

**Leadership Curriculum Used by High School Agricultural Science Instructors:  
A National Study**

A. Christian Morgan  
448 Agriculture Hall  
Oklahoma State University  
Stillwater, OK 74075  
405-744-8143  
chris.morgan@okstate.edu

Rick D. Rudd  
P.O. Box 110540  
University of Florida  
Gainesville, FL 32611  
352-392-0502  
rrudd@ufl.edu

## **Introduction**

Many writers have focused on the value of and the need to develop leaders (Figura, 1999; Gardner, 1990; Kouzes & Posner, 1997). Because of this need for leaders, it seems natural that leadership education should occur in public schools. Leadership has been taught in high school through a variety of venues such as leadership courses, vocational clubs, student council, and other school based organizations. Agricultural science courses have provided many opportunities for leadership education through classroom, supervised agricultural experience (SAE) and FFA Organization activities. Past studies have focused on the amount of leadership activities such as career development events (CDE), SAE activities, FFA Organization conventions, and other co-curricular activities, but little research has focused on the type of leadership curriculum and material used to teach leadership in agricultural science classrooms. This research sought to determine what leadership curriculum and materials were being used in high school agricultural science classrooms to teach leadership.

## **Literature Review**

Leadership development is becoming a focus of many public schools across the country and in a few cases, schools and school districts have designed and implemented curriculum in order to teach leadership knowledge and skills to youth (Commonwealth of Virginia Board of Education, 2001; School District of Washington, 2001; Virginia Division of Policy and Public Affairs, 2001). This interest in leadership from schools may have stemmed from authors such as Gardner (1990) who reminds us that leaders are needed in all levels of our society, or Figura (1999) which warns us of an impending leadership void among our workforce. Students who have been taught leadership are

better prepared to act in a leadership capacity due to the fact they better understand the phenomena of leadership as a personal and attainable undertaking (Ricketts & Rudd, 2002). If a goal of our high schools is to produce capable citizen leaders, it only seems natural that leadership should be part of the curriculum.

### **Leadership Development in High Schools**

Secondary public schools have a history of leadership development. In addition to student council, debate clubs, and other on campus organizations, many high school vocational programs develop leadership skills in students through a variety of activities such as National FFA Organization, FCCLA, DECA, and SkillsUSA (White, 1982). Since their inception, high school agricultural science courses have included leadership development as a cornerstone of their program (Hillison & Bryant, 2001). During this time the National FFA Organization has been working hand-in-hand with agricultural science teachers, providing an avenue for young people to exercise and develop their leadership skills (National FFA Organization, 2002, p. 5). The FFA mission statement reveals the original goal of the organization stating, “FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education” (National FFA Organization, 2002, p. 5).

There is a unique link between high school agricultural science programs and the co-curricular National FFA Organization. Within the agricultural science classroom the agricultural science instructor teaches leadership skills to students, who then apply that knowledge by engaging in leadership activities provided through local, district, state and national activities. .

Agricultural science programs provide a wide variety of opportunities for leadership development such as classroom instruction, supervised agricultural experience and FFA activities (Esters, 2002), while local FFA chapters have the primary responsibility for providing leadership experiences for students involved in agricultural education (Brannon, Holley, & Key, 1989; National FFA Organization, 2002). Since its inception in 1928, leadership development has been a goal of FFA (Connors, 1999; National Research Council, 1988). Through participation in FFA activities, students are able to obtain leadership experiences in a variety of environments (Esters, 2002).

### **Student FFA Involvement**

A substantial amount of research has been conducted to analyze the impact of FFA involvement on students. Townsend and Carter (1983) found student self-perceived leadership competencies had a significant correlation with FFA participation. Their results suggest leadership is enhanced with FFA activity. In addition, a study by Ricketts and Newcomb (1984) which surveyed high school students revealed that agriculture students and FFA members possess significantly more leadership and personal development abilities than did students not enrolled in agriculture. They also found that students with a higher level of activity in the local FFA chapter had increased self-perceived leadership abilities.

