

# THE EFFECTS OF TEACHER ATTITUDES AND RELATED FACTORS ON FFA PROFICIENCY AWARDS WON ABOVE THE FEDERATION LEVEL

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## Abstract

*Chapter participation in the FFA proficiency awards program for Pennsylvania has been alarmingly low in comparison to other states in the Eastern Region of the United States. The purpose of this study was to investigate the effects of teacher attitudes and selected variables on chapter participation rates in the FFA proficiency awards program. North Carolina, Ohio, and Pennsylvania were selected for the study based on state FFA structure and overall proficiency award participation. North Carolina and Ohio judge proficiency awards on local, district, and state levels where as Pennsylvania only judges proficiency awards on the state level. Because of the close relationship between proficiency awards and supervised agricultural experiences (SAE), teacher attitudes toward SAE were also to be studied. Two sub-populations were identified: 1) teachers in North Carolina and Ohio with district winners and teachers in Pennsylvania with state winners for 1990-1992; and, 2) teachers in North Carolina and Ohio without district winners and teachers in Pennsylvania without state winners. The findings indicated a significant relationship between teacher attitude toward proficiency awards and teacher attitude toward supervised agricultural experience programs. In addition, the number of awards is significantly related to teacher attitudes toward proficiency awards and supervised agricultural experience programs.*

Many agricultural educators have considered a successful supervised agricultural experience for each student a vital educational component of a secondary agriculture education program. Phipps (1980) emphasized that a supervised agricultural experience (SAE) consists of all the practical agricultural activities of educational value conducted by students outside class for which instruction and supervision is provided by their teachers, parents, employers, or others. According to Dewey (1916), experience, especially learning by doing, provides a relevance to the theory and cognitive material learned in a formal classroom setting. Many agricultural educators also regard the FFA proficiency award program as a motivational and reward complement to supervised agricultural experience programs. Proficiency awards have played a major role in the FFA awards program

since 1944 (Bender & Taylor, 1974). According to Newcomb, Warmbrod, and McCracken (1986), application of technical agricultural skills via the FFA allows students to enhance their learning experiences.

Competition in the FFA has long been considered worthwhile and educational as evidenced by more than 1,350 FFA members participating in national contests annually representing over 87,000 members (Reneau & Roider, 1986). However, data from the National FFA Organization suggest that few FFA members may actually participate in the FFA proficiency award program. The data also reveals that the highest percentage of FFA chapter participation for any proficiency award area

approaches 15% and participation in 22 of the 29 proficiency award areas nears the ten percent mark.

Research suggests that teachers may directly influence student participation in the proficiency awards program. Data collected by Balfe (1989) which shows that teacher encouragement and assistance consistently promotes student participation in SAE programs and proficiency award competition. Reneau and Roider (1986) found that teachers with more positive attitudes toward SAE have a greater proportion of students with SAE programs.

According to Gianchino and Gallington (1977), student interest in a particular subject relates to their teacher's interest and enthusiasm for that subject. Over 85 percent of the 1988 regional proficiency award winners reported receiving excellent support and invaluable assistance from their teachers in proficiency awards competition (Balfe, 1989). By understanding teachers' attitudes toward the FFA proficiency awards program and the supervised agricultural experience (SAE), factors influencing teacher attitudes toward proficiency awards may be identified and explained.

### **Objectives of the Study**

The study was accomplished through the following objectives:

1. To describe the attitudes held by agricultural teachers in North Carolina, Ohio, and Pennsylvania toward FFA proficiency award and supervised agricultural experience (SAE) programs.
2. To describe the differences between attitudes held by agriculture teachers in North Carolina, Ohio, and Pennsylvania toward FFA proficiency award and supervised agricultural experience programs (SAE) by the number of district and state proficiency awards won per chapter.

3. To describe the relationships between select North Carolina, Ohio, and Pennsylvania, teacher and school variables and chapter participation level in the FFA proficiency awards program.

### **Procedures**

#### Design of the Study

The study employed descriptive, correlational survey research to describe teacher attitudes and acquire other FFA proficiency award data.

