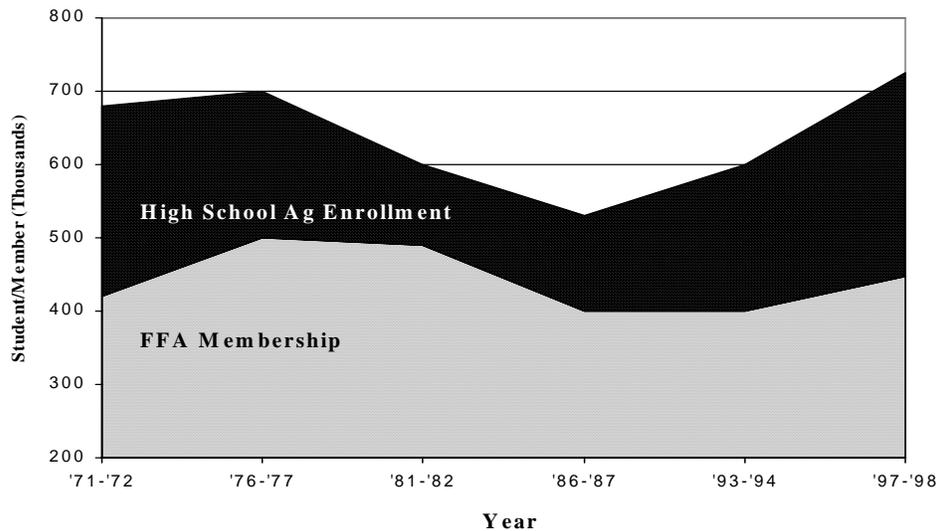
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Introduction

While expanded course offerings in areas like Horticulture and Natural Resources have increased Agricultural Education enrollments in the 1990s, student organization membership in the FFA has continued to decrease (National FFA Organization, 1999). Likewise, supervised agricultural experiences continue to decrease. A recent study by the National FFA Organization estimated that roughly half of students enrolled in Agricultural Education courses maintain an SAE or claim membership in the FFA (National FFA Organization, 1999). Figure 1 depicts the upward trends in enrollment with decreases in percentage of FFA membership.

Figure 1.
Trends in Agricultural Education enrollment and FFA membership.



Secondary Agricultural Education programs in the United States were originally directed to educate young men who aspired to be farmers. Students entered as freshmen and completed Vocational Agriculture I-IV where they were exposed to the gamut of farming principles, techniques, and related skills. Today, Agricultural Education courses are designed for young women and men who aspire to the broad career areas found in agriculture (National Research Council, 1988).

With current course offerings varying from Animal Science to Floral Design, the Agricultural Education enrollees come with new perspectives (Hoover & Scanlon, 1991). Fewer students now complete four years of agricultural training as they were in the past (Marshall, Herring, & Briers, 1992). Many now enter as juniors or seniors and seek courses that match their specific interests. With this flexible entrance to the program comes new obstacles for Agricultural Education as teachers struggle to reach new groups of students who come to their programs with vastly different expectations (Marshall, Herring, & Briers, 1992). The influx of more non-traditional students into Agricultural Education programs may result in students who enroll for specific courses, but are not interested in FFA or SAE activities.

Theoretical Framework

There are many possible reasons for students deciding to enroll or not enroll in Agricultural Education. Moore, Kirby, and Becton (1997) also confirmed the idea of pressure on students to earn graduation credits and fulfillment of college entrance requirements, especially when block scheduling was a factor. Rossetti, Elliot, Price and McClay (1989) also found that non-FFA members enrolled in Agricultural Education because they were interested in agriculture, they needed a science credit, they thought it would be an easy class or they were forced to enroll.

From a different perspective, Ullrich and Stapper (1999) found that parents, agriculture teachers and other students in agriculture classes were more influential in causing students to enroll in an agriculture class, while school counselors and other teachers had relatively little influence. It was also found that the perceived fun of courses and FFA activities were strong influences as were personal desires of students. Kotrlik (1987) also found that parents were dominant in influencing students to enroll in Agricultural Education courses.