Wingenbach (1995) found that increased member engagement within the local FFA chapter had a significant relationship with the youth leadership and life skill development score. Likewise Rutherford, Townsend, Briers, Cummins, and Conrad (2002) surveyed FFA chapter officers attending the National FFA Organization's Washington Leadership Conference (WLC) and found a significant positive relationship between self-perceived

leadership skills and level of FFA involvement. This positive correlation between level of FFA involvement and the instrument leadership scales reinforces the positive relationship between FFA activity and perceived leadership skills.

The preceding studies help to illustrate the benefits of youth being involved in extra-curricular and co-curricular activities. Yet, not all students engage in these activities. What would be beneficial is classroom leadership instruction so all students can learn leadership knowledge and skills (Carter & Spotanski, 1989; Ricketts & Rudd, 2001). There are leadership textbooks available (Delmar Learning, 2003; Prentice Hall, 2003) and some states have developed leadership curriculum (Commonwealth of Virginia Board of Education, 2001; Instructional Materials Service, 2003; North Carolina State University, 2003; Virginia Division of Policy and Public Affairs, 2001) to address local needs, but at the time of this study no nationwide curriculum was available. Although agricultural education has accepted the charge to teach leadership skills, no studies have been conducted to determine what curriculum has been used in agricultural science classrooms.

### **A Leadership Curriculum for Youth**

With no national leadership curriculum available, the question that begs for an answer is what materials are instructors using to teach leadership? Although high school agricultural science instructors have the skills to develop their own curriculum materials, they prefer to use pre-existing materials (Wingenbach, Gartin, & Lawrence, 2000) and the use of a quality curriculum provides a strong foundation for quality teaching to occur (Swan, 1996). Boccia (1997) points out “there is a meager base of programmatic guidelines for successful student leadership in schools” (p. 76). Though some teaching

materials are available, it appears there is a need for a comprehensive leadership curriculum for youth.

### **The Model of Youth Leadership Development**

A framework for a comprehensive youth leadership curriculum has been developed by Ricketts and Rudd (2002). They conducted a meta-analysis of youth leadership development literature and based on this research, the Model of Youth Leadership Development was developed (see figure 1). This model consists of five dimensions:

- Leadership knowledge and information--Base knowledge needed about leaders and leadership before application of leadership concepts.
- Leadership attitude, will and desire--Focuses on disposition, motivation, self-realization, and health to prepare students for leadership.
- Decision making, reasoning, and critical thinking--Using critical thinking skills to address problems and make decisions with incomplete information.
- Oral and written communication skills--Skills necessary to effectively sharing information and convey ideas, attitudes, opinions and feelings.
- Intrapersonal and interpersonal relations--Includes conflict resolution, stress management, teamwork and ethics viewed through the framework of diversity, learning styles and personality types (Ricketts, 2003).

Each dimension represents one construct for which a curricular unit should be developed. Each curricular unit is designed so it can be taught at three different levels of cognition: awareness, integration, and mastery. By addressing each stage in each dimension, a complete and cohesive nature of a leadership curriculum is possible (Ricketts & Rudd, 2001).