#### Population and Sample

The accessible population for this study consisted of secondary agricultural education teachers in Ohio, North Carolina, and Pennsylvania for the 1990-91 and 1991-92 school years. For comparison purposes, two sub-populations were identified. The first sub-population included teachers in North Carolina and Ohio with district FFA proficiency award winners and teachers in Pennsylvania with state FFA proficiency award winners for the 1990-91 and 1991-92 school years.

The second sub-population consisted of teachers in North Carolina and Ohio without district winners and teachers in Pennsylvania without state winners for 1990-91 and 1991-92. The total number of teachers in the winner sub-population was 179 with 573 teachers in the non-winner sub-population. Using Krejcie and Morgan (1970) to ensure a 95% confidence level, a stratified random sample of 127 was drawn from the proficiency award winner group and a stratified random sample of 230 was drawn from the non-winner group. Stratification was based on the proportion of teachers per state within each sub-population.

## Instrumentation

Data for the study were collected via a mailed survey instrument consisting of three sections. Section one requested information regarding teachers' attitudes toward the FFA proficiency award program and was a modified version of the Likert five point scaled questionnaire developed and used by Kotrlik (1987) for a similar study in Louisiana. Section two requested responses to a series of attitudinal statements regarding the supervised agricultural experience program using the same five-point scale as in section one. Section two was a modified version of an SOE attitudinal scale used by Herren and Cole (1984). Section three of the instrument collected demographic information on respondents. To determine content validity and reliability of the instrument, a pilot study of 30 teachers not in the research sample generated alpha coefficients of .86 for section one of the instrument and .75 for section two (Cronbach, 1951).

## Data Collection

Within three weeks of the initial mailing, 163 teachers responded representing a 45.4% response rate. Approximately three weeks later, an additional 53 teachers responded from a second mailing culminating in a 61% response rate. Based on Tuckman (1986), follow-up telephone contacts were made with a 10% sample of non-respondents who were questioned on selected statements from both attitudinal sections. No significant differences were found (Miller and Smith, 1983).

## **Results**

Of teachers responding, 47.7% (103) taught in Ohio, 29.2% (63) taught in North Carolina, and 22.7% (49) taught in Pennsylvania. Of those responding, 139 (64%) indicated that their students had participated in the proficiency awards program on the chapter level and 35.2% of the respondents (76) indicated that students had not.

## Objective One

Objective one of the study described the attitudes held by agricultural education teachers in North Carolina, Ohio, and Pennsylvania toward the FFA proficiency award and supervised agricultural experience programs. To test relationships involving teachers' attitudes toward proficiency awards and SAE programs, a summated attitudinal score for each section was calculated. Proficiency award summated attitudinal scores ranged from 37 to 185 and SAE summated attitudinal scores ranged from 40 to 200. The close relationship between proficiency awards and SAE suggested that both attitudinal scores may be correlated and analyzed simultaneously.

The resulting correlation regression analysis between proficiency award and SAE attitudinal scores was significant at the .01 level. Therefore, both attitudinal variables were analyzed simultaneously in a Multiple Analysis of Variance test. Results of the factorial MANOVA revealed a significant difference between the number of awards won and the two dependent variables, teachers' attitude toward FFA proficiency awards ( $F=31.92$ ;  $p=.000$ ) and teacher attitudes toward SAE programs ( $F=11.45$ ;  $p=.001$ ). The factorial MANOVA also revealed a significant difference between state and SAE attitude score at the .05 level ( $F=2.33$ ). However, the results of the MANOVA did not yield a statistically significant difference between state and proficiency award attitude score at the .05 level ( $F=9.01$ ).

## Objective Two

The second objective of the study described the relationship between attitudes held by agriculture teachers in North Carolina, Ohio, and Pennsylvania toward FFA proficiency award and supervised agricultural experience programs and the number of proficiency awards won on district and state levels. To determine the strength and direction of the relationships, a Pearson's correlation coefficient

Table 1. Multiple Analysis of Variance Test of Differences Between SAEATT and PAATT and State and Number of Awards Won (n=215)

Source	F	p
Number of Awards Won		
Proficiency Award ATT	31.92359	.000*
SAE ATT	11.45507	.001*
State of Teaching Assignment (NC, PA, OH)		
Proficiency Award ATT	2.33474	.099
SAE ATT	9.00982	.000*

\* Significant at .05 level

was calculated. The findings revealed a low, positive correlation of .20 between the number of proficiency awards won by a chapter on the district and state levels and the teachers' attitudes toward supervised agricultural experience programs. Further analysis indicated a moderate, positive correlation of .47 between the number of awards won by a chapter at the district and state levels and the teachers' attitudes toward the FFA proficiency award program. Both correlation coefficients were significant at the .01 level.

