

PROBLEMS FACED BY BEGINNING AGRICULTURAL TEACHERS PREPARING FOR LEADERSHIP DEVELOPMENT EVENTS AND CAREER DEVELOPMENTS

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Abstract

The purpose of this descriptive study was to determine the preservice needs of beginning agricultural science teachers in Texas in regard to preparing for career development events and leadership development events. Perceptions of beginning agriscience teachers were used to determine these pre-service needs. The data was collected using a mailed questionnaire. The subjects of this study were a random selection of the beginning to fifth year agriscience teachers in Texas according to a list from the Vocational Agricultural Teachers Association of Texas (VATAT). The population consisted of 285 beginning teachers. One hundred forty-two beginning teachers were chosen to participate in the study. Beginning agriscience teachers rated chapter conducting highest of the LDEs in terms of importance, competence and familiarity. Ag. Issues Forum is the LDE which most beginning agriscience place the least amount of importance as well as having the least competence and familiarity. Beginning agriscience teachers consider livestock judging to be the most popular CDE in Texas. Depending on geographic areas in which beginning teachers had completed either high school or university training, forestry and cotton classing are the events which are considered least in terms of familiarity, importance and competence. No significant relationship occurred between familiarity with events and perceived importance of events by respondents.

Introduction and Theoretical Framework

Teachers of agricultural sciences have always had a need for inservice education and will always have this need (Garton & Chung, 1996, p. 52). These programs have been aimed toward assisting agricultural science teachers, especially beginning teachers, to learn the knowledge and skills essential to carry out their professional duties (Barrick, Ladewig, & Hedges, 1983; Birkenholz & Harbstreit, 1987; Nesbitt & Mundt, 1993). Many of these teacher inservice programs were developed based on various previous research projects by Hillison (1977); Shippy (1981); Hachmeister (1981); Claycomb and Petty (1983); Veeman (1984); Birkenholz and Harbstreit (1987); and Valli (1992) that identified the needs of beginning teachers (Garton & Chung, 1996, p. 52).

One major responsibility of teachers of agricultural science is to serve as advisors of local FFA chapters. "The primary goal of the FFA is to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education" (Vaughn, 1999, p.2). Osborne and Witt (1985) suggest that teachers should accept contest participation as part of their job, solely for the tremendous benefits received by the students. According to Bowen and Doerfert (1989) most State FFA award winners from 1984-1986 aspired to gain employment in some professional field as a career. "As student and community needs differ from community to community, the need to produce agricultural leaders is a goal of every instructor" (Gartin, 1985 p.11). However, while FFA competition and events utilize active student involvement for quality enhancement of local FFA chapters, many teachers will not enjoy their benefits "because they lack the necessary technical and/or pedagogical competencies required to train the contestants" (Schumann, 1977 p. 65).

Purpose and Research Objectives

Research has shown that Garton and Chung's 1996 study on the inservice needs of beginning teachers of agriculture was a viable study, and the researchers suggested the study be conducted in other states to enhance the generalizability of the study. The purpose of this study was to determine the preservice needs of beginning agricultural science teachers in Texas, in regard to preparing for career development events (CDE) and leadership development events (LDE). Perceptions of beginning teachers were used to determine these pre-service needs. The specific overall objectives of this study were to:

1. Describe the characteristics of beginning agriscience teachers in regard to the following variables: (a) number of years teaching agriscience; (b) number of years at current school; (c) number of students enrolled in program; (d) university from which bachelor degree was earned; (e) university from which master degree was earned, if applicable; (f) FFA area where respondent attended high school, if applicable.
2. Describe the self-perceived preservice needs of beginning agriscience teachers in relation to training teams for leadership development events and career development events.
3. Determine the perceived abilities of beginning agriscience teachers to train teams in the leadership development events and career development events.

Methods and Procedures

This study was descriptive in nature. The data was collected using a mailed questionnaire patterned after the instrument used by Garton and Chung (1996). The questionnaire was mailed according to suggestions of Dillman's (1978) Total Design Method with a cover letter stating the purpose of the study and instructions for completing the questionnaire. A self-addressed, stamped envelope was included in the package for the convenience of the respondents. The questionnaire was sent to agriscience teachers in the state of Texas with one to five years of teaching experience.