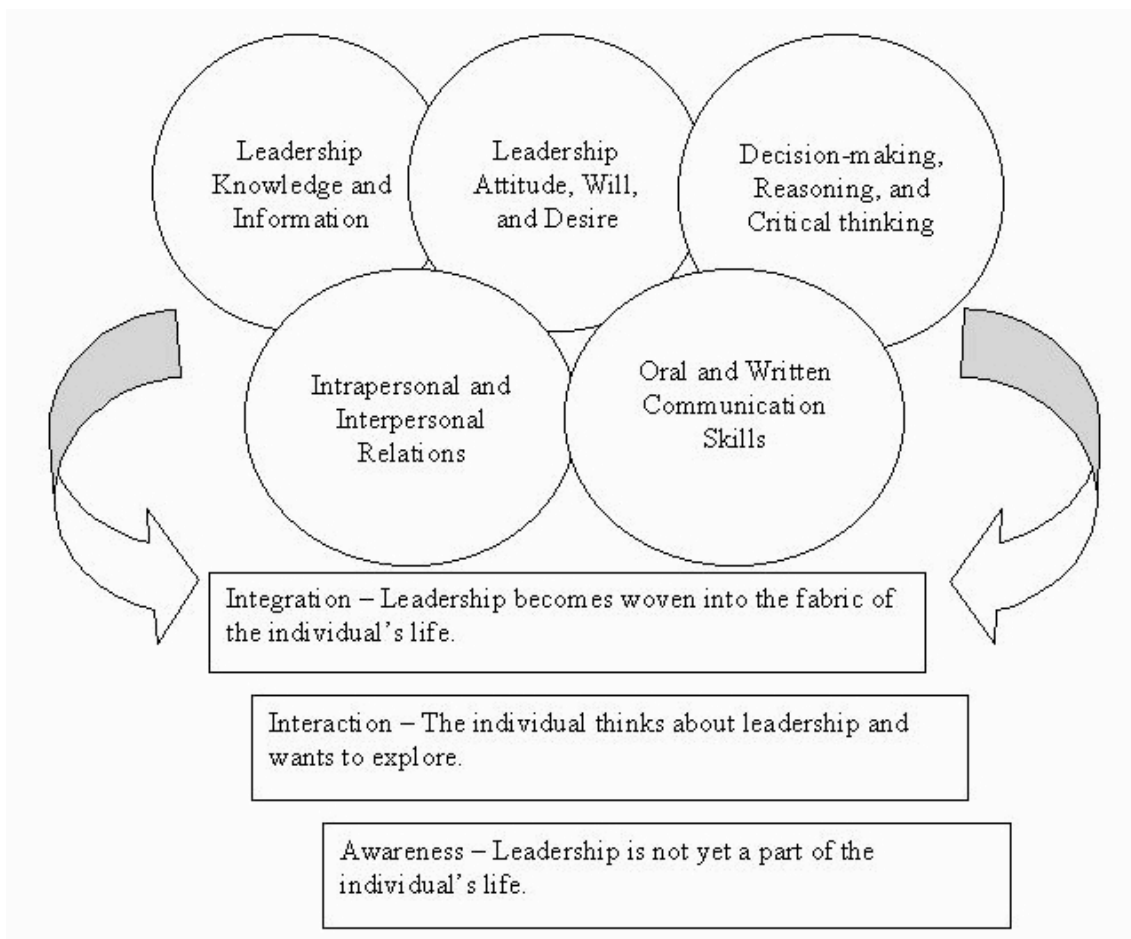


Figure 1. Model of Youth Leadership Development. From Ricketts, J. C., & Rudd, R. D. (2002). A comprehensive leadership education model to train, teach, and develop leadership in youth. *Journal of Career and Technical Education*, 19 (1), 7-17.

### Curriculum Adoption

Having a new curriculum with which to teach high school students leadership knowledge and skills has the potential to be advantageous to students' learning, but prior to students benefiting from the curriculum the instructors must first adopt it. Studies have found a common set of characteristics that lead to curriculum adoption (Bland et al., 2000). Bland et al. identified five categories for successful curriculum change: politics, participation by organization members, human resource development, evaluations and leadership.

Politics revolve around the allocation of scarce resources (Bolman & Deal, 1997). These resources include internal networking and resource allocation. Internal networking consists of formal and informal channels through which people are influenced by opinion leaders (Bland et al., 2000; Rogers, 2003). Successful change requires advocates within this network. Resource allocation requires having the necessary funds to implement the change. These funds may be required for purchasing curriculum, or may be necessary for faculty training of the curriculum, both of which are required for successful adoption.

Possibly the most influential political element in curriculum adoption today is the popularity of standardized testing and accountability within the school system (Frontline, 2002). Students in many states are required to pass a standardized test prior to moving on to the next grade level. Using the student scores from these tests, schools can be rated and held accountable for students' passing and failing these tests (Doherty, 2004). Because of the impact these tests have upon the students' success as well as the school's accountability, a tremendous amount of effort goes into preparing students to pass these tests (FairTest.org, 2004). This may have an impact on the subjects offered in the schools. Subjects that do not have a direct positive impact on student standardized test scores may be at risk of being eliminated from the school course offerings. Standardized tests usually assess the students' knowledge of mathematics, reading and grammar (Doherty, 2004). Typically, leadership is not a concept that students are held accountable for with these tests, and therefore a leadership curriculum may not be adopted in a school because it does not contribute to the success of students on standardized tests. This would be an unfortunate situation, because the skills learned through leadership instruction are skills that will benefit students regardless of the career in which they enter,

providing them with the leadership and communication skills desired by employers (Boccia, 1997; Figura, 1999).

