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# Agricultural Policy Agenda: What's Important To Students?

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## Abstract

Values that students place on contemporary agricultural policies are examined for three agricultural economics classes. Pre- and post-class rankings of values are presented by student background and major. This study demonstrates that students from all majors and backgrounds place a high priority on food safety and environmental issues; preserving the family farm is not a high priority of any of the student groups surveyed; students have not fully embraced the importance of internationalizing agriculture; and students from diverse backgrounds and majors have similar policy agendas that do not change dramatically while the students are enrolled in an economics course.

## Introduction

Schools and colleges of agriculture have experienced major changes in the student clientele groups served by their educational programs. Historically, the mission of these schools and colleges was devoted to enhancing agricultural production as farmers and agricultural support groups sought the expertise of agricultural scientists and educators. Increases in production efficiency led to a decline in the number of farmers and an increase in the size and scale of agricultural producers, processors, and input suppliers (Seitz et al., 1994). With the decline in traditional clientele groups this mission has expanded beyond the farm gate as consumers, environmental, and animal rights groups have entered the policy arena. In response to this diverse clientele, schools and colleges of agriculture have changed their names, merged with other schools and colleges, downsized, or in some cases, been eliminated. At the curriculum level, an increasingly diverse faculty are offering new courses and degree programs that are attracting increasingly diverse students. These students are typically from non-agricultural backgrounds and, consequently, have different values and experiences than those of traditional agricultural students.

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Students enter our classes with a set of values and beliefs about agricultural issues. These values have been influenced by the students' families, teachers, peers, news media, and their own personal experiences. Teachers also enter the classroom with a set of values which may differ from those held by students (Baker et al., 1996). However, few faculty survey or articulate the underlying values of the class or course materials. Thus, the instructor and textbooks may be incompatible (or insensitive) to the students' interests. Likewise. the instructor and textbook may devote too much attention to topics of little importance to students while down-playing or ignoring more important topics. While much of the subject matter in agricultural classes is technical and value-free. the choice of topics and reading materials is based on an implicit set of values. Likewise, students often respond emotionally to discussions of values, which in turn, affects their desire to learn course materials, as well as their overall intellectual growth (Goleman, 1995).

Previous research on student characteristics and learning has focused on learning styles (Whittington and Raven, 1995; Barkley, 1995), student diversity and personality (Conley and Simon, 1993; Sorensen and Hartung, 1987), and student values and demographic characteristics (Baker et al., 1996). The general finding of these studies is that student characteristics affect learning and faculty can use this knowledge to enhance the learning process. The current study argues that identifying and articulating how students feel about the subject matter is an integral part of the learning process and a quality of good teaching. By knowing student values, teachers have a better understanding of the students' motivation and goals for attending class and can use this information to create a more effective learning environment.

## Methods

This article examines the values of agricultural majors enrolled in three separate classes of an introductory agricultural economics course, AAE 258 *(Applied Microeconomic Principles)*. Specifically, the objectives of the paper are to (1) identify a scale for ranking student values toward agricultural policy issues, (2) compare values across student backgrounds and majors, (3) measure changes in values during the course, and (4) identify factors associated with value changes. This paper makes no judgments about the values and beliefs: instead it offers a forum for identifying and discussing values and beliefs and their implications for teaching. advising and recruitment.

The first task of this study was to design a method for describing student values and beliefs in a meaningful and practical way, and one that would allow comparisons among groups and over time. For this study, a relative, or ordinal, scale of values was constructed by asking students to rank the importance of policy issues facing agriculture. That is, rather than ask students if they thought food safety was important. we asked them to rank the importance of food safety relative to other agricultural issues described below. This ordering of agricultural issues is described herein as the students' policy agenda.

Policy issues used in the survey were taken from Seitz et al. (p.15). They are:

1. *Decline in the Number of American Farmers* (Farms). The number of farmers in the U.S. has been steadily declining since the 1930s. This trend had led to an increase in production efficiency but has displaced farm families, farm labor, and rural communities. Critics have argued that this trend has eroded the political base of family farms and their role in our *Jeffersonian* democracy where historically, family farms have served as the foundation of popular government (Madden and Brewster, 1970).

