

COMPARISON OF MEMBERS AND NON-MEMBERS OF PROFESSIONAL ORGANIZATIONS FOR VOCATIONAL AGRICULTURE TEACHERS

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Although much is said about the benefits to be derived by educators from membership in professional organizations, membership in such organizations has fallen short of the potential number. For example, in the American Vocational Association (AVA) membership decreased by 4,186 to 40,514 in 1987 according to the AVA Assembly of Delegates list for the 1987 AVA Convention. Buzzell (1987) estimated there were more than 250,000 vocational educators (potential members) in 1986 in the United States. The National Vocational Agricultural Teachers Association (NVATA) experienced similar trends with 7,787 members out of a possible 12,792 members in 1987 (S. Stenzel, personal communication, August 17, 1987).

A review of the literature revealed three categories of factors related to membership in professional organizations: degree of professionalism, self-perceived importance of organizational role and member benefits, and teacher characteristics. The first category, degree of professionalism, suggested that membership in a professional organization is a manifestation of degree of professionalism (Howsam, Corrigan, Denmark, & Nash, 1987; Hutchinson, 1976; Pisapia, 1976; Naqi, 1973; Simpson, 1969; & Hall, 1968). The second category, self-perceived importance of organization role and member benefits, implied that membership can depend on perceptions concerning the importance of the professional organization (McHam, 1984; Robison, 1979; Stenzel, 1976; & Weber, 1972). The last category, teacher characteristics, suggested that certain demographic characteristics are correlated to membership in professional organizations (Evangelauf, 1987; The Task Force on Teaching as a Profession, 1986; Nagi, 1973; & Simpson, 1969). No literature was found that addressed how these three categories in combination might be related to membership in professional organizations.

Purpose and Objective

The purpose of this study was to determine predictors of membership of vocational agriculture teachers in their professional organizations. More specifically, the objective was to identify a set of best predictors of membership from degree of professionalism, self-perceived importance of organizational role and member benefits, and teacher characteristics.

Procedures and Analysis of Data

The population was all vocational agriculture teachers listed in the 1987 Agriculture Teachers Directory. According to S. Henry (personal communication, September 14, 1987), editor of the Directory, there were 12,782 such individuals in the United States.

Samples for multivariate research should be ten times as large as the number of independent variables (Kerlinger, 1986). Given this requirement, it was determined that an accepting sample of 300 was needed for analysis. Dillman (1983) reported an average response rate of 73% when Dillman's Total Design Method (TDM) was employed. Also, it was determined by contacting persons in five states that an additional nine percent adjustment was necessary to reduce frame error for those who were no longer teaching in the position as listed in the Directory. Given these adjustments, 447 subjects were randomly selected by systematic sampling as described by Ary, Jacobs, and Razavieh (1985). Systematic sampling was chosen because of the large number of subjects in the population.

There were 131 non-respondents. To control for non-response error, a non-respondent sample was randomly selected and studied to determine if the non-respondents were different from those who returned the questionnaire. The non-respondent survey was conducted via telephone. No statistically significant differences were observed.

To maximize response rate, the instrumentation was designed and implemented with TDM procedures. The first part of the questionnaire measured the self-perceived importance of roles and member benefits of the professional organizations for vocational agriculture teachers. Respondents were asked to indicate the degree to which they agreed or disagreed with the

importance of the various statements using a Likert-type scale (1 = completely disagree, 6 = completely agree). This portion was adapted from a study conducted by Robison (1979) with a reported alpha coefficient of 0.908. For this study, the alpha coefficient was 0.906. Responses to this portion were analyzed with factor analysis which resulted in collapsing the items to four factors: (1) importance of program improvement activities, (2) importance of member services, (3) importance of professional development activities, and (4) importance of policy development activities.

The second part of the questionnaire consisted of a modified version of Hall's Professionalism Scale (Snizek, 1972). Depending on the data set, Kuder-Richardson Formula 20 reliability coefficients of 0.783 to 0.843 were reported. An alpha coefficient of 0.755 was obtained in this study. This Likert-type scale measures the five attitudinal components or dimensions of professionalism as identified by Hall (1968). The accepting sample indicated the degree to which the statements represented their attitudes and behaviors regarding professionalism (1 = very poorly, 5 = very well). The attitudinal components of professionalism were: (1) use of the professional organization as a major referent, (2) belief in public service, (3) belief in self regulation, (4) sense of calling to the field, and (5) sense of autonomy.

