

TEACHING VALUES IN AGRICULTURAL EDUCATION

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Abstract

This study determined perceptions of agricultural education teachers nationwide as to what values should be taught to students enrolled in high school agriscience courses. The population was secondary agricultural teachers who taught in public secondary schools in the United States during 1997-98. Most of the teachers were middle-aged, white males who taught agriculture for an average of 14 years. The average school size where these agriculture teachers taught was 750 students, and enrollment in agriculture represented nearly 20% of the total school population. Agriculture teachers agreed that the 21 values identified in this study were important characteristics that should be taught to young people studying high school agriculture. They perceived the most important values were responsibility, honesty, courtesy, and respect. Although agriculture teachers perceived the FFA as the best component for teaching values, a number of values can be taught in the classroom, laboratory, and Supervised Agricultural Experience program. Teachers tended to agree on the importance of the 21 values regardless of teacher characteristics. In general, teachers who perceived they exhibited a certain behavior tended to have a positive perception toward including that value (or a related one) in the agricultural education curriculum.

Introduction/Theoretical Framework

From the early 20th century to the present, heavy emphasis has been placed on the moral aspects of teaching (Kimball, 1991). Chang (1994) and Clark (1991) are among many who see the school as the most relevant change agent in the battle for improved morality in the United States. Chang notes that the school is more than just a building; rather it is a body of learners and educators set in an environment of inquiry and development. She emphasizes the influence teachers have on the moral development of students is tremendous, and the "importance of ethics in teaching cannot be overstated" (p. 71). Clark states that "to educate is to lead responsibly by influencing students' knowledge, skills and dispositions in ways that will serve them and their society well and to do so in morally defensible ways" (pp. 257-258).

Educators have realized for some time that

what a student accomplishes depends upon his/her attitude, philosophy and value judgments. Educators must recognize that students will possess a value system and it is part of the learning process to help students develop and utilize their individual system (Pullias & Lockhart, 1963). According to the Handbook on Agricultural Education in Public Schools (Phipps & Osborne, 1988), teachers of agriculture must possess unquestionable character as it is essential to be a successful teacher. Phipps and Osborne (1988) state this is a necessity because many students will try to emulate their agricultural instructors and consequently what teachers do must be of the highest standard. Above all, teachers must remember that their primary role in the public schools is to nurture and contribute to the educational, social, and personal development of people. Agriscience teachers must be able to demonstrate a sincere interest in the needs and accomplishments of each student. They continue by saying that even the most difficult students will

respond if provided with encouragement and have a teacher who will strive to build positive self-concepts in students.

Great strides are being made in incorporating moral education into the whole school environment, including the agricultural education curriculum. However, the instruction of moral education is not clearly defined in the current American educational system. Recent studies by Irwin (1988), Cheek and Parker (1994), and Cangemi and Aucoin (1992) reviewed methods of teaching values in the classroom. While the studies agreed that value education should be part of the formal curriculum, they did not agree on the best method of delivery.

In summary, the review of literature emphasized the following points: (1) there was a need to teach values to high school students; (2) the teaching strategies for incorporating the teaching of morals and values in secondary agricultural science needed to be identified; (3) literature showed there was a discrepancy as to what values are and what values should be taught; and (4) there was no existing study in agricultural education addressing the subject of teaching values and morals in the secondary agricultural education classroom.

Purpose of the Study

The major purposes of this study were to: (1) determine perceptions of agricultural education teachers nationwide as to what values should be taught to students enrolled in high school agriscience courses; (2) identify in which component of the agricultural education program should these values be taught; and (3) identify if differences exist in perceptions of the teachers according to selected demographic variables and teacher behavior.

Questions to Frame the Study

As a means of accomplishing the purpose of

the study, answers to the following questions were sought:

1. What are the characteristics of agriscience teachers in the United States according to selected demographic variables?
2. What are agricultural education teachers' perceptions as to values that should be taught in a high school agriscience program?
3. In which of the four components of an agriscience program (classroom, laboratory, supervised agriculture experience program, or FFA) do agricultural education teachers perceive these values should be taught?
4. What is the relationship between the characteristics identified in question one and the perceptions of teachers as to what values should be taught in the agricultural education curriculum?
5. Is there a relationship between teacher behavior and the values they think should be taught to students?

