

## FACTORS THAT INFLUENCE THE DECISION TO PARTICIPATE IN YOUTH ORGANIZATIONS IN RURAL HIGH SCHOOLS IN THREE STATES

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### Abstract

*This study sought to determine the factors that influenced student decisions to participate in FFA in a rural school and their level of involvement as an FFA member. Data was collected from 2,111 high school students in 41 rural high schools in Arizona, Florida, and Texas. Discriminant analysis identified four factors that influence participation in FFA in the respondents: high school GPA, participation in on-campus (non-Career/Technical organizations) activities, agreement with the statement "Leadership activities have made me a more confident person," and the student's year in school. Factors identified that influenced the level of involvement in FFA by the respondents were: involvement in on-campus athletics, involvement in on-campus (non-Career/Technical organizations) activities, high school GPA, and agreement with the statement "My friends would think less of me." Future research is recommended, including a replication of this study with urban students.*

### Introduction

Demographics, school size, and participation in multiple activities may explain how and why students participate in leadership development activities. Changing demographics, a decline in rural population, the role of the school in the community, and the importance of extracurricular activities have created a need to understand how and why students in rural schools participate in organizations such as FFA. Rural America and rural schools are facing a challenge today that seems insurmountable. Schools in rural areas that successfully produce well-educated students run the risk of the youth leaving the community to seek a career in a larger city with better paying jobs (Beaulieu & Gibbs, 2005). Rural communities are also facing the reality of school consolidation. In 1930, there were more than 130,000 school districts. By 2000, school consolidations had reduced that number to 15,000 (Lyson,

2005). Despite research, which supports the benefits of rural school on student performance and the school's importance to the community, schools continue to close in rural areas (Lyson).

In nonformal educational settings, the benefits of participation in leadership development activities for a rural school student may be seen far beyond the classroom. Stevens and Peltier (1994) reported that students in rural area schools participate in extracurricular activities more than students in schools with large student populations. Leadership activities provide students with opportunities to grow and learn in areas in which they may be interested. FFA is one such leadership opportunity and is considered a key component in secondary agricultural education classrooms. Through a variety of programming options, the National FFA Organization seeks to operationalize its mission of making "a positive difference in

the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education” (National FFA Organization, 2004). Rutherford, Townsend, Briers, Cummins, and Conrad (2002) reported that FFA has an effective leadership program. Students who participate in higher levels (state/national) of FFA activities have superior self perceptions and understanding of their leadership skills. Brannon, Holley, and Key (1989) found the impact of the FFA continues after high school. Community leaders felt vocational education in high school had an impact on their leadership skills as adults. Student leadership activities, such as FFA, have been shown to have a positive influence on students’ performance and attitude. A news report by Kingdon and McGinley (1999) stated that those students who participated in extracurricular activities perceive themselves positively within their peer group and tended to have a higher grade point average (GPA).

### Conceptual/Theoretical Framework

#### *Rural Communities/Schools*

The United States Census Bureau classifies 61.7 million (25%) of the total population in the United States as rural (United States Department of Agriculture, 2005). While one fourth of the United States population is classified as rural, one third of America’s children attend school in a rural area (Beeson & Strange, 2003). In rural schools, average enrollment is lower than urban schools (Sher, 1977). Lyson (2005) found the existence of schools in rural communities provided higher physical infrastructure for the community. The work force seemed to also benefit in rural communities as they typically employed laborers in more professional occupations, and more laborers in general were employed within the community (Lyson).

Benefits of a school within a community reflected on student achievement as well; rural communities with schools tended to have a higher population of college graduates (Lyson, 2005). Cotton (1996) reported that students felt needed in rural schools, which led to higher attendance and

lower dropout rate. According to Huang and Howley (1993), students in rural schools feel nurtured and are more productive with higher student achievement. Rural students also have a better opportunity for more individualized attention because of a high teacher to student ratio (Beaulieu & Israel, 2005).