Herring, Marshall, and Briers (1989) determined that students would seek the advice of counselors, friends, parents, and teachers before enrolling in Agricultural Education courses. Additionally, Luft and Giese (1991) found that the agricultural teacher had an influence on how students perceived agriculture and whether they enrolled in an agriculture class.

Though Brannon (1988) and others suggested that FFA membership is a major reason for students to enroll in Agricultural Education, a study by the National FFA Organization (1999) determined that only 56% of total Agricultural Education enrollees were FFA members. When teachers were asked why students did not become FFA members, 42% said some students do not believe that FFA membership is valuable; 26% said it is unrealistic to expect all agriculture students to be FFA members; and 21 percent said some students do not have adequate time to devote to FFA activities.

Brick (1998) studied FFA members attending the Washington Leadership Conference in order to determine variables influencing members' self-perceived leadership abilities. Influential variables included gender, plans after high school, FFA involvement, and hometown location, rural or urban. Length of membership in the FFA was not found as an influential factor. The author concluded that female FFA members with plans to attend a four-year college, from a large high school with high levels of involvement tended to have the strongest self-perceptions of their abilities. Recommendations included advisors facilitating increased involvement by all members in order to experience leadership roles.

Purpose/Objectives

The purpose of this study was to describe traditional and non-traditional students reasons for enrolling in an Agricultural Education course. To accomplish this purpose, the following objectives were developed:

- (1) Compare selected characteristics of traditional and non-traditional Agricultural Education enrollees,
- (2) Compare reasons traditional and non-traditional students enrolled in an Agricultural Education course.

Methods/Procedures

The population consisted of junior and senior students enrolled in selected Agricultural Education programs in the Spring of 1999 in Oklahoma. A school profile was developed in

order to select Agricultural Education departments in Oklahoma to participate in the study. The profile included schools with multiple teachers in the department and a non-traditional area (Horticulture or Natural Resources) being taught.

This list was narrowed based on the likelihood of obtaining students enrolling in Agricultural Education for the first time as a junior or senior. The researcher was assisted by the staff in the Agricultural Education Division at the Oklahoma Department of Vocational and Technical Education and Agricultural Education Faculty at Oklahoma State University in determining multiple teacher departments which fit the profile. This resulted in the selection of eight schools.

The researcher utilized portions from a questionnaire developed in a previous study by Marshall (1990). The questionnaire included demographic information as well as Likert-type items reflecting various reasons for enrolling as determined by prior research. After the instrument was formulated, additions, deletions and corrections were solicited from the Agricultural Education faculty at Oklahoma State University and the supervisory staff at the Oklahoma Department of Vocational and Technical Education. Suggested changes were made and the instrument was prepared for field-testing. Additionally, state supervisory staff suggested personal visits would provide more realistic data.

A pilot study was conducted in a local school, not part of the study population. Modifications concerning instructions were made based on the results of the pilot study. Initially, each selected school was contacted by a letter from Dr. Eddie Smith, the state program leader for the Agricultural Education Division of the Oklahoma Department of Vocational Technical Education, stating the purpose, importance, and procedure of the study. A follow up phone call was made to a teacher at each school to inquire concerning their willingness to participate.

Once confirmation was made and questions concerning procedures were answered, schools were visited by the researcher or an assistant. Each junior and senior in Agricultural Education classes that day was asked to complete the instrument after being read a disclosure statement. Questionnaires were collected and returned by the researcher or assistant visiting each school. All schools were visited in the month of April, 1999.

Collected data were first separated by school. School data were then separated into two groups: 1) those taking an Agricultural Education class for the first time as a junior or senior and 2) those who were previously enrolled in Agricultural Education. Throughout the remainder of this study, those juniors and seniors taking their first Agricultural Education course as a junior or senior will be referred to as “non-traditional” and those juniors and seniors who had previous years of Agricultural Education will be referred to as “traditional.”

Descriptive statistics and t-tests were used to accomplish the analysis of the data (Pedhazur, 1982). The demographic portions of the instrument dealt with nominal data so frequencies and percentages were utilized. Respondents were also asked to respond to statements related to why they enrolled in Agricultural Education using a five point Likert-type

scale. T-tests between traditional and non-traditional groups were used to determine if differences were statistically significant. An alpha level of .01 was selected as the significance level to maintain conservatism.