Procedure

The target population for this study was all secondary agricultural teachers who taught in public secondary schools in the United States during the 1997-98 school year. The list of individuals in the target population was taken from the Agricultural Educators Directory (Henry, 1997). A mailed questionnaire, prepared by the researcher using the Total Design Method (Dillman, 1978), was used as the data collection instrument. A review panel of agricultural educators was used to validate the instrument. It was pilot tested by a group of cooperating

agriscience teachers using test/retest strategies. Relationships between the first and second measures were used to determine a coefficient of stability for the instrument. Coefficients ranged from .90 to 1.0 for each of the questions/statements. A proportional, random sample of 200 teachers was selected from the Agricultural Educators Director-v and served as the sample for the population. The sample was also stratified by state. A formula for estimating sample size recommended by Cochran (1977) and Dillman's (1978) suggested response rate were used to determine a minimum return sample size. By using this formula, it was determined that a sample size of 175 was sufficient. Over-sampling was used because past national surveys of agricultural education teachers have shown low response rates. Individuals selected for the sample were surveyed starting the first week of September, 1997, and continued until the second week of October, 1997. A total of 141 teachers responded to the survey (return rate = 70.5%). Three returned instruments were unusable.

Survey instrument responses were entered and used to construct data files. Statistical analysis of the data files was completed using SPSS for the Macintosh. Descriptive statistics were used to summarize the data pertaining to: (a) the demographic background of the teachers, (b) teacher responses concerning values to be taught, and (c) program areas where the values can be taught. Multiple regression analysis was used to determine if significant differences existed on teacher responses according to selected teacher characteristics. Correlation coefficients were utilized to determine if significant relationships existed between teacher behavior and values the teachers perceived should be taught to students in agricultural education.

Findings

Characteristics of Respondents

The mean years of teaching experience for the

respondents was 14.8 years, and they had taught agricultural education for an average of 14.0 years. A majority of the teachers were in single teacher departments, although 47% were in programs with more than one teacher. Over three-fourths (87%) of the respondents were male. The average age of the teachers was 41 with the youngest being 24 and the oldest being 65. The majority (93%) of the respondents were white/non-Hispanic.

Most of the teachers taught in small communities with populations less than 5,000. Average school size was 750 students with 136 students enrolled in agriculture courses. The mean percentage of agriculture students participating in the FFA organization was 72. Sixty-one percent of the students in the teachers' programs participated in SAE programs.

In order to get a measure of how religious the teachers were, they were asked their level of agreement with the statement "I consider myself a religious person." A large majority (85%) of the teachers agreed or strongly agreed with the statement.

Agreement with Values

Teachers were given 21 values and asked to indicate their level of agreement as to whether these values should be taught in the agricultural education program (based on a scale of 5 = strongly agree and 1 = strongly disagree). There was strong (4.0 or higher) agreement that all 21 values should be taught in the agricultural education curriculum (Table 1). Values receiving a level of agreement higher than 4.5 were responsibility (4.86) honesty (4.80), courtesy (4.79), cooperation (4.73) truth (4.70), respect (4.70), diligence (4.65) honor (4.64) self-respect (4.61), perseverance (4.60), commitment (4.57), and loyalty (4.55). Other values ranked in order of level of agreement were prudence (4.51), trust (4.50), kindness (4.50) caring (4.50) service (4.49) tolerance (4.41) friendship (4.40) generosity (4.35), freedom (4.12).

Table 1. Rating of Values

Value	<u>M</u>	SD
Responsibility	4.86	.35
Honesty	4.80	.42
Courtesy	4.79	.41
Cooperation	4.73	.45
Truth	4.70	.49
Respect	4.70	.49
Diligence	4.65	.50
Honor	4.64	.53
Self-respect	4.61	.60
Perseverance	4.60	.51
Commitment	4.57	.54
Loyalty	4.55	.54
Prudence	4.51	.56
Kindness	4.50	.57
Trust	4.50	.54
Caring	4.50	.61
Service	4.49	.63
Tolerance	4.41	.60
Friendship	4.40	.69
Generosity	4.35	.69
Freedom	4.12	.79

Where Values Should Be Taught

The teachers were asked which component of the agricultural education program (Classroom, Laboratory, SAE, or FFA) would serve as an appropriate medium for teaching each of the values. Responses were recorded according to the percentage of teachers who indicated that the component was an appropriate place for the value to be taught.

Values Appropriate as Part of the Classroom Component.

Three of the values were perceived by more than 90% of the teachers to be appropriately taught in the classroom setting. Courtesy (96.4%) respect (91.3%), and honesty (91.2%) were the values seen to be best suited for classroom

instruction. Other values receiving high ratings for the classroom component were truth (87.7%) responsibility (86.2%) kindness (86.1%) caring (84.1%), honor (83.9%), self-respect (81.2%), cooperation (80.4%) and prudence (80.3%). Over seventy percent of the teachers indicated that tolerance (79.7%), trust (75.2%), perseverance (74.5%) friendship (72.5%), loyalty (72.3%) diligence (71.7%) and commitment (70.3%) were values that could be taught in the classroom. Although they ranked lowest, a majority of the teachers indicated that generosity (65.7%) service (60.1%) and freedom (54.7%) were appropriate for the classroom setting.

Values Appropriate as Part of the Laboratory Component.