The third part of the questionnaire was designed to collect demographic data that were used as possible predictors. Both nominal and ordinal data were collected by the third portion of the questionnaire. Nominal data included production agriculture background, mode of teacher certification, membership status in professional organizations as a student, gender, future career plans, membership status in various general education associations, past enrollment in secondary vocational agriculture, and the type of program in which currently employed. Nominal data were dummy coded. Ordinal data included level of education, age, years of teaching experience, years of FFA membership, and salary. Ordinal data were collected by use of items with pre-established ranges and coded accordingly.

The specific statistical technique used was discriminant analysis. The discriminant analysis equation uses a person's scores on predictor variables in an attempt to predict the group of which the person is a member. The criterion variable was membership or non-membership in professional organizations for vocational agriculture teachers. The predictor variables were sub-scores on the professionalism scale, factor sub-scores on the self-perceived importance of organizational role and member benefit scale, and selected teacher characteristics.

Of the 316 (70.7%) returned questionnaires, 304 usable questionnaires were included in the analysis. The respondents were members of no professional organizations for agriculture teachers or members of one to four professional organizations for agriculture teachers (American Vocational Association, a state affiliate of the American Vocational Association, National Vocational Agriculture Teachers Association, and a state affiliate of the National Vocational Agriculture Teachers Association).

Findings

Univariate analysis indicated that members and non-members differed significantly ($p < .05$) on perceived importance of member services, belief in self regulation, type of agricultural background, student membership in professional organizations, National Education Association (NEA) membership, and years of membership in the FFA. Non-members held a significantly higher perception toward the importance of member services provided by professional organizations. Non-members had significantly more (24%) agricultural background of other than production agriculture when compared to members (9%) who had such background. Members had a significantly greater belief in self regulation and more years of membership in the FFA. A significantly greater percentage (72%) of teachers who were members had been a student member of a professional organization but only 32% of non-members had held student membership. Sixty percent of members also held membership in the NEA, whereas 36% of non-members held membership in the NEA. The two groups did not differ significantly on perceived importance of program improvement activities, use of the professional organization as a major reference, sense of calling to the field, years of teaching experience, membership in the American Federation of Teachers (AFT), membership in local education associations, salary, and the location of the program in which they were teaching (Table 1).

Since intercorrelations among discriminating variables adversely affect the analysis, the correlation matrix was examined. Table 2 shows that years of teaching experience and salary were moderately correlated ($r = .67$). However, both variables were left in the model due to the exploratory nature of this research. Two other combinations of discriminating variables showed low correlations;

perceived importance of program improvement activities to perceived importance of member services ($r = .41$) and belief in self regulation to sense of calling to the field ($r = .37$). The convention by Hinkle, Wiersman, and Jurs (1979) was used to describe the correlations.

Table 1
Means and Standard Deviations for Discriminating Variables

Discriminating Variable	Member ($n = 249$)		Non-member ($n = 55$)		Univariate F-ratio
	Mean	SD	Mean	SD	
perceived importance of program improvement activities ¹	5.23	(0.57)	5.29	(0.59)	0.17
perceived importance of member services ¹	4.21	(1.12)	4.76	(1.17)	4.73*
use of professional organization as a major reference ²	3.77	(0.71)	3.69	(0.61)	0.26
belief in self regulation ²	3.61	(0.66)	3.32	(0.55)	4.48*
sense of calling to the field ²	3.58	(0.56)	3.55	(0.74)	0.39
background in agriculture other than production ³	0.09	(0.29)	0.24	(0.44)	5.26*
student member of professional organization ⁴	0.72	(0.45)	0.32	(0.48)	17.15***
years of teaching experience ⁵	2.76	(1.36)	3.24	(1.48)	2.63
membership in National Education Association ⁴	0.60	(0.49)	0.36	(0.49)	5.17*
membership in American Federation of Teachers ⁴	0.05	(0.21)	0.12	(0.33)	2.18
membership in a local education association ⁴	0.20	(0.40)	0.08	(0.28)	2.13
years of membership in FFA ⁶	4.53	(0.95)	4.12	(1.13)	3.92*
salary ⁷	3.84	(1.15)	3.56	(1.04)	1.35
program located in area vocational technical schools ⁸	0.08	(0.28)	0.1	(0.33)	0.34

