Agriculture Students' Leadership Development: A National Needs Assessment

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Abstract

Agriculture students were surveyed to determine their leadership development needs. The National FFA Leadership Continuum Assessment Student Questionnaire was designed based on information collected during focus groups conducted in two states. Responses were received from 1,031 agriculture students representing 28 schools across the country. The average student respondent was involved in one or two school organizations, in their first year of membership in the FFA, and involved in limited out-of-school activities. Respondents indicated that leadership was important to very important. When asked to indicate the importance of leadership skills in various areas of their life, students indicated in their future career as most important, followed by organizations. They reported that FFA, sports and elective classes were where they frequently or often learned and practiced leadership. Respondents also reported agriculture classes, international experiences, and national conferences as the places they highly preferred or very preferred to learn leadership skills. In addition, it was important to very important that leadership activities be fun, consisting of group work, provided real-world application, were interactive, and contained organization.

Introduction-Theoretical Framework

A smooth transition from school to work is an obstacle that all youth face at some point in their life. If not readily prepared for this transition, an individual may face early failures that may alter their career path and set them on a road that does not allow them to reach their full potential. For many years, the focus of agricultural educators has been to create well-rounded programs that develop students' ability to attain academic excellence, civic responsibility, and career success (Esters & Bowen, 2005). A complete Agricultural Education program is composed of three key components. The key components are: 1) classroom/laboratory instruction or contextual learning where students are taught the real-life relevance of new skills; 2) supervised agricultural experience or experiential learning where students are given ample opportunity to practice the new skills; and 3) student leadership development or high-order application where students are asked to synthesize information, evaluate next steps, and apply the new skills to real-life situations. Together these three key components provide a well-rounded and practical approach to student learning (National FFA Organization, 2005; New Jersey Department of Agriculture, 2005). However, in a time when globalization is eminent and competition with US markets are high, it is important that youth are fully equipped, not just in theory, with a solid knowledge base and skills set to handle the responsibilities that will be placed on them when entering the work force.

van Linden and Fertman (1998) found that "employers are more interested in adolescents who are leaders" (p. 7). In a study conducted by the National Association of Colleges and

Employers (2000), six of the top seven skills desired by employers from new graduates were leadership related. These skills were: interpersonal, teamwork, verbal communication, analytical, written communication, and leadership. In the same study the top personal qualities that employers seek in an employee were: communication skills, motivation/initiative, teamwork skills, leadership skills, academic achievement/GPA, interpersonal skills, flexibility/adaptability, technical skills, honesty/integrity, work ethic, and analytical/problem-solving skills. Larson, Wilson, and Mortimer (2002) wrote:

> The future of societies (globally) depends on their success in providing pathways whereby young people develop and prepare themselves to be contributing adults to their communities. When these pathways are well marked, stable, supported by the community, and inviting to adolescents, a society can be confident that new generations will join the ranks of adulthood well prepared (p. 159).

The question guiding this study remains, what is the most effective method for developing youth leadership skills? van Linden and Fertman (1998) proposed that the development of leadership in adolescents is a social process that is developed through interventions between people, activities, and learning experiences from interaction with families, communities, schools, and workplaces. They described three stages of leadership development that youth experience in the process of effectively developing leadership skills. They are: awareness, in which youth begin to discover how leadership fits into their lives; interaction, where youth develop their leadership skills through experiences and practice; and mastery, where youth have learned and are able to apply leadership skills to real-world situations. Additionally, Carter and Spotanski (1989) reported that students who received formal leadership training scored higher than students who had not received leadership training on nine of the eleven characteristics desired by employers that were aforementioned. They concluded that implementing leadership development goals in the formal curriculum would help develop stronger career and technical programs such as agriculture.

Therefore, if agricultural educators are focused on preparing students to be successful leaders in their homes, communities, and in the world market, current youth (future workers) must be exposed to experiences that promote the development of civic investment and competencies by first creating awareness about the importance of getting involved in their school and communities, then by allowing them repeated practice of desired skills, and finally by creating experiences that will develop mastery of the desired skills. To that end, the most effective way to develop youth leadership skills is to offer a variety of leadership training experiences. Through increased opportunities to participate in leadership development activities, in conjunction with formal leadership and career training, students are afforded the chance to gain a sense of responsibility and ownership over their career and societal success.