#### *Youth Development*

The past 30 years have seen widespread proliferation of prevention and positive youth development programs (Castalano, Berglund, Ryan, Lonczak, & Hawkins, 2002). Research is increasingly showing that organized youth activities, such as extracurricular activities and community-based youth programs, are a context of positive development for adolescents (Dworkin & Larson, 2004). In a comprehensive synthesis of the scientific literature on adolescent development, Scales and Leffert (1999) describe some of the outcomes associated with involvement in youth development settings: (a) increased self-esteem, increased popularity, increased sense of personal control, and enhanced identity development; (b) better development of such life skills as leadership and speaking in public, decision-making, and increased dependability and job responsibility; (c) greater communication within the family; (d) fewer psychological problems, such as loneliness, shyness, and hopelessness; (e) decreased involvement in risky behaviors, such as drug use, and decreased juvenile delinquency; (f) increased academic achievement; and (g) increased safety.

Students in small schools tend to feel more of an attraction or pressure to participate in leadership activities (Lindsay, 1982). Beaulieu and Israel (2005) found rural students who participated in youth leadership organizations had lower test scores on their standardized tests. Yet when students took on a leadership role in the youth organization, their test scores increased (Beaulieu & Israel). Stevens and Peltier (1994) found that students in rural schools felt participation in extracurricular activities was one of the main benefits of rural education.

### *Youth Involvement*

In 1999, Alexander Astin presented a student involvement theory to guide the practice and research of undergraduate student development. At this early stage of theory development, Astin offered five basic postulates: (a) involvement refers to the investment of physical and psychological energy in various objects; (b) regardless of the object, involvement occurs along a continuum; (c) involvement has both quantitative and qualitative features; (d) the amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program; and (e) the effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement.

Rural schools may provide opportunities to be involved and succeed outside the classroom. Participation from all students in extracurricular activities in a small school is necessary for clubs, teams, and leadership development activities (Cotton, 1996). Research from Barker and Gump (1964) found that students in smaller schools participated more often in extracurricular activities than those in large schools. Wicker (1969) also found student organizations in larger schools, such as those in more urban areas, are saturated by students, which has caused students not to participate. Small school organizations were found to be less saturated, and students were more likely to participate.

### *FFA Membership and Involvement*

With so many opportunities for students to join organizations, agricultural education and FFA can often times be a second or third choice as a student activity. The study of why students choose to engage in agricultural education and FFA activities has a long history, often with conflicting results. Selland (1968; cited in Connors, Moore & Elliot, 1990) found that an agriculture student's decision to join FFA was influenced by whether or not his or her

friends were FFA members. However, Connors et al. (1990) conducted a study of agricultural education students and found that friends were not an influence on their decision to join FFA. The researchers also found that financial problems and time conflicts were not factors in FFA membership but that place of residence (farm, rural nonfarm, or in-town) was a factor as was interest in agriculture. Further, non-FFA members spent their free time playing sports or working in after-school jobs.

Marshall, Herring, and Briers (1992) found that Texas students joined FFA because it enhanced their identity as a person and, to a lesser degree, to become involved in FFA activities. Talbert and Balschweid (2004) found that when FFA members were compared with non-FFA members, FFA members were more likely to be current or former 4-H members, had a higher percentage of parents/siblings who were in agricultural education or 4-H, and were more likely to live on a farm. FFA members also believed that their agriculture classes were preparing them for the future and that the agriculture teacher had an influence on their enrollment. The researchers also examined level of involvement in FFA and found that approximately one third of FFA members participated in a leadership event above the chapter level.

To bring clarity to the literature on FFA and leadership development, Ricketts, Osborne and Rudd developed a model (Figure 1) that depicts the seven major factors and 63 sub factors that may, in theory, explain the emergence of leaders in local FFA chapters. However, while comprehensive, this model may prove too cumbersome for an agriculture teacher to utilize within their local program. Research that could potentially reduce these factors to a more manageable number may prove valuable to the future of the profession and could help pinpoint factors that influence students to join youth organizations such as FFA.