Subject Selection

The subjects of this study were a random selection of the beginning to fifth year agriscience teachers in Texas according to a list from the Vocational Agricultural Teachers Association of Texas (VATAT). The population consisted of 285 beginning teachers. One hundred forty-two beginning teachers were chosen to participate in the study. Errors could exist due to the following factors: (a) teachers hired by districts after the latest VATAT membership list was comprised; (b) new teachers to Texas who have taught for more years outside of Texas; or (c) new teachers choosing not to join the VATAT. Procedures for subject selection were followed according to Dillman (1978).

Instrumentation

The survey instrument used to collect data was a questionnaire used to determine the level of knowledge possessed by the participants of the LDEs and the CDEs. The researchers following an extensive review of the related literature, developed the questionnaire.

Following extensive modifications and input from a panel of experts in the Department of Agricultural Education and Communications at Texas Tech University, a pilot test was conducted using student teachers from Texas Tech University to determine reliability and validity of the instrument. Demographic information was collected to determine independent variables. A rating system was developed to determine respondents' opinions of the importance of each event, and their own perceived abilities regarding training for the events.

More independent variables were established by the respondents' personal past participation in the events, as well as their high school and university exposure to these events. Additionally, open-ended questions were also included to determine other perceived strengths or weaknesses of the respondents. The questionnaire was coded to identify non-responding participants.

The instrument was printed in booklet form on white paper and included a photocopy of the FFA emblem and the title of the instrument on the front cover and a thank you reminder with the return address on the back cover and was stapled along the spine.

Data Collection

In mid-spring a cover letter, instrument, and self-addressed stamped envelope were sent to the sample of agriscience teachers. The letter explained the purposes and objectives of the study and asked the agriscience teachers to participate. The letter was printed on letterhead from the Department of Agricultural Education & Communications at Texas Tech University and the researcher and the committee chairperson individually signed each one. The questionnaire and letter were mailed in a 6 1/2" X 9 1/2" envelope so that the questionnaire would not need to be folded.

Two weeks later, a reminder postcard was mailed to all members of the sample group whose instrument had not been returned. This served as a reminder of the due date to return the questionnaire. The postcard was printed on white cardstock and included a graphic of the FFA emblem as a tieback to the study. The postcard did not require any action from the respondents.

A second questionnaire, and the same original cover letter was sent two weeks later to non-respondents. The letter was again printed on department letterhead and bore the same signatures as the original letter.

In order to increase response rates, telephone surveys were conducted May 25, 1999-May 28, 1999.

The data collection phase was concluded on May 30, 1999. Any completed questionnaires received after this date were not considered in the data. All agriscience teachers who had not sent their questionnaires by this date were considered non-respondents.

Seventy-five usable instruments were received. This produced a response rate of 52.8%. Realizing this response rate was comparatively low, Goldhor's (1974) suggestion was implemented. According to Goldhor, early responses were compared to late responses. Yielding no significant differences between the early and late responses allowed the research to assume there would be no significant differences between those that responded and those that did not respond.

Findings and Discussion

Characteristics of Respondents

The mean number of years teaching of respondents was three years, and they had been at their respective schools for an average of 2.6 years. Mean enrollment in local programs of the respondents was 126.3 students. Almost all (95.9%) of the respondents received their bachelor degree from a Texas university and while a majority (74.7%) of the respondents indicated they did not have a master degree, of those that did, 36.8% indicated that their master degrees had come from Texas Tech. Thirteen of the respondents indicated they had attended high school in Area X in Texas.

Importance of Events

Teachers were given lists of the various events available for participation in Texas FFA during the school year and asked to indicate their perceived level of importance of the events based on a scale of 5 = very important and 1 = not important. There was an overwhelming (3.9 or higher) indication (Table 1) that all of the LDEs were of high importance. LDEs receiving importance ratings of 4 or higher were Chapter Conducting (4.6), FFA Skills (4.3) and Public Relations (4.3). Ag. Issues Forum, FFA Creed, FFA Quiz, and FFA Radio all received mean importance ratings of 3.9.