Using two of the three stages of youth leadership development described by van Linden and Fertman (1998) as the theoretical framework, this study assessed the leadership awareness and interaction of agriculture students. This study provides the much needed insight into what leadership development experiences are currently available, as perceived by the students, as well as what methods and activities are most desirable to these students. By understanding the students' leadership awareness and interaction, agricultural educators can create interventions that are "well marked, stable, supported by the community and inviting to adolescents" (Larson et al., 2002).

Purpose and Objectives

The purpose of this study was to assess the leadership awareness and interaction of agriculture students by answering the following questions: 1) Who are our current agriculture students? 2) Is leadership important in various areas of their lives? 3) What type of leadership development activities do students prefer? 4) Where do students prefer to learn and practice leadership development activities? and 5) Where are the greatest opportunities to apply leadership development skills to real-world experiences? The following research objectives guided this study:

1. Identify selected characteristics (gender, grade level, FFA membership and involvement, SAE, and organizational involvement) of agriculture students.
2. Describe students' attitude toward leadership development activities.
3. Describe current opportunities for leadership development identified by agriculture students.
4. Identify leadership development activities desired by agriculture students which include location and factors of a quality experience.

Methods

This descriptive study's population consisted of students enrolled in secondary agriculture programs in the United States. One hundred (n = 100) agricultural education programs were randomly selected as a cluster sample from a frame provided by the National FFA Organization of United States Department of Education approved agriculture programs.

In conducting the study, the National FFA Leadership Continuum Assessment Student Questionnaire (NFLCASQ) was designed by the researchers based on information collected during focus groups conducted in two states (Missouri & Colorado). The focus groups were used to clarify specifics within objectives three and four. Adjustments to the questionnaire were made based on the recommendations of a panel of experts (n=6). The questionnaire consisted of six major sections with 81 questions. The first section included six summated questions to determine the students' attitude towards leadership development. Two sections were used to identify current opportunities for leadership development. These sections included 38 questions with a 5-point Likert scale and an additional option for not applicable questions. Two additional sections were used to identify desired leadership activities. The leadership activities sections consisted of 27 5-point Likert scale questions. The final section included 10 demographic questions designed to measure personal characteristics (i.e. gender, grade level and FFA involvement).

The NFLCASQ Cronbach's alpha reliability coefficient on the summated scale questions was .85. On the test/retest, 30 questions had a percent agreement of .94 or better, 20 questions had percent of agreement of .88, 11 questions had a percent of agreement of .81, and 4 questions had a percent of agreement of .75. Demographic questions were not subject to reliability issues.

The questionnaire was converted into a scan form for ease and accuracy of data collection and entry. The questionnaires were sent out by Pearson NCS to selected schools. Teachers were instructed to administer the questionnaire to agriculture students in their program. Once completed, teachers were instructed to return the questionnaires to the University of Missouri-Columbia for data entry and analysis. Dillman's (2000) *Tailored Design Method* was utilized to

maximize the response rate using five points of contact (pre-instrument postcard, cover letter & instrument, postcard reminders, telephone calls, and a 2nd mailing of the instrument). From the 100 schools selected, 28 schools returned useable data. Independent samples *t*-tests were calculated to compare early respondents to late respondents (Miller & Smith, 1983) when addressing non-response error. The two groups were found to be different. Based on these calculations, caution should be used when generalizing beyond the sample.

Findings

One thousand thirty one students represented twenty-eight schools. The students were 43% female and 57% male. Grade level of the students was 31% freshmen, 21% sophomores, 27% juniors, and 21% seniors. Of the respondents, 76% were current FFA members and 68% reported to have a Supervised Agricultural Experience. Of the current FFA members, 41% were first year members, 25% were second year members, 19% were third year members, and 15% had been a member four years. When asked about their involvement in "in-school" organizations, 14% of the students were not in an organization, 30% were in one, 23% in two, 16% in three, 8% in four, and 9% were in five or more. For "out of school" organizations, 38% of the students were not in an organization, 27% were in one, 20% in two, 8% in three, 3% in four, and 4% were in five or more. Over 14% were current chapter FFA officers and over 20% were officers in other organizations.