2. *Policy Responses to Uncertainty in Agriculture* (Uncertainty). Agricultural production is highly susceptible to weather, diseases and insects. Given the high degree of uncertainty faced by farmers. policies have been implemented to help farmers deal with these problems. Critics argue that too much protection from uncertainty leads to poor management decisions, while too little protection may lead to farm bankruptcy (Seitz et al., 1994).

3. *Increasing Internationalization of Agriculture* (International). Markets for agricultural products have become global. U.S. farmers compete with farmers in foreign countries for market shares here and abroad. The globalization of agriculture has led to lower food prices and more food availability. but has displaced farmers and affected farm communities.

4. *Environmental Consequences of Agricultural Production* (Environmental). Farmers have long been concerned with soil and water conservation, and other natural resource policies. While conservation programs may benefit the larger society, they limit the freedom of producers and impose costs on taxpayers and consumers.

5. *Food Safety and Availability* (Food). Providing safe and abundant food has long been a goal of agricultural policy. In the U.S., consumers have become increasingly concerned about agricultural chemicals. pesticide residues, food additives, cholesterol, and other food-related health issues.

6. *Managing Technological Advances in Agriculture* (Technology). Advances in agricultural technology have increased production efficiency and given us more food at lower prices. Yet, these advances have not been without controversy. Advances in genetic research. growth hormones/stimulants and confinement production techniques have raised the ire of animal rights groups who have called for tighter government control of food production and processing.

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During the first week of the ten-week quarter, students in AAE 258 were asked to rank the above policy issues and give a brief discussion of their rationale as part of a class writing assignment. Students were also asked to complete a biographical sketch on their family and educational backgrounds. During the quarter, policy issues were discussed as part of the course material. At the end of the quarter, students were asked to rank the same policy issues on the final exam, without giving their rationale.

General characteristics of the three separate classes participating in the survey are shown in Table 1. The class, AAE 258, is largely a service course for the College of Agricultural and Environmental Sciences, with two-thirds of the class consisting of majors outside the department. Less than half of the students were from farm or rural nonfarm backgrounds, while more than half were female. Animal and poultry science were the most popular majors, followed by agricultural and applied economics.

Students were asked to rank the six policy issues by order of importance, with one being the most important and six being the least important. Student rankings of policy issues for all classes are shown in Table 2. All classes ranked *Food Safety* as the most important issue facing U.S. agriculture, despite the evidence that the U.S. leads the world in food safety, availability and price. Students generally agreed that *Environmental* issues were the second most important policy issue. Students were expected to place a high priority on food safety and environmental issues, given the media coverage and increased public awareness of these issues. The *Decline in the Number of Farms* was ranked third initially and dropped to fourth by the end of the quarter, in part, because of changes in the rankings of other issues. Ironically, the textbook discussed the *Decline in the Number of Farms* as the first policy issue, though no indications of the

Table 1. Characteristics of Students in AAE 258 Classes, University of Georgia.

| Characteristic | Winter 1995 | Spring 1995 | Winter 1996 |
|---|---|---|---|
| Class Size | 68 | 62 | 62 |
| | | - - - - - - - - - *average* - - - - - - - - | |
| Age (years) | 20.2 | 20.8 | 20.2 |
| Grade Point Average' | 2.8 | 2.9 | 2.6 |
| Earned Credit Hours' | 63.9 | 80.6 | 65.8 |
| First Exam Score | 73.6 | 79.0 | 76.0 |
| | | - - - - - - - - - *percent* - - - - - - - - - | |
| Gender | | | |
| % Female | 51.8 | 51.8 | 54.4 |
| Student Background: | | | |
| % Farm | 29.5 | 24.2 | 24.2 |
| % Rural Nonfarm | 16.2 | 21.0 | 14.5 |
| %Suburban | 35.3 | 35.5 | 40.3 |
| % Urban | 11.8 | 8.1 | 14.5 |
| %Other' | 7.3 | 11.2 | 6.5 |
| Academic Major: | | | |
| % Agricultural/Applied Economics | 26.5 | 35.5 | 33.9 |
| % Animal/Poultry Science | 48.5 | 41.9 | 35.4 |
| % Food/Environmental Health Science | 7.4 | 9.7 | 14.5 |
| % Family/Consumer Sciences | 7.4 | 3.2 | 9.7 |
| % Plant Sciences | 5.9 | 6.5 | 4.8 |
| % Other' | 4.3 | 3.2 | 6.5 |

' Based on a 4.0 scale.