Participation by organization members is a key element to successful change (Bland et al., 2000). Curriculum adoption efforts must have the support of instructors for the adoption effort to be a success. One method to accomplish this is to include instructors in the implementation of the adoption process (Butler, 1999; Lowery, 2000). As stated by Connors (1999), “Teachers must see a need for change, believe it is justified, and be able to recognize problems that can be addressed by adoption of the curriculum” (p. 54). Including instructors in the adoption process increases their skill development and the likelihood of curriculum implementation (Bland et al., 2000). Therefore, instructors must be willing to participate in the curriculum change for success to occur.

Human resource development in the form of professional development workshops and seminars is important to allow instructors to see how the curriculum is properly utilized are necessary for successful curriculum adoption (Kirk & MacDonald, 2001; Leat & Higgins, 2002). In this way, instructors’ needs can be met through proper professional development, training, and support through the curriculum adoption process (Bland et al., 2000). Ideally professional development workshops should be conducted to assure successful curriculum adoption.

Evaluation allows for monitoring of implemented changes and solving problems as they arise (Bland et al., 2000). As curriculum is distributed and implemented instructors should be contacted to monitor and evaluate the adoption process. The findings of this current study would assist in such an evaluation process by providing baseline data of current leadership instruction. Future studies could then be conducted to determine the

rate of adoption of a new curriculum. This information may be helpful in determining future professional development seminars and possible curriculum changes in order that the curriculum will be most useful to instructors.

Strong leadership is required for successful change to occur (Bland et al., 2000). With this adoption process the leader must be prepared to provide a vision for a national organization. In addition, other factors within the adoption process are also necessary. Many studies found encouraging teachers to adopt a new curriculum can be a challenge for a number of reasons. For some instructors there is a period of delay from the time the curriculum is introduced to the instructors, to the time it is adopted (Connors & Elliot, 1994; Lowery, 2000; Rudd & Hillison, 1995; Wingenbach, Gartin, & Lawrence, 2000). This delay is natural and should be anticipated.

The adoption rate of many of these studies follows the Rogers (2003) model of adoption innovation. For adoption to occur teachers must see the relative advantage to using the curriculum, they must be able to observe the advantage of using the curriculum, and the curriculum must be compatible with their existing schedule, teaching style and environment. The complexity of the curriculum must be at a level that is challenging to the students, yet relatively simple for the instructor to utilize. Finally, the curriculum must have the ability to be used on a trial basis to determine if it has the ability to integrate with the existing teaching environment and teaching style of the individual teacher. Rogers (2003) defines five adopter categories based on the individual's stage of adopting an innovation.

- Innovators – Active seekers of new ideas, who adopt new ideas quickly, thought to be “on the cutting edge.”
- Early Adopters – Individuals who have evaluated the innovation and are quick to adopt it once it meets their approval.

- Early Majority – Individuals that adopt new ideas after thorough evaluation and just prior to an “average” member of the group adopts an idea or innovation.
- Late Majority – Individuals that are skeptical about the innovation and must witness the success of others prior to adopting an idea or innovation themselves.
- Laggards – Individuals who are last to adopt an innovation.

While some instructors are slow to adopt the curriculum, others prefer to use only parts of the curriculum rather than the entire curriculum (Connors & Elliot, 1994; Rudd & Hillison, 1995; Wingenbach, Gartin, & Lawrence, 2000). For this reason the curriculum should be designed as ‘bite-sized’ pieces that it can be incorporated into existing instruction (Leat & Higgins, 2002). This also provides instructors the opportunity to use the curriculum on a trial basis. This provides a way for instructors to sample a piece of the curriculum without being forced into using the entire curriculum.