### Objective Three

The third objective of the study was to describe the relationships between selected teacher school variables and the number of proficiency awards won on district and state levels. To meet this objective, a stepwise multiple regression was employed. Variables were entered into the equation in a two separate blocks with each block was tested independently to reduce chances of multi-collinearity. Significant variables from Block I (teacher variables) and Block II (school variables) were combined into a final regression equation to determine the overall significance of the tested variables. The final regression equation yielded three significant variables at the .05 significance level: 1) availability of computer program for proficiency award applications; 2) higher summated score for teacher attitude toward proficiency awards; and 3) greater numbers of FFA members.

The final adjusted  $R^2$  was 26.7 with the three factors accounting for 26.7% of the variance in explaining the number of students to win proficiency awards on the district and or levels (Table 2).

## **Summary, Conclusions, and Recommendations**

### Objective One - Conclusions

The results of the study revealed a significant relationship between the number of awards won at the district and/or state levels and teachers' attitudes toward FFA proficiency award and SAE programs. Teachers with more positive attitudes toward proficiency awards and SAE programs had higher numbers of students winning proficiency awards. In addition, the analysis yielded a significant difference between state and teacher attitudes towards SAE programs. Ohio teachers had the most positive attitudes towards SAE programs followed by North Carolina and Pennsylvania. It should be noted that no statistically significant difference at the .05 level existed between the number of awards won and state (NC, OH, PA).

### Implications - Objective One

The results indicated no significant difference in teachers' proficiency award attitude between states and proficiency award attitudes across states at the .05 level; however, the analysis closely approached

Table 2. Final Regression on Number of Proficiency Awards Won at District and/or State Levels of Competition (n=215)

Factor	b	Beta	Zero Order Correlation Coefficient	Partial Correlation Coefficient	Sig.
Proficiency award computer program	-1.026837	-.145150	-.270738	-.136848	.0221
Teacher attitude toward proficiency awards	4.712713	.416934	.471771	.406121	.0001
Number of FFA Members	.015673	.155456	.273632	.146849	.0141
Constant	-12.2778597				.0001

Multiple R = .52776, df = 208, Multiple R<sup>2</sup> = .27853, F = 26.38105, Adjusted R<sup>2</sup> = .26797, Sig F < .05

significance (p=.099). A significant difference was found between state and teachers' attitudes toward supervised agricultural experience programs. Overall, Ohio teachers exhibited the most positive attitudes toward both supervised agricultural experience programs and proficiency awards followed by teachers from North Carolina and Pennsylvania. Ohio also offers greater state department leadership than North Carolina or Pennsylvania by providing a greater number of agricultural education supervisors. North Carolina employs two consultants and a full time FFA Executive Secretary with Pennsylvania employing only one state consultant. The effect of state influence on proficiency award participation offers a plausible hypothesis for explaining additional factors affecting proficiency award participation, however, this is beyond the scope of the study. As a result, a cause and effect relationship cannot be projected, however, the possibility does exist that additional state level supervision may translate into higher levels of teacher and student participation in FFA activities.

#### Objective Two - Conclusions

Based on the data analyzed, it was concluded that a positive relationship (r=.20) exists between the number of awards won at the district and/or state levels and teachers' attitudes toward supervised agricultural experience programs. A positive relationship also exists between the number of awards won at the district and/or state levels and teachers' attitudes toward proficiency awards (r=.47).

#### Implications - Objective Two

Giachino and Gallington (1977) found that the attitude of the teacher is instrumental in how well any subject is presented and accepted by students. First, teacher attitudes toward FFA proficiency award and supervised agricultural experience programs represents the belief component. Since the belief component consists of what one thinks, teachers' thoughts and attitudes may directly relate to the number of proficiency awards won on the district and/or state levels.

Teachers with positive attitudes toward the proficiency award program may possess a predisposition to act, resulting in their students winning a greater number of proficiency awards. The results of this study support a moderate link between attitude and behavior; however, the influence of an attitude depends upon repetition, ingrained habits, freedom of choices, and level of commitment.