In accordance with cluster sampling, students' data were compiled into school data for unit analysis. A mean for each school was calculated and grand means were determined for each question. Students were asked to indicate the level of importance that leadership plays in six areas of their life (see Table 1). When asked about their school, 69% of students indicated leadership was important or very important. Within their community, 61% of students indicated leadership was important or very important. A response of important or very important was indicated by 86% of the students when asked about their future career. Over 51% of the respondents indicated that leadership was important or very important with friends. Within organizations, 76% of students indicated important or very important. Finally, 64% of students indicated important or very important with family. The rating questions were summated for a total level of leadership importance, 76% of students indicated that leadership was important or very important in their overall lives.

Students were asked to identify how often they received the opportunity to learn leadership in selected activities (see Table 2). The FFA Organization was chosen by 78% of students who indicated a level of opportunity as an activity where they frequently or often learn leadership. Sports was selected as frequently or often by approximately 75% of the respondents who indicated a level of opportunity. Over 68% of students selecting a level of opportunity, indicated elective classes were frequently or often associated with leadership development opportunities. Of the students selecting a level of opportunity for work, frequently or often was selected by 60%.

Table 10
Level of Importance Leadership Skills Have in Selected Areas (n=28)

Area	Not Important %	Of Little Importance %	Somewhat Important %	Important %	Very Important %
In your school	3.45	7.09	20.13	42.28	27.04
In your community	2.98	9.70	25.94	36.60	24.78
In your future career	1.45	2.90	9.95	29.18	56.52
With friends	5.70	12.75	30.82	30.43	20.29
In organizations	2.71	5.33	15.70	37.50	38.76
With family	4.42	9.23	22.12	32.31	31.92
Total Importance of Leadership	0.60	3.98	19.70	53.23	22.49

Table 11
Opportunity to Learn Leadership Skills During Activities (n=28)

Activity	Never %	Rarely %	Occasionally %	Frequently %	Often %	Not Applicable %
FFA	4.74	4.41	12.44	25.44	52.97	11.93
Sports	6.10	6.68	12.31	25.09	49.82	17.58
Elective classes	4.37	5.72	21.73	31.19	37.01	6.51
Work	6.07	7.56	20.05	27.84	38.49	15.73
With parent(s)/guardian(s)	6.25	9.98	26.41	27.12	30.24	4.43
Workshops/Conferences	13.84	11.98	19.54	24.54	30.10	30.66
Church	10.26	12.97	24.17	23.70	28.89	17.11
With peers	8.11	13.68	30.40	26.24	21.58	4.73
4-H	27.54	7.57	18.07	18.42	28.40	43.70
With siblings	9.52	15.24	28.78	24.97	21.48	8.25
Core classes	9.44	13.85	30.75	20.88	25.08	6.11
Student Council	27.98	10.11	17.69	19.31	24.91	45.90
National Honors Society	26.53	13.36	19.66	20.23	20.23	48.37
FCCLA	38.51	10.75	15.52	15.22	20.00	66.83
Boy/Girl Scouts	40.34	8.28	18.05	19.32	14.01	53.82
FCA	38.53	11.61	17.28	17.85	14.73	65.43
FBLA	43.62	8.61	15.43	15.43	16.91	66.90
Literature/Books	19.10	22.36	28.52	19.47	10.55	21.73
Band/Chorus	29.65	16.97	24.55	14.50	14.33	41.47

Several activities were reported as not applicable or not available by respondents (see Table 2). FBLA was selected as not applicable by 67% of the respondents. Of those who indicated a level of opportunity, 32% of students indicated they frequently or often learned leadership from this activity. Similarly, 67% of students indicated FCCLA was not applicable, of those whom FCCLA was applicable, 35% of students indicated frequently or often. Not applicable was selected by 65% of the respondents when asked about FCA. Frequently or often was chosen by 33% of respondents when applicable. The last category with higher than 50% not

applicable was Boy/Girl Scouts, 54% of students indicated not applicable and 33% responded frequently or often when applicable. The two leadership development activities with the lowest level of perceived importance by students were Literature/Books (30%) and Band/Chorus (29%).