Table 1.
Importance of LDEs

Name of LDE	M	SD
Ag. Issues Forum	3.91	.81
Chapter Conducting	4.59	.55
FFA Creed	3.93	.86
FFA Quiz	3.92	.88
FFA Radio	3.89	.82
FFA Skills	4.27	.79
Public Relations	4.32	.78

Note: Higher mean indicates greater perceived importance

The five CDEs (Table 2) receiving ratings of 4.0 or higher were: Livestock Judging (4.4), Ag. Mechanics (4.3), Meats Judging (4.2), Farm Business Management (4.1), and Land Judging (4.0). Horse Judging, Horticulture, Poultry Judging, Range & Pasture Judging, Range & Pasture Plant ID, and Tractor Mechanics all earned importance ratings of 3.9. Ag. Sales and Dairy Cattle Judging received 3.8 importance ratings from the respondents. Other CDEs ranked in order of importance were Entomology (3.5), Crops Judging (3.4), Dairy Foods (3.4), Forestry (3.2), Cotton Classing (3.1), and Wool Judging (3.1).

Table 2.
Importance Of CDEs

Name of CDE	M	SD
Ag. Mechanics	4.34	.77
Ag. Sales	3.85	.88
Cotton Classing	3.07	1.10
Crops Judging	3.43	.93
Dairy Cattle Judging	3.76	.86
Dairy Foods	3.38	.99
Entomology	3.51	1.04
Farm Business Management	4.08	.85
Forestry	3.17	1.23
Horse Judging	3.85	.98
Horticulture	3.93	.84
Land Judging	4.04	.89
Livestock Judging	4.41	.74
Meats Judging	4.19	.77
Poultry Judging	3.87	.91
Range & Pasture Judging	3.93	.94
Range & Pasture Plant ID	3.93	.97
Tractor Mechanics	3.93	.93
Wool Judging	3.10	1.03

Competence of Events

Respondents were given the same lists of events to indicate their perceived level of competence (Table 3) in training for the various events based on 5 = very competent and 1 = not competent. Respondents indicated a high level (3.5 or higher) of confidence on five of the seven LDEs: Chapter Conducting (4.1), FFA Creed (4.1) FFA Quiz (3.9) FFA Skills (3.8), and FFA Radio (3.6). The other LDEs in order of rating were: Public Relations (3.4), and Ag. Issues Forum (2.9).

Table 3
Competence of LDEs

Name of LDE	<u>M</u>	<u>SD</u>
Ag. Issues Forum	2.95	1.13
Chapter Conducting	4.05	.79
FFA Creed	4.05	.74
FFA Quiz	3.91	.80
FFA Radio	3.55	.92
FFA Skills	3.76	.92
Public Relations	3.35	1.15

Note: Higher mean indicates greater perceived competence

Only two of the nineteen CDEs (Table 4) rated 3.5 or higher in confidence levels: Livestock Judging (4.1) and Horse Judging (3.5). Rating 3.0 or higher were Ag. Mechanics (3.3), Dairy Cattle Judging (3.3) Land Judging (3.2), Meats Judging (3.2), Horticulture (3.0), and Poultry Judging (3.0). The remainder of the CDEs and their competence ratings in order are Farm Business Management (2.9), Range & Pasture Judging (2.9), Range & Pasture Plant ID (2.9), Ag. Sales (2.8), Dairy Foods (2.6), Tractor Mechanics (2.6), Crops Judging (2.4), Entomology (2.4), Cotton Classing (2.0), Forestry (2.0), and Wool Judging (1.9).