#### Recommendations for Objectives One and Two

1. To positively influence the attitudes of teachers toward proficiency awards, teacher education departments should offer professional development emphasizing the benefits of proficiency awards.
2. State Department Agricultural Education consultants should offer periodic in service activities on how to correctly complete applications.
3. Additional components of agricultural education programs in North Carolina, Pennsylvania and Ohio should be investigated to determine how state leadership influences overall program quality.

#### Objective Three - Conclusions

The final regression model yielded three significant variables at the .05 significance level: the availability of computer programs for proficiency award applications, summated proficiency award attitudinal score, and number of FFA members. These three variables accounted for 26.7% of the variance in number of state and/or district proficiency award winners. Based on these findings, one might conclude that the demographic variables investigated in the study are somewhat irrelevant toward influencing the number of proficiency awards won by an FFA chapter. Therefore, one might conclude that other variables account for the remaining unidentified variance in the number of

proficiency awards won. Assuming this, the following implications are offered.

#### Implication One - Objective Three

Mapston (1986) found that the success of a proficiency award winner is due to the involvement of the vocational agriculture teacher and is a reflection of the agriculture program. As the regression model indicated, 27% of the variance was revealed. Obviously, other factors not investigated influence student proficiency award participation. According to the National Research Council (1988), the United States farm population is about 2.2% of the overall population. However, 55% of the proficiency awards are classified as production oriented. In addition, 83% of the National FFA award finalists for 1988 resided on farms (Balfe, 1989). To counter the overwhelming emphasis on production agriculture, the National Research Council (1988) recommended the FFA revise its focus and award structure of the contests by opening new categories of competition outside production oriented activities. Therefore, a lack of perceived relevance from students could account for additional variance in a teacher having a student participate in and win proficiency awards.

#### Implication Two - Objective Three

Walker (1980) supported competition and believed that individual satisfaction in competition is achieved by displaying individual excellence or by gaining approval. However, inappropriate competition design could deter many teachers from encouraging student participation in the proficiency award program. Johnson and Johnson (1989) outlined nine essential elements key to the success of competition, which if considered, adopted, and properly implemented may increase the number of students applying for proficiency awards. Each element and proposed recommendations are briefly described below.

Element 1: For a situation to be competitive, participants must perceive a negative interdependence with others. This requires a perceived scarcity of goals and winners.

Recommendation 1: Students should be aware of the accomplishments of others in their agricultural education departments.

Element 2: The second element includes a clear beginning, a clear ending, a clear criteria for selecting winners, and a clear set of rules and procedures that control interaction. Ambiguity detracts from competition.

Recommendation 2: Criteria for assigning points for each section of the proficiency award application should be clearly established, providing for consistency in evaluation of the application.

Element 3: The third element consists of being able to clearly and definitively rank the competitors from best to worst.

Recommendation 3: As with key element number two, the point scale criteria exists, however no method of assigning points on a clear, objective and unbiased basis exists. The establishment of a clear criteria for assigning points would allow judges of proficiency award applications to unilaterally and accurately rank all competitors.

Element 4: The fourth element consists of appropriate tasks composed of well-learned skills and competition by students with the same opportunity to acquire the same skills and abilities.

Recommendation 4: Agriculture teachers should emphasize the skills and proficiencies learned in a supervised agricultural experience programs rather than highlighting the students economic accomplishments.

Element 5: The fifth element of constructive competition is a strict control on interaction among

competitors. Interaction must be planned and participants must "play fair."

Recommendation 5: Because of unclear regulations pertaining to admissible data for a proficiency award application, some teachers may believe it to be appropriate and fair to assign a percentage of family's farming operation to the student's SAE program. In some cases, this could be correct; however, in other circumstances, the inclusion of "family farm" data may border falsification. To counter this possibility, the National FFA Organization should consider guidelines for ascertaining when the accomplishments of the family farm may be included in a proficiency award application.

Element 6: The sixth element of competition is ability to audit and monitor progress on individuals in order to engage in social comparison. Individuals must be able to compare themselves with others to determine if they are ahead or behind.

Recommendation 6: In the current structure of proficiency award competition, students do not formally engage in program comparison. Teacher coordinated tours would promote the recommended program comparisons.