Students were asked to indicate how often they received the opportunity to practice leadership skills in selected activities (see Table 3). Of the students who indicated a level of opportunity, 73% selected frequently or often for FFA. Sports was selected as frequently or often by 70% of students selecting a level of opportunity. Elective classes was selected by 63% of the respondents selecting a level of opportunity. Finally, approximately 62% selected work as frequently or often an opportunity to practice leadership skills.

Table 12
Opportunity to Practice Leadership Skills During Student-Related Activities (n=28)

Activity	Never %	Rarely %	Occasionally %	Frequently %	Often %	Not Applicable %
FFA	7.57	6.05	13.74	23.52	49.13	13.32
Sports	6.42	8.77	14.69	24.44	45.68	18.18
Elective classes	5.48	9.32	22.37	28.84	33.99	8.71
Work	7.76	10.47	19.76	30.94	31.06	14.91
With parent(s)/guardian(s)	7.40	13.52	26.61	25.00	27.47	6.33
Church	10.15	14.29	24.19	23.43	27.94	18.98
With peers	7.68	13.73	28.54	26.49	23.57	7.13
Workshops/Conferences	15.04	13.57	23.75	22.71	24.93	29.08
4-H	26.63	9.24	16.85	17.75	29.53	45.18
With siblings	11.27	14.03	27.85	25.30	21.55	9.23
Core classes	12.05	14.68	26.83	21.36	25.08	9.24
Student Council	26.26	11.17	17.32	20.11	25.14	45.04
National Honors Society	25.57	13.17	21.37	18.32	21.56	46.53
FCCLA	35.92	10.34	16.95	16.38	20.40	64.60
Boy/Girl Scouts	35.56	11.78	16.44	18.00	18.22	54.50
FCA	35.61	12.54	17.09	17.09	17.66	64.55
FBLA	39.23	9.44	18.58	14.16	18.58	65.72
Band/Chorus	27.37	18.43	22.00	16.82	15.38	43.93
Literature/Books	20.65	22.61	26.14	16.60	13.99	22.18

FBLA (66%), FCCLA (65%), FCA (65%), and Boy/Girl Scouts (55%) had the highest number of respondents selecting not applicable (Table 3). For those who FBLA was applicable, 33% of students indicated the opportunity was frequent or often. FCCLA was shown to have frequent or often opportunity by 37% of those to whom it was applicable. Of the students who indicated FCA was applicable, 35% indicated an opportunity of frequently or often. Finally, 36% of the respondents who Boy/Girl Scouts applied to indicated frequently or often. Although they are switched in order, the two leadership development activities with the lowest levels of importance were again, Band/Chorus (32%) and Literature/Books (31%).

When asked to indicate the level of importance for factors related to quality leadership training, fun was found to have the highest level of important (61%) (see Table 4). Group work was selected as the second highest with 60% of the students selecting important or very important. Almost 55% of the respondents selected real-world application as important or very important. The fourth highest level of important or very important was interactive activities with 54% of the respondents selecting the top two categories. Organization was found as the fifth most important with 53% of respondents indicating important or very important. The two factors found to be the least important were a workbook and lectures. Almost 49% of the respondents selected not important or of little importance when asked about a workbook. Lectures was selected as not important or of little importance by 45% of the respondents.