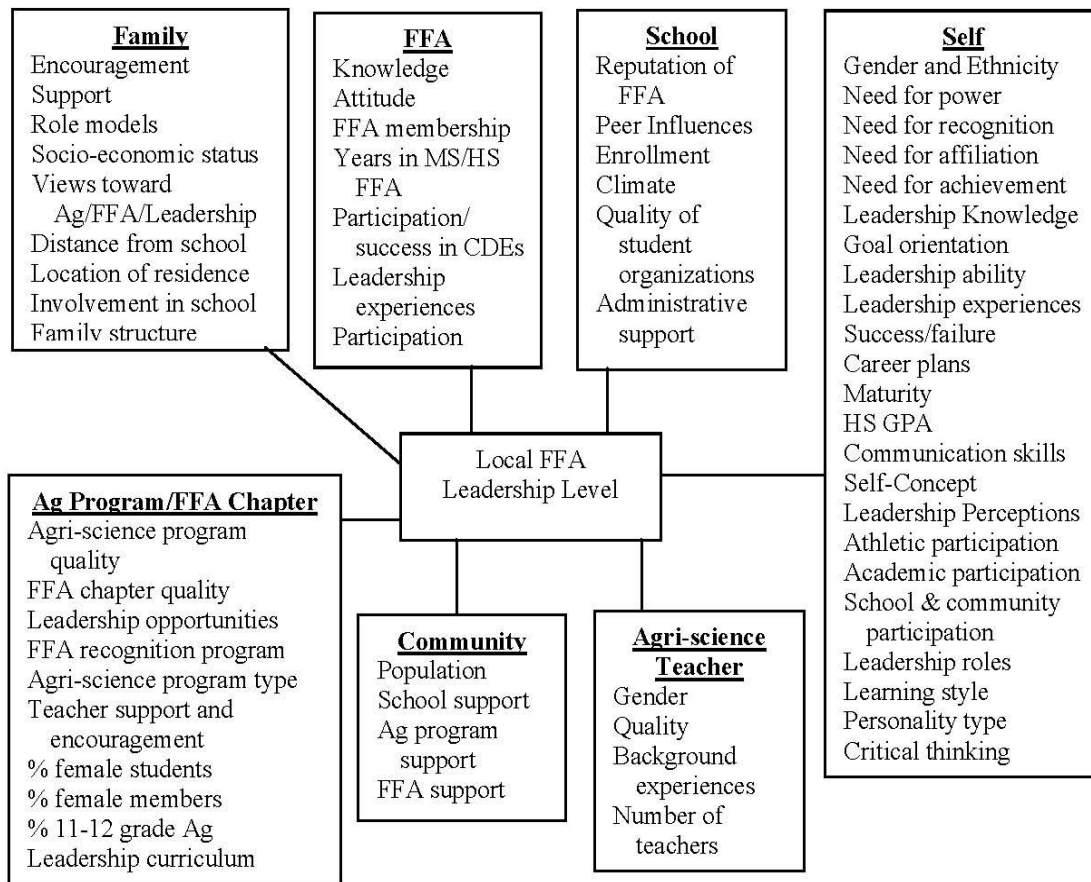


Figure 1. Conceptual model of factors affecting the emergence of leaders in local FFA chapters (Ricketts, Osborne, & Rudd, 2003). Reprinted with permission.

**Purpose and Objectives**

The purpose of this study was to evaluate the factors that influence FFA membership and level of FFA participation among high school agricultural education students in Arizona, Florida, and Texas. The following research questions were formulated to describe the purpose of this study:

1. What factors predict a student’s membership in FFA?
2. What factors predict a student’s level of participation in FFA?

**Methods and Procedures**

The target population was all students in rural secondary agricultural education/ agricultural science programs in Arizona, Florida, and Texas. Based upon the current USDA definition, a population frame was developed of all secondary agricultural education/science programs in communities with less than 10,000 residents. To develop this frame, a list of rural schools within Arizona and Texas was obtained from university faculty in those states. To develop the frame for Florida, the State’s Department of Education was contacted.

The result of this effort yielded a frame with 21 Arizona schools, 43 Florida schools, and 564 Texas schools identified as rural that met the < 10,000 population criteria.