* $p < .05$, *** $p < .001$

¹1 = completely disagree, 6 = completely agree

²1 = very poorly, 5 = very well

³Dummy coded, other agriculture = 1

⁴Dummy coded, member = 1

⁵1 = 1-5 yrs, 2 = 6-10 yrs, 3 = 11-15 yrs, 4 = 16-20 yrs, 5 = > 20 yrs

⁶1 = 0 yrs, 2 = 1 yr, 3 = 2 yrs, 4 = 3 yrs, 5 = > 3yrs

⁷1 = < \$15,000, 2 = \$15,000-\$19,999, 3 = \$20,000-\$24,999, 4 = \$25,000-\$29,999, 5 = \$30,000-\$34,999, 6 = \$35,000-\$40,000, 7 = \$40,000

⁸Dummy coded, Area Voc-Tech School = 1

Discriminant analysis was used to determine if vocational agriculture teachers' degree of professionalism, perceptions concerning the importance of organizational roles and member benefits, and selected teacher characteristics discriminated between members and non-members of professional organizations for vocational agriculture teachers. A stepwise procedure identified 14 variables which resulted in a statistically significant ($p < .001$) discriminant function indicating that members can be distinguished from non-members by the set of variables included in the analysis (Table 3). Standardized discriminant function coefficients with absolute values greater than one-half the largest coefficient represent the most powerful discriminating variables. The standardized discriminant coefficient for background in agriculture other than production agriculture, program location in area vocational-technical schools, and membership in the AFT indicated that higher values for these variables tend to be characteristic of non-members of professional organizations for vocational agriculture teachers. The standardized discriminant function coefficient for student membership in professional organizations indicated that a higher value for this variable tended to be characteristic of members of professional organizations for vocational agriculture teachers. Perceived importance of program improvement activities, perceived importance of member services, use of professional organizations as a major reference, belief in self regulation, sense of calling to the field, years of teaching experience, membership in the NEA, membership in a local education association, years of membership in the FFA, and salary were not particularly important in discriminating between the two groups.

Table 2
Pooled Within-Groups Correlation Matrix: Discriminating Variables (n = 304)

	PI	MS	MR	SR	SC	OAB	SM	YTE	NEA	AFT	LEA	FFA	SAL	VTS
PI	1.00													
MS	0.41	1.00												
MR	0.25	0.14	1.00											
SR	0.27	0.18	0.19	1.00										
SC	0.17	0.11	0.15	0.37	1.00									
OAB	-0.08	-0.01	-0.13	-0.01	-0.02	1.00								
SM	0.02	0.00	-0.10	0.08	0.12	-0.04	1.00							
YTE	0.01	-0.03	0.02	0.06	0.05	-0.17	0.07	1.00						
NEA	0.08	-0.09	0.00	-0.08	-0.03	0.12	0.08	-0.14	1.00					
AFT	-0.12	-0.08	-0.04	0.09	-0.08	0.03	0.12	0.08	-0.14	1.00				
LEA	-0.01	-0.07	-0.14	0.01	0.00	0.24	0.11	-0.07	0.16	0.10	1.00			
FFA	0.04	0.03	0.00	-0.08	-0.04	-0.15	0.10	-0.10	-0.10	-0.02	0.00	1.00		
SAL	-0.02	-0.11	0.01	0.06	0.00	0.00	-0.01	0.67	0.19	0.19	0.01	-0.10	1.00	
VTS	-0.11	-0.17	-0.10	0.03	-0.09	0.05	0.13	0.06	0.05	0.21	0.15	-0.08	0.17	1.00