Table 13
Factors in Developing Quality Leadership Training Experiences (n=28)

Factor	Not Important %	Of Little Importance %	Somewhat Important %	Important %	Very Important %
Fun	5.14	9.59	24.42	27.23	33.62
Group work	5.43	8.43	26.55	36.24	23.35
Real-world application	9.25	9.44	26.48	29.50	25.32
Interactive activities	7.11	9.15	29.21	31.45	23.08
Organization	8.23	10.68	28.60	31.44	21.06
New information	9.97	11.13	30.20	30.98	17.72
State officer	14.29	14.38	25.66	22.45	23.23
Individual work	11.21	13.24	30.05	27.34	18.16
Well known presenter	13.09	14.36	27.25	27.15	18.16
National officer	18.08	13.39	23.66	21.51	23.36
Materials to take home	15.51	14.63	29.66	24.68	15.51
Specific topic	11.60	16.76	31.87	27.19	12.57
Prizes	13.37	18.51	29.75	17.73	20.64
Far from home	13.55	18.20	30.01	25.94	12.29
Near home	11.28	18.00	33.66	23.15	13.91
Lectures	24.66	20.47	28.65	16.37	9.84
A workbook	25.68	22.97	29.15	15.93	6.27

The level of preference for location of leadership training can be seen in Table 5. When focusing on responses of preferred, highly preferred, and very preferred combined, agriculture classes (77%) was the highest rated location by students. Chapter meetings was the second most preferred with 63% selecting one of the top three levels of preference. The third highest rated category was international experience with 62% of the responses in the three categories. Officer meetings was the fourth most preferred location for leadership training with 61% of the responses. The item with the lowest preference was committee chair training (53%).

When reviewing students' responses in only the top two categories (highly preferred and very preferred), agriculture classes (48%) remained the top selected location for leadership training. International experience moved to the second most preferred location with 42% of the responses in the top two categories. A national workshop had the third most responses in highly

preferred or very preferred with 35% of the responses. The fourth most preferred location when looking at the top two levels was statewide workshop (38%). Committee chair training (28%) remained the lowest preferred location.

Table 14
Level of Preference for Leadership Training Location (n=28)

Location	Not Preferred %	Slightly Preferred %	Preferred %	Highly Preferred %	Very Preferred %
Ag classes	10.05	13.33	28.50	22.80	25.31
Chapter meetings	22.59	14.83	26.23	19.06	17.29
International experience	24.68	13.51	19.92	17.69	24.20
Officer meetings	21.96	16.62	24.98	18.85	17.59
National workshop	25.41	13.63	21.52	16.85	22.59
District/Area/Region workshop	23.83	16.41	24.90	20.61	14.26
Statewide workshop	24.68	16.65	21.06	19.10	18.51
With 2-5 surrounding states	27.71	16.47	21.70	16.27	17.85
With 2-5 surrounding chapters	25.98	19.51	25.29	15.59	13.63
Committee chair training	27.01	19.65	24.95	16.01	12.38

Conclusions-Implications-Recommendations

The future of any society depends on the success of preparing youth to be effective leaders and contributors to their communities as adults. How youth respond to situations in adulthood will be dependent on their experiences, backgrounds, and attitude toward that situation. Although the youth differ in gender, ethnicity, socioeconomic status, learning styles, personality types, experience, and education (van Linden & Fertman, 1998; Snow & Yallow, 1982; Rudd, Baker, Hoover, & Yermal, 1998), there are certain commonalities that can aid in the development of leadership interventions. Although the following conclusions and recommendations are limited to the sample, this study provides interesting insights into youth perceptions of leadership development and supports a need for further attention.

Research objective one was to identify selected characteristics of agriculture students. Of the 1,031 respondents, the majority were males with all high school grade levels being relatively equally represented. The majority of the students were FFA members and had a Supervised Agricultural Experience. Of the current FFA members, 41% were first year members and decreased with each year. The largest reported number of “in school” organizational involvement was one organization, followed by involvement in two organizations. The largest number of students reported no involvement with out-of-school organizations followed by involvement in one “out of school” organization. When asked about formal leadership roles, 14% were current chapter FFA officers and 20% were officers in other organizations. This can be interpreted as the average student respondent, with the majority being male, was involved in one or two school organizations, most likely in their first year of membership in the FFA, did not hold any leadership offices, and possibly participated in one, if any, out-of-school activities.

Research objective two was to describe students' attitude toward leadership activities. The majority of agriculture students reported leadership skills as important or very important in their life. Although several areas were identified as important and very important, the two areas where students reported leadership as the most important was in future careers and in organizations. Both areas received a ranking of important or very important by at least 75% of the respondents. This was followed in importance by in school, family, community and friends respectively.