Because of the lower frame numbers, a census of all of the identified Arizona and Florida rural schools was used for potential research participants. With the large number of rural schools in Texas, the decision was made to use a stratified random sample of the 564 schools using the 10 agricultural education/FFA regions in the state. Within each region, the rural schools were alphabetically assigned a number. Using computer-generated random numbers, five schools were selected from each of the 10 areas in the state for a total sample of 50 rural Texas schools.

Once the sampling process was complete, the researchers contacted the agriculture instructor at the school via telephone to solicit their involvement in the study. During the conversation, the teacher was informed of the purpose of the study and the approximate time needed to complete the survey. Those who agreed to participate were asked to provide a count of the students in their agricultural education/science courses to ensure that sufficient numbers of data collection instruments would be sent to the school. Within the three states participating in the study, 56 total schools agreed to participate (Arizona = 18 [86%]; Florida = 8 [19%]; Texas = 30 [60%]). Based on this level of agreement to participate, the results of this study will only be generalized to the schools that returned completed data collection instruments.

A descriptive-correlational survey design using a researcher-designed questionnaire was used to gather data for this research. The independent variables are the categories based on the Ricketts et al. (2004) model. Those categories are family, FFA, school, self, agriscience teacher, community, and agricultural education program/FFA chapter. The dependent variables are the students' decision to join and level of participation in FFA. A questionnaire developed by Dr. James Connors of The Ohio State University (personal communication, February 3, 2004) was also influential in the development of

the data collection instrument. The resulting instrument was formatted as an eight-page booklet using Microsoft Word.

The instrument was reviewed for face and content validity by four faculty members in the agricultural education and communications department at Texas Tech University. A pilot test was conducted to determine the reliability of the instrument with four schools in West Texas that were not part of the sample drawn. In addition to completing the instrument, four open-ended questions regarding the phrasing of the questions were asked at the completion of the pilot test to identify any questions or sections students may have found difficult to complete. Reliability was determined on the Likert-type scales resulting in a Cronbach's alpha of 0.87 and 0.98, respectively. No changes were made to the instrument as a result of the pilot test.

In April 2004 the instrument was sent to the participating schools with instructions to return the survey within 1 month after receiving the package. The package contained instructions for administering the instrument, sufficient copies of the instruments, a letter thanking the participating teacher, and return postage. The teachers were asked to have each student in agricultural science complete the instruments. As such, the actual data collection conditions may have varied from school to school.

Forty-one of the 56 schools (73%) that agreed to participate in the study returned a total of 2,111 completed surveys. Information was collected and entered into Microsoft Excel. Numerical values were assigned to specific answers and entered into the application. Once the data set was complete, it was exported into SPSS PC 12.0 for statistical analysis.

To respond to the two stated research questions, discriminant analysis procedures were used. Barrick and Warmbrod (1988) stated that discriminant analysis is used to study differences between two or more groups and a set of discriminating variables. The underlying concept of discriminant analysis is to construct a linear combination of the set of discriminating variables that will maximally differentiate among the groups in questions (Barrick & Warmbrod).

For the first research question, all respondents were coded as either FFA or non-FFA members. For the second research question, only those who indicated that they were FFA members were selected for analysis. Further, the level of FFA participation was recoded into three areas: local only (low), county/district and regional/area (medium) or state and national (high). Both discriminant analyses included all attitude and belief statements, participation in athletics, CTSOs (Career and Technical Student Organizations), non-CTSO in-school organizations, and outside school student organizations, gender, year in school, GPA, location of the student's residence, post-high school plans, and number of parents in the household. An alpha level of  $p < 0.05$  was used to determine significance.

## Findings

### *Findings Related to Research Question 1*

Research question 1 includes all respondents to determine what factors influence a student's motives for joining FFA. Non-FFA members were compared with FFA members with regard to the independent variables. Four variables were found to be significant in determining a student's willingness to join the FFA. GPA

was shown to be the strongest factor to influence membership in FFA (Table 1).

Table 2 illustrates the correlation between variables in the discriminant analysis. Barrick and Warmbrod (1988) stated, "Since interdependence (inter-correlations) among discriminating variables affect the analysis, examine the correlation matrix of the discriminating variables" (p. 63). Membership in FFA and agreement to the statement "leadership activities have made me a more confident person" had the strongest correlation of 0.230.