The laboratory component was perceived by the teachers as being a suitable mode of instruction for diligence (83.3%), responsibility (79.7%) cooperation (79.0%), courtesy (77.4%) honesty (75.9%). Fewer teachers agreed that respect (66.7%) perseverance (65%), prudence (65%), kindness (63.5%), and truth (61.6%) fit into laboratory instruction. A majority of the teachers also agreed that trust (59.9%) honor (59.1%), caring (52.9%) and self-respect (52.9%) could be taught in the laboratory. Those values deemed less appropriate for laboratory instruction were loyalty (47.4%), commitment (47.1%), friendship (46.0%), generosity (44.5%), tolerance (42.8%), service (37%) and freedom (34.3%).

Values Appropriate as Part of the SAE Component.

The top four values seen as appropriate for the SAE component by the teachers were responsibility (87.7%), diligence (83.3%), honesty (83.2%), and perseverance (82.5%). Commitment was deemed appropriate by 73.2% of the respondents. Others perceived by a majority of teachers as suitable for SAE were truth (65.2%), prudence (63.5%), honor (59.9%) freedom (58.4%) self-respect (55.8%) courtesy (55.5%)

and respect (54.3%). Values seen as less appropriate were cooperation (50.0%) trust (49.6%) kindness (48.9%) caring (47.8%) loyalty (46.0%), generosity (43.1%) service (42%) tolerance (38.4%), and friendship (38.0%).

Values Appropriate as Part of the FFA Component.

Many of the values were deemed as appropriate for being taught in the FFA component of agricultural education. The value receiving the most agreement by the teachers for inclusion in FFA was honesty (93.4%) closely followed by truth (92.8%) cooperation (92.8%), courtesy (92.7%), honor (92.0%) loyalty (91.2%), and responsibility (90.6%). Other values receiving high levels of agreement for FFA inclusion were respect (89.9%) friendship (89.8%), service (89.1%) commitment (89.1%) self-respect (87.7%) generosity (87.6%), trust (86.9%) kindness (83.9%) caring (82.6%), diligence (81.9%), and perseverance (81.8%). Over two-thirds of the teachers agreed that tolerance (79.1%), prudence (78.9%) and freedom (68.8%) could be appropriately taught using the FFA organization.

Relationships Between Teacher Characteristics and Perceptions of Teachers as to What Values Should be Taught

Multiple regression was utilized to determine relationships between teacher characteristics and teacher value perceptions. The analyses produced 11 regression equations which accounted for variances in teacher value perceptions. No significant relationships were found between any of the teacher characteristics and ten of the values: caring, commitment, cooperation, freedom, friendship, honesty, loyalty, prudence, responsibility, and self-respect. The amount of variance being accounted for in teacher value perceptions by teacher characteristics in the 11 regression equations ranged from 5.4% to 10.4%.

Only seven of the characteristics (number of students enrolled in agriculture courses, self-perceived religious level, number of students attending school, percentage of students participating in SAE, number of years teaching agriculture, age of respondent, and number of agriculture teachers in department) were significantly related to the teacher value perceptions. The only three teacher characteristics found which explained variance in the teacher value perceptions were number of students enrolled in agriculture (found in eight of the equations), followed by self-perceived religious level (found in two of the equations), and number of students attending school (found in one of the equations). All of the relationships for these four characteristics were positive, indicating that as the value of the teacher characteristic increased, so did the level of agreement concerning use of a specific value in the student curriculum.

Number of years teaching, number of years teaching agriculture, gender, school location, percentage of FFA members, number of teachers in the department, age, and percentage of students participating in SAE programs were not significantly related to teacher value perceptions in any of the equations. None of the teacher characteristics were significantly related to teacher value perceptions for the values of caring, commitment, cooperation, freedom, friendship, honesty, loyalty, prudence, responsibility, and self-respect. Ethnicity was dropped from the equation as it was not significantly related to teacher value perceptions (Note: This could be because of lack of variance in the sample.)

Relationships Between Selected Teacher Behavior and Inclusion of Values in Curriculum

Correlations were examined between teachers' perceived behaviors and their level of agreement with inclusion of specific values in the curriculum of agricultural education. Significant, positive relationships were found between the following: (a) teacher honesty and incorporating honesty ($r =$

.28) and truth ($r = .24$) in the curriculum, (b) teacher compassion and incorporating kindness in the curriculum ($r = .27$), (c) teacher confidentiality and incorporating trust ($r = .22$) and loyalty ($r = .18$) in the curriculum, (d) teacher dedication and incorporating diligence ($r = .26$) and perseverance ($r = .24$) in the curriculum, (e) teacher cooperation and inclusion of cooperation in curriculum ($r = .170$), (f) teacher respect and teaching tolerance ($r = .28$) and respect in the curriculum ($r = .19$), and (g) teacher courtesy and teaching courtesy ($r = .230$).