' Based on quarter system with 182 credit hours required for the bachelors degree.

' Not specified.

authors' rankings were given. Much to our surprise, the *Internationalization of Agriculture* was ranked as the least important policy issue, despite efforts by many schools and colleges to internationalize their curriculums and the media coverage of GATT (General Agreement of Tariffs and Trade) and NAFTA (North American Free Trade Agreement).

Also shown in Table 2 are indications of how class and individual student rankings changed during the quarter. The Change in Ranking by *Class* is the pre-class minus post-class rankings and measures the overall change in mean class rankings. Positive changes in Rankings by *Class* indicate that the particular issue has become more important to students. Change in Ranking by *Students* measures (in absolute value terms) the extent to which individual students changed their rankings in either direction. For example, the Change in Ranking by *Class* of 0.0 suggests that the class's ranking of *Farms* was virtually unchanged during the term. However, the Change in Ranking by *Students* of 1.4 suggests that individual students changed their ranking of *Farms* by an average of 1.4 places.

We expected that discussing agricultural issues in an economic context would affect student rankings. This expectation was based on the idea that as students learn the economic costs and benefits of alternative agricultural policies, the values they place on these policies may change (Johnson. 1986, p. 66). For example, values that students place on the *Decline in the Number of Farms* may change when *economies of scale* is presented (Seitz et al, 1994,

p.80). Discussions of agricultural pollution might change the value that students place on *Environmental* issues. To our surprise, there were few changes in the overall pre- and post-test class rankings, suggesting that the course had little impact on student rankings. However. when examined on an individual basis. changes in student rankings were more noticeable. Students were least likely to change their rankings of *Food Safety* and *Environmental* issues and the most likely to change their rankings of *International* and *Technology*.

### Student Background

We expected that the students' policy agenda would be affected by their background and family experiences. As shown in Table 3, student backgrounds were classified into Farm, Rural Nonfarm, Suburban, and Urban. Students from farm and rural nonfarm backgrounds were thought to have a greater appreciation for farming and place a higher priority on the *Decline in the Number of Farms*. Students from suburban and urban backgrounds are removed from agricultural production and were expected to be more concerned with *Food Safety* and *Environmental* issues. When compared to other groups, students from farm backgrounds placed a higher priority on the *Decline in the Number of Farms*, although this was not their top priority. *Food Safety* and *Environmental* issues were ranked high by all student groups, including those from farm and rural backgrounds.

Table 2. Student Rankings of Policy Issues in AAE 258, University of Georgia, 1995-96.

| Policy Issue[y] | Mean Ranking[z] | | Change in Ranking | |
|---|---|---|---|---|
| | Pre-Test | Post-Test | Class[x] | Students[w] |
| Farms | 3.7 | 3.7 | 0.0 | 1.4 |
| Uncertainty | 3.9 | 3.9 | 0.0 | 1.3 |
| International | 4.2 | 4.6 | -0.4 | 1.6 |
| Environmental | 2.9 | 2.9 | 0.0 | 1.3 |
| Food Safety | 2.6 | 2.5 | +0.1 | 1.2 |
| Technology | 3.7 | 3.4 | +0.3 | 1.5 |

[z]Based on a scale of 1 to 6, where 1 = most important and 6 = least important.
[y]Policy options were taken from Seitz et al. (1994):

      Farms: *Decline in the Number of American Farmers*
      Uncertainty: *Policy Responses to Uncertainty in Agriculture*
      Internationalization: *Increasing Internationalization of Agriculture*
      Environmental: *Environmental Consequences of Agricultural Production*
      Food: *Food Safety and Availability*
      Technology: *Managing Technological Advances in Agriculture*

[x]Mean (pre-test minus post-test) change in overall class ranking.
[w]Mean (pre-test minus post-test) change in individual student rankings in absolute value terms.