Results/Findings

Eight schools were found to fit the established school profile, being a multi-teacher department while teaching an expanded course offering of Horticulture or Natural Resources and being likely to have juniors and/or seniors as first time enrollees. This provided 393 useable questionnaires with 190 traditional and 203 non-traditional students. 15 questionnaires were determined not to be useable because an entire category of information or more was missing.

Comparison of Selected Characteristics

Differences were present in the gender of traditional and non-traditional enrollees. With slightly more than one-third of the traditional enrollees, and one-half of the non-traditional enrollees being female.

Place of residence for traditional and non-traditional enrollees did differ significantly ($P(t)=.00000$) with a larger percentage of non-traditional enrollees (60.10%) living in the city compared to 40.53% for traditional enrollees. Fewer than 10 percent of non-traditional enrollees lived on farms compared to 25.26% of the traditional enrollees. However, plans after graduation did not differ significantly for traditional and non-traditional enrollees.

Career intentions related to an agricultural career differed for traditional and non-traditional enrollees. Of the traditional enrollees, 40.00% reported career intentions related to agriculture compared to only 16.26% for non-traditional enrollees; only 25.26% of traditional enrollees reported career intentions other than agriculture while non-traditional enrollees reported 56.16%.

Differences between traditional and non-traditional enrollees' academic performance were not seen. Those slight differences present were not statistically significant at $\alpha=.01$ (Table 1).

Table 1
Academic Performance of Traditional and Non-Traditional Enrollees

Grade	Traditional		Non-Traditional	
	N	%	N	%
A's	15	7.89	33	16.26
A's & B's	83	43.68	101	49.75
B's	19	10.00	4	1.97
B's & C's	54	28.42	39	19.21
C's	8	4.21	11	5.42
C's & D's	7	3.68	12	5.91
D's or Below	2	1.05	2	.99
Overall Academic Index	3.04		3.15	

$P(t)=0.108$

With regard to activities, traditional and non-traditional enrollees were very similar (Table 2). No statistically significant difference was found in the number of activities traditional and non-traditional enrollees were involved.

Table 2. *Activities of Traditional and Non-Traditional Enrollees*

Activity	Traditional		Non-Traditional	
	N	%	N	%
FFA	182	95.79	133	65.52
Athletics	87	45.79	109	53.69
Honor Society	33	16.84	56	27.59
Church Group	49	25.79	70	34.48
Band	29	15.26	43	21.18
Vocational Club	34	17.89	32	15.76
Student Council	25	13.16	38	18.72
Language Club	18	9.47	44	21.67
FHA	21	11.05	32	15.76
4-H	32	16.84	3	1.48
Debate	12	6.32	26	12.81
Newspaper	11	5.79	26	12.81
Cheerleading	8	4.21	18	8.87
Hobby Club	8	4.21	14	6.90
Boy/Girl Scouts	17	8.95	9	4.43
Other Club/Organization	30	15.79	21	10.34
Mean # of Organizations	3.14		3.32	

P(t)=0.355

With regard to correlated variables (Table 3), differences were found in the strength of the correlation between Academic Performance and Organization Involvement as this relationship appeared to be stronger for non-traditional enrollees ($r=.47$).

Table 3. *Correlations Between Academic Performance and Organization Involvement for Traditional and Non-Traditional Enrollees*

Variable	Traditional Correlation	Non-Traditional Correlation
Academic Performance/Organization Involvement	.32*	.47*

*Significant r at $\alpha=.01$

Few differences were found in the Agricultural Education course enrollment of traditional and non-traditional enrollees. However, a larger proportion, 66.10%, of non-traditional enrollees took Horticulture as compared to 31.05% of traditional enrollees. A greater percentage (8.95%) of traditional enrollees were enrolled in multiple courses concurrently, compared to only 2.46% of non-traditional enrollees.