Table 4.
Competence of CDEs

Name of CDE	<u>M</u>	<u>SD</u>
Ag. Mechanics	3.28	1.054
Ag. Sales	2.80	1.135
Cotton Classing	1.99	1.133
Crops Judging	2.36	1.170
Dairy Cattle Judging	3.33	.991
Dairy Foods	2.61	.985
Entomology	2.37	1.183
Farm Business Management	2.87	1.143
Forestry	1.96	1.140
Horse Judging	3.53	1.223
Horticulture	2.99	1.168
Land Judging	3.16	1.151
Livestock Judging	4.11	.894
Meats Judging	3.20	1.344
Poultry Judging	3.00	1.147
Range & Pasture Judging	2.91	1.254
Range & Pasture Plant ID	2.88	1.241
Tractor Mechanics	2.64	1.165
Wool Judging	1.91	1.075

Familiarity with Events

Respondents were given the same lists of events, but this time were asked to indicate their level of familiarity with the events (based on 5 = very familiar and 1 = not familiar).

Most (six of seven) of the LDEs earned familiarity ratings of 3.5 or higher: Chapter Conducting (4.4), FFA Creed (4.3), FFA Quiz (4.1), FFA Skills (4.1), FFA Radio (4.0), and Public Relations (3.5). Public Relations (2.9) rated lowest in familiarity.

Three CDEs earned familiarity ratings higher than 3.5: Livestock Judging (4.5), Horse Judging (3.8), and Dairy Cattle Judging (3.7). The remainder of the events in order of familiarity ratings were: Ag. Mechanics (3.4), Meats Judging (3.4), Land Judging (3.3), Poultry Judging (3.2), Dairy Foods (3.1), Range & Pasture Plant ID (2.9), Horticulture (2.8), Range & Pasture Judging (2.8), Tractor Mechanics (2.8), Farm Business Management (2.7), Ag. Sales (2.6), Entomology (2.3), Crops Judging (2.2), Cotton Classing (2.1), Wool Judging (2.0), and Forestry (1.9).

Past Participation in Events

Respondents were asked to indicate whether they had participated in the various events. Yes/No questions were used to determine the responses.

Five of the seven LDEs had participation over 50%. The LDEs listed from highest past participation to lowest were FFA Creed (83.8%), Chapter Conducting (74.3%), FFA Radio (73.6%), FFA Quiz (71.2%), FFA Skills (58.1%), Public Relations (41.1%), and Ag. Issues Forum (27.4%).

Only four CDEs had participation over 50 percent: Livestock Judging (92.0%), Horse Judging (73.3%), Dairy Cattle Judging (65.3%), and Land Judging (50.7%). The remainder of CDEs in order of participation ranking were Poultry Judging (48.0%), Dairy Foods (38.7%), Meats Judging (38.7%), Ag. Mechanics (37.3%), Range & Pasture Plant ID (32.0%), Range & Pasture Judging (26.7%), Horticulture (25.3%), Farm Business Management (21.3%), Wool Judging (16.2%), Cotton Classing (14.7%), Forestry (14.7%), Ag. Sales (13.3%), Entomology (13.3%), Crops Judging (10.7%), and Tractor Mechanics (10.7%).

High School Exposure to Events

Respondents were asked to indicate the amount of high school exposure they had to the various events. They were given a scale of zero to four years they had been exposed to the events.

Ag. Issues Forum (2.4) and Chapter Conducting (2.4) rated highest in high school exposure, followed by FFA Creed (1.4), FFA Skills (1.2), FFA Quiz (1.1), FFA Radio (.93), and Public Relations (.35).

Only three CDEs showed high school exposure rates over one year: Livestock Judging (2.2), Dairy Cattle Judging (1.3), and Ag. Mechanics (1.2). Following these are Horse Judging (.99), Land Judging (.77), Poultry Judging (.60), Range & Pasture Plant ID (.51), Range & Pasture Judging (.48), Dairy Foods (.42), Farm Business Management (.39), Tractor Mechanics (.36), Ag. Sales (.34), Crops Judging (.33), Horticulture (.25), Forestry (.21), Wool Judging (.21), Entomology (.14), and Cotton Classing (.11).

University Exposure to Events

Given a similar scale, respondents were asked to indicate the number of university semesters they had been exposed to the various events.