No significant relationships were found between the following: (a) teacher compassion and inclusion of caring in the curriculum, (b) teacher dedication and inclusion of responsibility in the curriculum, and (c) teacher tolerance and inclusion of tolerance in the curriculum.

Conclusions

The following conclusions are based on interpretations of data presented in the study and are restricted to the populations surveyed.

Most of the agriculture teachers in the United States who are currently teaching (1997-98) are middle-aged, white males who have taught agriculture for a number of years (14 on the average). Most of them teach in rural communities where they are the only agriculture teacher. The average school size where these agriculture teachers teach is small (average enrollment is 750 students). Enrollments in agriculture also represent a significant proportion of the total school population (nearly 20% of the students in these schools enroll in agriculture courses). There is a high percentage of membership in the FFA and a relatively high level of participation in SAE programs by students of these teachers. FFA membership was over 70%, and participation in SAE programs was 60%. A large majority of agriculture teachers in the U.S. consider themselves to be religious. This was evidenced by the fact that 85% of the teachers in the study

agreed or strongly agreed that they were religious people.

As a group, agriculture teachers in the U.S. agree that the 21 values identified in this study are important characteristics which should be taught to young people studying high school agriculture. They perceive the most important values to be responsibility, honesty, courtesy, and cooperation. The least important values they perceive to be taught are friendship, generosity, and freedom. Agriculture teachers perceive that the most appropriate component for teaching many of the 21 values is the FFA organization. This was evidenced by the fact that over three-fourths of the teachers thought all of the values (except freedom) could be appropriately taught using the FFA organization. Those values which the teachers see as most appropriate for the FFA are honesty, courtesy, honor, cooperation, truth, loyalty, and responsibility.

Although agriculture teachers perceive that the FFA organization is the best component for teaching many of the values in agricultural education, they also perceive that a number of the values can be taught in the classroom, laboratory, and SAE. The laboratory component is perceived by agriculture teachers as the least desirable component in which instruction about values can occur. They particularly do not view the laboratory as an appropriate place for teaching the values of loyalty, commitment, friendship, generosity, tolerance, service and freedom. The most appropriate values they see as teachable in the laboratory are diligence, responsibility, cooperation, courtesy and honesty.

Agriculture teachers perceive the classroom as an effective place to teach courtesy, respect, honesty. Values which they perceive to be best taught elsewhere are generosity, service, and freedom. Responsibility, diligence, honesty, and perseverance are seen by agriculture teachers as the most appropriate values to be taught in the SAE program. However, cooperation, trust,

kindness, caring, loyalty, generosity, service, tolerance, and friendship were seen as the least teachable values in SAE. Agriculture teachers tend to agree on the importance of the 21 values regardless of teacher characteristics. This was evidenced by the small amount of variance that was explained in level of agreement with the values by teacher characteristic. (It is important to note, however that when differences in agreement with the values occurred, it was due to size of agriculture enrollment, self-perceived religious level, and size of high school. Teachers who had larger agriculture classes, or taught in larger schools or had a higher perceived religious level, tended to have higher levels of agreement with the values than teachers with smaller agriculture classes or teachers who taught in smaller schools, or teachers with lower perceived religious levels.) In general, teachers who perceived that they exhibited a certain behavior tended to have a positive perception toward including that value (or a related one) into the agricultural education curriculum.

Recommendations

The following recommendations are made by the investigators as a result of having conducted this study:

Curriculum specialists in agricultural education should be enlisted to examine existing agriscience curriculum for possible inclusion of value education. This is based on the finding that a majority of agriscience instructors in the United States agree that value education should be part of the agriscience curriculum.

As a beginning step, these curriculum specialists should design educational activities which enhance development of the 21 values included in this study, most notably the values of responsibility, honesty, courtesy, and respect. The specialists should also review the findings of this study which identify the most appropriate component of agricultural education for teaching

these values.

The FFA and its related activities should continue to serve as a vehicle for value education. Agriscience teachers obviously believe it is the most appropriate component of agricultural education for teaching values. Educational leaders need to be made aware of the opportunities the FFA makes available for character development as it is an integral part of the instructional program in agriculture.

Additional studies using these values should be conducted on populations of various stakeholders who have an interest in agricultural education to determine if they exhibit the same perceptions as agriscience teachers. Potential populations include parents, employers, and school administrators.

Future studies should be conducted to determine if additional values, beyond those included in this study, should be part of the agricultural education curriculum. Additional research should also be conducted to determine specific methods of instruction and/or educational activities which are most appropriate for value education.

This study should be replicated, perhaps on a state-wide basis, to determine if ethnic and cultural diversities of individual states influence what values should be included in the agricultural education curriculum. Studies similar to this one should be conducted for other areas of the high school curriculum to verify the findings of this study.

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