Similarly, instructors need to have the freedom to modify the curriculum to meet the needs of the school, community and constituent groups (Bland et al., 2000). This freedom provides ownership of the curriculum by the local instructor, which is essential, because they have the expertise to know what the students can handle and to know how curriculum can best be adapted for use locally (Kirk & MacDonald, 2001; Leat & Higgins, 2002).

### **Purpose and Objectives**

Research has been conducted to determine the impact of co-curricular activities on youth leadership development (Rutherford, Townsend, Briers, Cummins, & Conrad, 2002; Seevers & Dormody, 1995; Townsend & Carter, 1983; Wingenbach, 1995), and the amount of leadership being taught in agricultural science classrooms (Morgan & Rudd, 2005), but little research has been conducted to determine the curriculum materials used to teach leadership in high school agricultural science classrooms. The purpose of

this study was to determine what types of curriculum were used by agricultural science instructors to teach leadership. The objectives were to determine if:

- Instructor-developed curriculum was being used for leadership instruction
- Commercially available curriculums were being used for leadership instruction
- Commercially available text books were being used for leadership instruction

This research was conducted prior to the national distribution of the National FFA Organization's *LifeKnowledge* curriculum.

### **Methods**

This study was conducted using survey research and was part of a larger study. The population for this study was high school FFA chapter advisors at agricultural science programs during the 2003-2004 school year. FFA advisors in five states (Kansas, Maine, Nebraska, New Jersey, and Pennsylvania) where the *LifeKnowledge* curriculum had been pilot tested were not included in this study.

There are 7,193 FFA chapters throughout the nation (National FFA Organization, 2002). To achieve a 95% confidence level with 5% sampling error a sample size of 367 was needed for this study (Dillman, 2000). To account for inactive programs, incorrect addresses, etc., a sample size of 400 was used. A list of FFA chapters was provided by the National FFA for this study and the sample was selected using simple random selection (Agresti & Finlay, 1997).

An open-ended question was used to gather this information which asked, "Please tell us what leadership curriculum or text book you currently use." Responses to this question were sorted and grouped using the constant comparative method (Lincoln & Guba, 1985).

The data collection from the sample was conducted using a modified version of the Tailored Design Method (Dillman, 2000). Participants were mailed a pre-notice letter notifying them that they had been selected to participate in this study. Instructions were provided explaining how they could access the survey instrument from the World Wide Web. Four days later a paper instrument was mailed to the participants which included the IRB informed consent form. A thank you / reminder postcard was mailed ten days later. A second survey instrument was mailed ten days later to participants that had not yet responded. Eight days later phone calls were placed to participants that had not yet responded asking them to complete the questionnaire. An additional ten days were allowed for the collection of electronic and mailed responses. The final response rate was 41.8% ( $n=167$ ).

### **Findings**

Of the 167 participants, 135 responded to the open-ended curriculum question. Participant responses that included multiple curriculum materials were divided and each material listed was placed in an appropriate category (Table 1).

The text *Leadership, Personal Development, and Career Success* from Del Mar was the most popular resource with 27 respondents stating they use this. The second most popular material was state provided curriculum ( $n=25$ ). Within this group 11 participants used curriculum from the Instructional Materials Service (IMS) in Texas, four participants used materials from the Instructional Materials Lab (IML) in Missouri, two participants used materials from the Curriculum and Instructional materials Center (CIMC) in Oklahoma, and eight participants stated they used materials from other states.

Eighteen participants stated they used the Official FFA manual or FFA Student handbook to teach leadership. In addition, fifteen participants developed their own curriculum materials. These material included “handouts,” “just notes,” “personal experience,” “articles,” “state FFA officer materials,” Washington Leadership Conference materials, and “various resources from college text books and Internet sources.”

Parliamentary procedure materials were used by 12 participants as leadership curriculum. Nine participants used other agricultural science text books, with the most popular being *Agriscience: Fundamentals and Applications* by Delmar. A variety of miscellaneous books and materials were used by nine of the participants to teach leadership. These materials included Ziglar’s *I Can* curriculum, CEV multimedia videos, *Success in the World of Work* software, *Character First*, *How to Win Friends and Influence People*, *7 Habits of Highly Effective People*, *The Leadership Challenge*, *Developing the Leader within You*, and John Deere business curriculum. Three of the respondents stated they used the Interstate text *Developing Leadership and Personal Skills* to teach leadership.