Chapter Conducting (1.5) was indicated as the most exposed LDE at the university level followed by FFA Skills (.83) FFA Creed (.74), FFA Quiz (.73), FFA Radio (.65), Public Relations (.61), and Ag. Issues Forum (.43).

Livestock Judging (1.7), and by Ag. Mechanics (1.5) were shown to be the most exposed CDEs on the university level. Following these events in order were Meats Judging (.96), Horse Judging (.90), Dairy Cattle Judging (.85), Horticulture (.81), Poultry Judging (.75), Land Judging (.70), Range & Pasture Judging (.67), Range & Pasture Plant ID (.67), Farm Business Management (.66), Dairy Foods (.60), Tractor Mechanics (.56), Ag. Sales (.55), Entomology (.49), Crops Judging (.36), Wool Judging (.36), Forestry (.29), Cotton Classing (.16).

Relationships Between Teacher Background and Perceptions of Teachers Toward Events

Statistical analyses were used on various teacher demographics: university of bachelor degree, university of master degree, area where respondent graduated high school; to compare them with respondents views of importance, competence, and familiarity to the events. Seventeen significant relationships were discovered.

Eleven of the relationships involved the FFA area where the respondents attended high school. FFA Area of high school seemed to affect competence of FFA Radio and Forestry; importance of Horticulture, Dairy Cattle Judging, Forestry, Poultry Judging, Range & Pasture Judging, Range & Pasture Plant ID; familiarity to Cotton Classing, Crops Judging, and Forestry. University where the respondents received their bachelor degrees seemed to cause four significant relationships: familiarity to Ag. Issues Forum, cotton classing, Forestry; and importance of crops

judging. University where respondents earned their master degrees seemed cause significant relationships in competence of Tractor Mechanics and familiarity with Forestry.

Conclusions

The following conclusions are based on interpretations of data presented in the study and are restricted only to the population surveyed. They are also limited to the limitations found in Chapter One of the study. The conclusions are as follows:

1. The average beginning agriscience teacher in Texas has been teaching agriscience for three years, 2.6 of these years have been in the schools where they are currently working.
2. Texas Tech University has placed more Texas agriscience teachers in the past five years than any other university in Texas. More master degrees have been earned by beginning agriscience teachers from Texas Tech in the past five years than from any other Texas university.
3. The average agriscience program with beginning teachers in Texas has an enrollment of 126.3 students, and most are instructed by teachers that attended high school in Texas FFA Area X.
4. Beginning agriscience teachers rate Chapter Conducting highest of the LDEs in terms of importance, competence and familiarity. Ag. Issues Forum is the LDE with which most beginning agriscience teacher place the least amount of importance as well as having the least competence and familiarity.
5. Beginning agriscience teachers consider Livestock Judging to be the most popular CDE in Texas. Depending on geographic areas in which beginning teachers had completed either high school or university training, Forestry and Cotton Classing are the events which are considered least in terms of familiarity, importance and competence.
6. No significant relationship occurred between familiarity with events and perceived importance of events by respondents.

Recommendations

The following recommendations are made by the researchers as a result of having conducted this study.

1. Teacher educator programs in agricultural education should implement classes specifically designed to address training for and participation in LDEs and CDEs in order to better prepare beginning agriscience teachers.
2. Agriscience teachers have more responsibilities in terms of the number of events offered compared to the number of agriscience teachers in average programs. Teacher educator programs in agricultural education should appropriate time during student teaching blocks to prepare them for all aspects of their career duties as they begin their student teaching.
3. Agricultural education teacher education programs should spend an equal amount of time on each of the LDEs and CDEs regardless of location. This will better prepare agriscience teachers for employment regardless of the location they go to teach.
4. Teacher education curriculum for agriscience teachers should contain classes which include information about the CDEs.
5. Further studies should be conducted to determine the reason why the two least populated areas in terms of state FFA student membership produced most of the beginning agriscience teachers in Texas.
6. Studies similar to this should be conducted in other areas of the agriscience teachers' responsibilities, i.e., SAEs, record books, livestock shows, etc. in order to verify the findings of this study.
7. Studies similar to this should be conducted in other states in order to verify the findings of this study.

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