Table 3 illustrates the summary for the discriminant analysis completed for research question one. Barrick and Warmbrod (1988) stated that "in discriminant analysis, the emphasis is on analyzing the variables together, not one at a time. The standardized discriminant function coefficient is used to indicate the relative importance of the discriminating variables" (p. 63). In this analysis, GPA was the strongest characteristics in describing a student's membership in FFA.

Table 4 is a summary of the discriminant analysis, which illustrated 75.0% of cases, could be predicted from the four characteristics. These four variables could predict 75.0% of the factors that lead to membership in FFA.

Table 1

*Means and Standard Deviation for Research Question 1 Discriminant Variables*

Discriminating Variable	Group			
	Non-FFA member ( $n = 683$ )		FFA member ( $n = 1,428$ )	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
GPA	3.05	0.74	3.53	0.60
In-school (non-CTSO) activities	4.19	6.82	2.36	2.78
Leadership activities have made me a more confident person	2.24	1.57	2.97	1.18
Year in school	1.33	0.48	1.54	0.50

Table 2  
*Within Group Correlation Matrix for Research Question 1*

	FFA	GPA	In-school (non-CTSO) activities	Leadership activities have made me a more confident person	Year in school
FFA	1.00				
GPA	0.12	1.00			
In-school (non-CTSO) activities	0.09	0.12	1.00		
Leadership activities have made me a more confident person	0.23	0.20	0.14	1.00	
Year in school	0.02	-0.05	0.06	0.04	1.00

Table 3  
*Summary for Discriminant Analysis Research Question 1*

Variables	b	s	Discriminant function 1	
			Group	Centroids
GPA	0.700	0.572	Not an FFA member	-1.138
In-school (non-CTSO) activities	-0.627	-0.369	FFA member	0.210
Leadership activities have made me a more confident person	0.407	0.438		
Year in school	0.551	0.314		
Eigenvalue	Rc	Wilks' Lambda	<i>p</i>	
0.242	0.442	0.805	< 0.01	

Table 4  
Classification Results (All Respondents)<sup>a</sup>

Original	Count	Are you a member of the FFA?	Predicted group membership		Total
			No	Yes	
		No	32	116	148
		Yes	32	433	472
		Ungrouped cases	0	1	1
	<i>P</i>	No	21.6	78.4	100.0
		Yes	8.3	91.7	100.0
		Ungrouped cases	0	100.0	100.0

<sup>a</sup>75.0% of original grouped cases correctly classified.

*Findings Related to Research Question 2*

The second discriminant analysis determined the factors that influence the level of participation in FFA. The top four variables found to describe level of participation in FFA were involvement in athletics and in-school activities, GPA, and the statement “My friends would think less of me” (Table 5). Table 6 illustrates the correlation between variables in the discriminant analysis. GPA and agreement to the statement “My friends would think less of me” had the strongest correlation at

0.173. Table 7 illustrates low involvement in FFA. Involvement in in-school activities was able to predict level of participation better compared with the other three variables. Table 8 illustrates medium involvement in FFA. Agreement with the statement “My friends would think less of me” was able to best characterize medium level of involvement. Table 9 illustrates the four variables which when combined will characterize 50.9% of cases as to level of participation in FFA.

Table 5  
Means and Standard Deviation for Discriminant Variables: FFA Only (n = 1,428)

Discriminating Variable	Involvement Level							
	Low		Medium		High		Total	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Involved in in-school athletics	0.45	0.50	0.78	0.42	0.71	0.46	0.62	0.49
In-school (non-CTSO) activities	0.49	0.50	0.66	0.48	0.85	0.36	0.33	0.47
GPA	3.37	0.68	3.44	0.62	3.75	0.47	3.54	0.61
My friends would think less of me	1.46	0.75	1.88	0.71	1.34	0.78	1.49	0.78

Table 6  
*Within Group Correlation Matrix: Discriminant Variables: FFA Only*

	Involved in In-school athletics	In-school (non- CTSO) activities	GPA	My friends would think less of me
Involved in in-school athletics	1.000			
In-school (non-CTSO) activities	0.142	1.000		
GPA	0.053	0.134	1.000	
My friends would think less of me	-0.026	0.105	0.173	1.000