Reasons for Enrolling

Respondents were asked to respond to statements related to why they enrolled in Agricultural Education using a five point Likert-type scale. Statements were taken from the Marshall (1990) study. Factors with corresponding Cronbach's Alpha for the Marshall study and this study respectively were: Class Characteristics .57, .38; Identity Enhancement .83, .82; Agricultural Interest .74, .74; Instrumental/Practical .60, .44; Significant Others .80, .70; Circumstantial/Disavowance .58, .62

Comparisons between traditional and non-traditional enrollees agreement with enrollment statements (Table 4) using t-tests revealed statistically significant differences in all statements except: "I needed science credit" ($t=.79$), "The principal or other teacher suggested I take the class" ($t=1.47$), "My friends suggested I take the class" ($t=-1.78$), "I heard this class was easy" ($t=2.04$), "The name or description of the class sounded interesting to me" ($t=-2.24$).

Responses to the open-ended question were classified into eight different categories, producing differences between traditional and non-traditional enrollees (Table 5). A larger percentage of traditional enrollees enrolled for "Career Preparation," to "Learn About Agriculture," and "FFA/Leadership/Showing" while a larger percentage of non-traditional enrollees enrolled to "Learn About Plants" and for "Disavowance" reasons.

Traditional and non-traditional enrollees were similar with regard to "Fun/Hands On" as a reason for enrolling at 31.58% and 35.47%, respectively. It should also be noted that only one of the eight schools offered science credit for Agricultural Education coursework.

Table 4. Traditional and Non-Traditional Enrollees' Agreement with Enrollment Statements

Statement	Traditional		Non-Traditional		
	Mean	N	Mean	N	T
I wanted to participate in shows and fairs	3.83	187	2.60	200	-9.94*
I could have a project and/or earn money through work experience	3.83	188	2.79	200	-8.57*
I could be a member of the FFA	4.02	188	2.97	201	-8.48*
I enjoyed working with animals	4.24	188	3.22	200	-8.29*
I thought this class would prepare me for a career in agriculture	3.88	189	2.94	199	-7.70*
The agriculture teacher(s) encouraged me to take the class	3.06	188	2.15	199	-7.16*
Agriculture classes sounded fun	4.28	188	3.48	198	-7.09*
My involvement in agriculture at home got me interested in this class	3.65	189	2.74	199	-6.61*
I could learn things in class that would be useful to me	4.27	188	3.66	201	-5.76*
I could learn how to do things rather than just learn out of a text	4.29	188	3.69	197	-5.63*
I thought I would like this class	4.45	189	4.05	200	-4.34*
I enjoyed being outside the classroom (greenhouse, barn, etc.)	4.39	187	3.96	196	-4.03*
I was placed in this class by the people who do the scheduling	1.73	188	2.17	200	3.97*
I needed an elective class	2.65	186	3.17	199	3.79*
I liked the teacher(s)	4.05	187	3.62	198	-3.63*
It was the only elective available	1.79	185	2.22	200	3.60*
My counselor suggested I take the class	1.90	184	2.28	197	3.29*
My brother(s)/sister(s) or other relatives suggested I take the class	2.84	186	2.41	201	-3.06*
Some of my friends were in this class	3.56	187	3.20	199	-2.75*
My parent(s) or guardian(s) suggested I take the class	2.63	189	2.30	199	-2.52*
The name or description of the class sounded interesting to me	3.70	189	3.42	201	-2.24
I heard this class was easy	3.02	189	3.30	200	2.04
My friends suggested I take the class	3.06	189	2.81	200	-1.78
The principal or other teacher suggested I take the class	1.82	186	1.98	200	1.47
I needed a science credit	2.07	189	2.17	200	.79

Table 5

Responses to Open Ended Questions by Traditional and Non-Traditional Enrollees

Reason	Traditional		Non-Traditional	
	N	%	N	%
Fun/Hands On	60	31.58	72	35.47
Career Preparation	39	20.52	19	9.36
Learn About Plants	8	4.21	45	22.17
Learn About Agriculture	34	17.89	7	3.45
FFA/Leadership/Showing	24	12.63	3	1.48
Disavowance	7	3.68	28	13.79
Learn About Animals	7	3.68	7	3.45
Science Credit	1	.05	9	4.43