Element 7: The seventh element of constructive competition is homogeneous matching of participants. Individuals with little chance of winning may not be motivated and concede defeat. Any consistent pattern of winners and losers may decrease the performance of all concerned.

Recommendation 7: Because of age variations in FFA members, most students do not have the opportunity to win a proficiency award until their junior or senior years. To more closely align the proficiency award program with element seven, the National FFA Organization should consider a program for proficiency award participation exclusive to ninth and/or tenth grade students.

Element 8: The eighth element of constructive competition is that who wins or loses should be relatively unimportant.

Recommendation 8: On all levels of proficiency award competition, the FFA recognizes only one first place winner per award area. The National FFA Organization should consider a criteria based reward system in lieu of the current normative system. A criteria based system may award ribbons or medals for proficiency awards instead of ranking the participants to arrive at a single winner per award area.

Element 9: Appropriate competition must include the following essential skills:

- a) Fair and appropriate rules of engagement.
- b) Being a good winner and a good loser while enjoying the competition.
- c) Monitoring the progress of competitors.
- d) Not over-generalizing results to a person's worth.

Recommendation 9: State departments, university faculty, and National FFA Organization officials should conduct workshops or other in service activities on the importance of the skills identified above.

For many years, proficiency awards have been a major part of the educational opportunities offered to secondary agriculture students by the National FFA Organization. If proficiency awards are to continue fulfilling a motivational and instructional role in agricultural education, consistent investigative efforts by agriculture teachers, teacher educators, and the National FFA Organization must occur to maintain the program's viability by addressing the needs of contemporary agricultural education students -- needs that change based on the economy, agricultural sector, and demographic factors. Not recognizing and considering these variations risks educational stagnation, and at worst, obsolescence of the FFA proficiency awards program.

## References

Balfe, K. (1989). The agricultural proficiency program. The Agricultural Education Magazine, 62, 20-21.

Bender, R. E. & Taylor, R. E. (1974). The FFA and you: Your guide to learning (2nd. ed.). Danville, IL: Interstate Printers and Publishers.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16, 297-334.

Dewey, J. (1916). Democracy and education. New York: The MacMillan Company.

Giachino, J. W. & Gallington, R. O. (1977). Course construction in industrial arts, vocational, and technical education. Chicago: The American Technical Society.

Herren, R. & Cole, L. (1984). Attitudes of Oregon vocational agriculture teachers toward the supervised occupational experience program component of the vocational agriculture curriculum. The Journal of the American Association of Teacher Educators in Agriculture, 25, 45-51.

Himmelfarb, S. & Eagly, A. H. (1974). Orientations to the study of attitudes and their change. In S. Himmelfarb & A. H. Eagly (Eds.), Readings in attitude change. New York: Wiley.

Johnson, D. W. & Johnson, R. T. (1989). Cooperation and competition: Theory and research. Edina, MN: Interaction Book Co.

Kotrlik, J. W. (1987). Attitudes held toward FFA proficiency awards. Journal of American Association of Teacher Educators in Agriculture, 28(2), 25-32.

Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607-610.

Mapston, K. D. (1986). Use and value of supervised occupational experience programs and related instructional activities in the western states. Unpublished Master of Science Professional Paper, Bozeman: Montana State University.

Miller, L. E. & Smith, K. (1983). Handling non-response issues. Journal of Extension, 24, 11-13.

National Research Council. (1988). Understanding agriculture: New directions for education. Washington, DC: National Academy Press.

Newcomb, L. H., McCracken, J. D., & Warmbrod, J. R. (1986). Methods of teaching

agriculture. Danville, IL: The Interstate Printers and Publishers, Inc.

Phipps, L. J. (1980). Handbook on agricultural education in public schools. Danville, IL: Interstate Printers and Publishers, Inc.

Reneau, F. & Roider, R. (1986). Attitudes of vocational agriculture teachers toward supervised occupational experience programs. The Journal of the American Association of Teacher Educators in Agriculture, 27(2), 8-12.

Tuckman, B. W. (1988). Conducting educational research. Orlando, FL: Harcourt Brace Jovanovich.

Walker, S. (1980). Winning: The psychology of competition. New York: W.H. Norton and Co.