Table 7  
*Summary for Discriminant Analysis: All respondents (Function 1, Low Participation)*

Variables	b	s	Discriminant function 1	
			Group	Centroids
Involved in in-school athletics	0.308	0.452	Low	-0.480
In-school (non-career/technical Organizations) activities	0.566	0.770 <sup>a</sup>	Medium	-0.181
GPA	0.521	0.645 <sup>a</sup>	High	0.545
My friends would think less of me	-0.349	-0.254		
Eigenvalue	Wilks' Lambda	p		
0.224 <sup>a</sup>	0.735	< 0.01		

<sup>a</sup> Pooled within-groups correlations between discriminating variable and standardized canonical discriminant functions.

Table 8  
 Summary for Discriminant Analysis: All respondents (Function 2, Medium Participation)

Variables	b	s	Discriminant function 1	
			Group	Centroids
Involved in in-school athletics	0.665	0.649 <sup>a</sup>	Low	-0.231
In-school (non-career/technical Organizations) activities	0.095	0.155	Medium	0.622
GPA	-0.280	-0.086	High	-0.091
My friends would think less of me	0.760	0.697 <sup>b</sup>		
Eigenvalue	Wilks' Lambda	p		
0.111 <sup>b</sup>	0.900	< 0.01		

<sup>a</sup> Pooled within-groups correlations between discriminating variable and standardized canonical discriminant functions.

<sup>b</sup> First two canonical discriminant functions were used in the analysis.

Table 9  
 Classification Results (FFA Only)<sup>a</sup>

Original Count	FFA participation level	Predicted group membership			
		Low	Medium	High	Total
	Low	286	46	129	461
	Medium	113	41	98	252
	High	105	43	228	375
P	Low	62.0	10.0	28.0	100.0
	Medium	44.8	16.3	38.9	100.0
	High	28.0	11.5	60.5	100.0

<sup>a</sup>50.9% of original grouped cases correctly classified.

**Conclusions and Recommendations**

The conclusions are limited to agricultural education/agricultural science students surveyed in these 41 rural schools in Arizona, Florida, and Texas. Factors that influenced FFA membership were (a) high school grade point average, (b) involvement with in-school activities other than vocational student organizations, (c) year in high school, and (d) agreement

with the statement “Leadership activities have made me a more confident person.” Factors that influenced a student’s level of involvement in the FFA were (a) involvement with in-school athletics, (b) involvement with in-school activities other than vocational student organizations, (c) high school grade point average, and (d) agreement with the statement “My friends would think less of me.”

Overall, FFA membership is low considering it is an intracurricular component of the agricultural education/agricultural science program. Several factors were identified that deterred FFA membership and participation. Involvement in athletics had a negative influence on rural student FFA participation. This echoes Cotton's (1996) findings that rural students participate in more activities such as clubs, teams, and leadership organizations. This also reaffirms Barker and Gump's (1964) findings that students in smaller schools often participate in more extracurricular activities than students in larger schools. This concern is raised by agricultural education teachers in many rural areas who feel that they must "compete" for their students. The researchers also concluded that rural students enrolled in agricultural education/agricultural science classes predominantly carried an "A" or "B" grade point average, and most of these students plan to continue their education beyond high school. To that end, saving money and preparing for college were the biggest deterrents to involvement in FFA. Students who believe leadership activities have a positive impact are more likely to participate in them, and FFA members believed the number one reason for joining FFA was that it would be fun. A student's friends can therefore have either a negative or positive influence on FFA membership and involvement.

Researchers recommend the following: Further research should be completed to validate the factors that influence FFA membership and levels of involvement including the replication of this study with urban students. The theory of involvement was designed from the research efforts with university undergraduate students. Further research efforts should be conducted to determine if this theory has application to involvement by high-school-aged students in youth organizations. The National FFA Organization should examine the results of this study for the potential of a recruitment/retention program targeted at rural students. Additional research that could stem from this project includes investigating the level of FFA involvement and the

relationship to college admissions, high school GPA, and ACT and SAT scores.

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