Overall, students have leadership awareness. They understand the importance of leadership in their everyday lives. Areas where leadership awareness could be stronger are with friends, community and family. Although a majority of the students reported these three areas as important and very important, these areas received the highest ratings for not important or of little importance of the choices given. This implies that students understand that leadership is important in school and at work, but not as much in their homes and communities. Many students reported that they were FFA members and part of the FFA creed is to "exert and influence" in home and community. These findings indicate that students may not be fully aware of the importance of being leaders in their community, home, and with friends and therefore more opportunities should exist to focus on these areas with future leadership interventions.

Research objective three was to identify current opportunities for leadership development by agriculture students. Of the 19 opportunities identified as places or situations to learn leadership, only seven were rated by the majority as an opportunity to learn leadership frequently or often. The FFA ranked number one with 78% indicating it as a place they frequently or often learn leadership followed very closely by sports. The other opportunities identified by a majority were elective classes, work, with parents/guardians, workshops or conferences, and church respectively.

When asked to identify where opportunities to practice leadership exist, the majority indicated that FFA, sports, elective classes, work, with parents/guardians, and church respectively were places or situations in which they frequently or often received opportunities to practice leadership. Although youth conferences and workshops were identified as an opportunity to learn leadership, it was not identified as an opportunity to practice leadership. FBLA, FCCLA, FCA, and Boy/Girl Scouts all had the highest levels of not applicable in both opportunities to learn and practice leadership skills. Additionally, students who deemed these four organizations applicable reported them as having the lowest levels of opportunity to learn and practice leadership skills.

Students identified several opportunities to practice leadership. This is very promising for youth leadership development. This indicates that students are receiving leadership interaction in a variety of situations which will be very important to their future success. However, the findings indicate that students are practicing in student organizations, through participation in sports, in class, and at work. The observation that three of the four opportunities are school related may indicate why students reported school related activities as the most important areas for youth leadership development. In general, students will find the things they are most familiar with as most important. In order to accomplish full leadership awareness and interaction, students must be exposed to and taught how to apply leadership skills to a variety of academic, extra-curricular, professional, community, and home situations.

Therefore, it is recommended that agriculture instructors incorporate leadership development activities into all areas of their local program. Leadership development experiences should be created to provide opportunities to practice real-world application. Teachers should acknowledge and incorporate the lessons learned from participation in sports, work, and community activities when teaching leadership development. Also, students should be encouraged to participate in extra-curricular activities if not already involved.

Research objective four was to identify leadership activities desired by agriculture students. When asked where leadership training should occur, the locations that received the most frequent responses as highly preferred and very preferred were agriculture classes, followed by international experiences and national workshops. Those locations that received the most frequent low-rankings of not preferred were with 2-5 surrounding states or chapters, and committee chair meetings. Students indicated preferences toward activities at the local and national/international level. Currently, the National FFA Organization provides national and international leadership development opportunities. More and broader opportunities should be provided to allow an increased number of students to participate. National workshops should be offered across the country with different programs at each location.

When asked what factors are most important to them in evaluating the quality of a leadership activity, the majority identified five key factors as important or very important. The key factors in order were: fun, group work, real-world application, interactive, and organization of the activity. The presenter(s) at a leadership activity was not as important as the development of the activity. If leadership activities are designed with students' desires in mind, the presentation can be conducted by differing individuals (e.g., teachers, students, officers.)

Furthermore, the National FFA Organization, which was identified by the respondents as the most often utilized leadership development opportunity should develop materials that are easily incorporated into agriculture programs. Materials should be produced that can be used in multiple situations at the local level. Materials should be created in such a manner that students, teachers, and related personnel can use them, such as ready to use workshop packets.

Finally this study should be replicated to support the findings and decrease non-response error. Along with the replication of this study on the same population, other youth leadership development assessments on alternative populations such as urban agriculture students or non-agriculture high school students should be conducted to identify similarities or differences in the results. Additionally, responses from teachers should be compared to student information to identify commonalities and differences.

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