Conclusions/Recommendations/Implications

Based on the findings of this study, the following conclusions were made:

- (1) Traditional and non-traditional enrollees differed in gender;
- (2) Traditional enrollees tended to be male while non-traditional enrollees were male or female;
- (3) More traditional enrollees tended to live on farms or in the country while non-traditional enrollees tended to live in the city or in town;
- (4) Traditional and non-traditional enrollees differed significantly on most agreement with enrollment statements though rank of statements showed little difference; and
- (5) While both groups enrolled because the course was “fun/hands on,” Traditional enrollees tended to enroll for “Career Preparation” and to “Learn About Agriculture” and non-traditional enrollees tended to enroll to “Learn About Plants.”

The reaction of some in dealing with non-traditional Agricultural Education students is to minimize expectations for this group and eliminate them from our programs. What has become increasingly evident over time is that Agricultural Education courses are in demand by a wide range of students with very diverse interests. To disregard them due to late entrance simply does not do justice to the student or to the Agricultural Education program.

The results of this study should lead us toward further expansion in the areas of Horticulture and plant related courses while ensuring that all of our courses continue to remain “fun and hands-on.” This study indicates that recruitment efforts which focus on animals, agriculture, and FFA may not be reaching all the students that could have an interest in what Agricultural Education programs have to offer.

This study also contradicts the assumption that the majority of non-traditional students enrolled for disavowance reasons. Though these findings may conflict with some previous research on reasons for enrolling (Brannon, 1988; Kotlik, 1987; Herring, Marshall, & Briers, 1989; and Luft & Geise, 1991), it does indicate that we must continue to find ways to meet the needs of students through promotion of participation in course and outside activities regardless of when they enter the program.

Implications for future research include an examination of teachers' expectations for non-traditional enrollees, students' satisfaction of expectations of courses enrolled, and a qualitative look at reasons non-traditional students enrolled in an Agricultural Education course.

References

- Brannon, T. (1988). Impact of vocational agriculture/FFA on community leadership in Oklahoma. Unpublished doctoral dissertation, Oklahoma State University, Stillwater.
- Brick, T. (1998). A national survey of FFA member's self-perceived leadership skills. Unpublished doctoral dissertation, Texas A&M University, College Station.
- Herring, D.R., Marshall, T., & Briers, G. (1989). Analysis of enrollment in secondary agricultural science and membership in the FFA in Texas. National Agricultural Education Research Meeting. Orlando, Florida.
- Kotrlik, J.W. (1987). Factors related to the career decisions of seniors who have taken vocational agriculture. The Journal of AATEA, 28(1), 50-56.
- Luft, V.D. & Geise, A.D. (1991). Factors and persons influencing high school students to enroll in vocational agriculture programs. National Agricultural Education Research Meeting. Los Angeles, California.
- Marshall, T. (1990). Analysis of enrollment in agricultural science and membership in the FFA in Texas. Unpublished Doctoral Dissertation. Texas A&M University.
- Marshall, T., Herring, D., & Briers, G. (1992). Factors associated with enrollment in agricultural science and membership in the FFA in Texas. Journal of Agricultural Education, 33(4), 17-23.
- Moore, G., Kirby, B., & Becton, L.K. (1997). Block scheduling's impact on instruction, FFA, and SAE, in Agricultural Education. Journal of Agricultural Education, 38(4), 1-10.
- National FFA Organization. (1999). FFA Advisors: Making a Difference, (7)9.
- National Research Council, Committee on Agricultural Education in Secondary Schools, Board of Agriculture. (1988). Understanding agriculture—new directions for education. Washington, D.C.: National Academy Press.
- Pedahazur, E.J. (1982). Multiple regression in behavioral research. New York: Holt, Rinehart, & Winston.
- Rosetti, R., Elliot, J., Price, C., and McClay, P. (1989). Factors that influence a student not to enter into a high school vocational curriculum. Department of Agricultural Education, The Ohio State University.
- Ullrich, D. & Stapper, M. (1999). Factors influencing enrollment of active FFA members in agricultural programs in Texas. Southern Agricultural Education Research Meeting. Memphis, Tennessee.