PI = perceived importance of program improvement activities

MS = perceived importance of member services

MR = use of professional organization as a major reference

SR = belief in self regulation

SC = sense of calling to the field

OAB = background in agriculture other than production

Sm = student member of professional organization

YTE = years of teaching experience

NEA = membership in National Education Association

AFT = membership in American Federation of Teachers

LEA = membership in a local education association

FFA = years of membership in FFA

SAL = salary

VTS = program located in area vocational technical school

Table 3
Summary Data for Discriminant Analysis

Variables	Discriminant Function 1		Group	Centroids
	b	s		
PRGIMPRV	-.39	.00	Member	.212
MMBRSRVC	-.19	-.25	Non-member	-1.606
MJRREF	.53	.36		
SELFREG	.53	.25		
SENSOFCALL	-.38	.02		
OTHERAGBCK	-1.20	.27		
STDNTMEMBR	1.08	.48		
TCHEXPRYRS	-.52	-.19		
NEAMMBR	.39	.27		
AFTMMBR	-1.35	-.17		
LEAMMBR	.42	.17		
YRSFFAMMBR	.16	.23		
SALARY	.54	.14		
LOCVOTECH	-.72	-.07		
<hr/>				
<u>Eigen value</u>	<u>Rc</u>	<u>Wilks' Lambda</u>	<u>p</u>	
.344	.506	.744	<.001	

b = standardized discriminant function coefficient

s = within-groups structure coefficient

Rc = canonical correlation coefficient

The discriminant function correctly classified 76.97% of the cases (Table 4). As a result, classification based on the discriminating variables resulted in 54% fewer errors than would be expected by random classifications.

Table 4
Classification of Cases

Actual Group	Number of Cases	<u>Predicted Group Membership</u>	
		Member	Non-Member
Member	249	195 18.3%	54 21.7%
Non-Member	55	16 29.1%	39 70.9%

Note. Percent of cases correctly classified: 76.97%

Conclusions/Recommendations

Vocational agriculture teachers who are members of professional organizations for vocational agriculture teachers can be distinguished from those who are not members by a set of discriminating variables describing degree of professionalism, self-perceived importance of organizational role and member benefits, and teacher characteristics. The most powerful discriminating variables were, in order of importance, 1) membership status in AFT, 2) background in agriculture other than production agriculture, 3) student membership in professional organizations, and 4) program location in area vocational-technical schools. Members tended to have been student members of professional organizations, whereas those who 1) are members of AFT, 2) have a background in agriculture other than production agriculture, and 3) teach in a program located in an area vocational-technical school are likely to be non-members. Other variables that contributed to the discrimination between members and non-members were: perceived importance of program improvement activities,

perceived importance of member services, use of professional organizations as a major reference, belief in self regulation, sense of calling to the field, years of teaching experience, membership in NEA, membership in a local education association, years of membership in the FFA, and salary.

Vocational agriculture teachers who 1) were not members of AFT, 2) had a background in production agriculture, 3) did not teach in a program located in an area vocational-technical school, and 4) were students members of a professional organization were more likely to be members of a professional organization for vocational agriculture teachers. Conversely, vocational agriculture teachers with 1) membership in AFT, 2) a background in agriculture other than production agriculture, 3) a teaching assignment in an area vocational-technical school, and 4) no previous student membership in a professional organization were more likely to be non-members of a professional organization for vocational agriculture teachers.

Teacher educators should take note of at least two of the above conditions. Prospective teachers without a production agriculture background should be identified as a possible non-joiner early in their teacher education program. These prospective teachers need extra encouragement and instruction about the benefits of membership. Also, teacher educators should notice the importance of student membership in discriminating between members and non-members. Of those surveyed, 179 of 249 (72%) members had been student members while only 18 of 55 (32%) non-members had been student members. Perhaps teacher educators need to increase efforts in recruiting students to membership in student branches of professional organizations. However, it is doubtful that increasing student membership will be effective unless meaningful experiences are provided.

State Departments of Education and professional organization leadership should evaluate the tendency of vocational agriculture teachers who are members of AFT to be non-members of professional organizations for agriculture teachers. Although it is not possible to control membership in AFT, it may be possible to note that those who are members of AFT are "at risk" of being non-members of professional organizations for agriculture teachers. Additional encouragement and recruiting may be in order for those who are AFT members. Also of interest is the tendency of those who teach in area vocational-technical schools to be non-members.

Recommendations for further research include: 1) a study similar to this should be made of other vocational and academic teachers; 2) an investigation should be made to determine if there are other potential predictor variables; 3) studies at the individual state level should be made to determine if states differ; and 4) an evaluation should be made of efforts to recruit or retain teachers who have been identified as "at risk".

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