Table 1

*Leadership Curriculum Materials Used by Agricultural Science Instructors*

| Curriculum Material Used  | <i>n</i> |
|---|----------|
| Text: <i>Leadership, Personal Development, and Career Success</i> | 27       |
| State provided curriculum   | 25       |
| FFA Manual or FFA Student Handbook                                | 18       |
| Instructor developed  | 15       |
| Parliamentary procedure materials                                 | 12       |
| Agricultural science textbooks                                    | 9        |

|  |   |
|--|---|
| Miscellaneous leadership books                         | 9 |
| Text: <i>Developing Leadership and Personal Skills</i> | 3 |

Finally, 11 participants stated that leadership was not taught in a specific course, but was taught throughout many courses within the agricultural science curriculum. Within this responses included:

- “Indiana has eleven approved agricultural courses. Leadership is not one of them. It is taught throughout all eleven courses”
- “Leadership is not formally taught from a text book. Rather, leadership, goal setting, and responsibility are taught as part of the science curriculum. Each student is given an agenda book in the beginning of the year. Lessons are given on goal setting, time management and prioritizing with assessment being part of the agenda book grad”
- “We teach agriculture leadership everyday in our agriculture program. We were able to get 70% of our students to get involved in an after school activity to show their leadership. We just received a new book to use on leadership, however I do not use a book at this time. I teach them from my own values”
- “No text is used – other than the ‘Official FFA Manual’. Leadership skills & curriculum are included in, or should be included in every course we teach!”
- “I teach leadership development in all my courses. We spend a couple of weeks intensely and then it is integrated throughout the year. I use several resources: My personal experience as a past state officer. I also use Delmar’s Leadership book, but I also refer several resources I have acquired from different seminars I have attended.”
- “I implement leadership into my general agriscience course.”
- “Integrated into a unit within each course taught; FFA student handbook, parliamentary procedure workbook; and *Bits and Pieces*”
- “I currently do some leadership activities with my 7<sup>th</sup> and 8<sup>th</sup> graders in their FFA unit - I do a leadership/conflict resolution unit with my freshman – Also, talk about leadership with my seniors in advanced ag & with all agribusiness/entrepreneurship class members.”

### **Conclusions / Recommendations / Implications**

It is apparent from this study that a wide variety of materials were being used to teach leadership in agricultural science classrooms. While *Leadership, Personal Development, and Career Success* from Del Mar was the most popular material being used by respondents in this study, there was not a curriculum material or text being used by the majority of the respondents. Similarly, state curriculums were popular, but were not used by a majority of instructors either.

Likewise, a variety of perspectives of leadership existed among the participants. Some instructors focused on the FFA manual as their source for leadership knowledge, while others focused on parliamentary procedure manuals. Still others used materials available from popular sources and some instructors relied on personal experience for teaching leadership.

While each of these curriculum materials has their strengths, it is evident there is a lack of consistency in what leadership knowledge base is being used for leadership instruction. In addition, there appears to be a lack of consistency in how instructors define leadership. Some instructors view leadership through the lenses of Kouzes and Posner's *The Leadership Challenge*, while others view it thorough the lenses of a general agriscience textbook, and others view it though the lenses of the state curriculum.

This study reveals two primary observations. First, there is a need for a common definition of leadership that all agricultural science instructors can share. Just as agricultural science instructors have a common definition for animal science or horticulture, there should be an accepted definition for leadership. Second, there is a need for a curriculum that all agricultural science instructors can access to use as a foundation for leadership instruction. Since the time this study was conducted the

National FFA Organization has helped to address both of these observations. The LifeKnowledge curriculum was developed to provide a common curriculum base which all agricultural science instructors can use. This curriculum was developed through a partnership with industry, university faculty and the National FFA Organization so that youth in classrooms across the country could have a solid base in leadership knowledge.

It is recommended that future research should be conducted to determine the adoption of the LifeKnowledge curriculum. In addition, research should be conducted to determine specifically how agricultural science instructors define leadership.

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