Changes in pre- and post-test rankings are also shown in Table 3. The course appeared to heighten concerns among farm and suburban students about the *Decline in the Number of Farms* while having the opposite effect on rural nonfarm and urban students. Students from farm backgrounds were more likely to change their rankings as shown by the Change in Ranking by *Students* in Table 3. By the same measure, students from urban backgrounds were least likely to change their rankings. None of the student background groups placed a high priority on International issues, before or after the course.

*Student Major*

Student rankings by academic major are shown in Table 4. Because of sample size limitations we were not able to analyze separately, all majors enrolled in the classes. Instead, student majors were classified into five major groups including Agricultural Economics, Animal Sciences, Food Sciences, Family and Consumer Sciences, and Plant Sciences. When compared to other majors surveyed, animal scientists were more concerned with the *Decline in the Number of Farms*. At the beginning of the course *Food Safety* was the top concern of all but the Plant Scientists. At the end of the course, Food Scientists ranked *Technology* issues first, while Plant Scientists were most concerned with *Environmental* issues related to agriculture. Food Scientists and Family and Consumer Scientists appeared to change their rankings more than that of other majors surveyed.

*Change Model*

In the final part of the research, we sought to identify factors associated with changes in student policy agendas during the course. Observed changes in policy agendas in Tables 2 through 4 were examined in a multiple regression framework to determine the statistical significance of these changes. The objective of the model was to determine how the course's impact on policy agendas was influenced by student background, academic major, and other characteristics. Since students' rankings of individual issues are interdependent, we examined overall changes in student rankings rather than those for individual issues. For this reason, the dependent variable in the model is the Change in Ranking by Students, summed over the six issues.

Ordinary least-squares regression estimates of changes in student rankings are shown in Table 5. Student background, major and quarter enrolled in AAE 258 were entered as binary variables. For variable groups, the regression coefficients measure differences between the variable shown in Table 5 and the variable omitted from the particular group. For example, since *farm* was the omitted background variable, the regression coefficients for *rural*, *suburban* and *urban* backgrounds measure differences from students with farm backgrounds. Likewise, regression coefficients for *majors* (animal science, food science, etc.) measure differences from *agricultural economics majors*.

Model results indicated the following. Male students were more likely than female students to change their policy rankings. Students who had previously taken an economics course were more likely to change their rankings. When compared to students with farm backgrounds, students from suburban and urban backgrounds were less likely to change their rankings. Students from rural nonfarm backgrounds responded similarly to those from farm backgrounds. No significant differences were found for academic major, grade point average, earnings, credit hour load, cumulative credit hours, and quarter of enrollment. The overall explanatory power of the model, as shown by the $R^2$, suggested that the model did not capture many factors that changed student rankings.

## Conclusions

Agricultural students enroll in our classes with a set of personal values and beliefs about agricultural issues. The backgrounds and interests of students taking our courses have changed dramatically in recent years, with a growing percentage of students coming from urban and suburban backgrounds. In this study we examined how these students felt about contemporary agricultural issues and how their beliefs were affected by taking an economics class.

The findings and implications of this paper are as follows. First, students from all backgrounds and majors place a high priority on food safety and environmental issues associated with agriculture, suggesting that students are concerned about these issues and are likely to be receptive to readings and courses on these topics. These findings are generally consistent with growing public concerns and governmental regulatory activity to promote food safety and environmental quality in agriculture. Colleges that are slow to embrace these concerns in their course-work, course offerings and recruiting materials may lose students to majors that recognize these interests.

Second, students do not appear to embrace the Jeffersonian view that the family farm is necessary for the survival of our democracy. While preserving the family farm is viewed as being important to some student groups, it does not appear to be the top priority of any of the student groups surveyed. Given that few actually return to the family farm, agricultural curricula should expose students to issues beyond the farm gate.

Third, despite the globalization of agriculture that has taken place in recent years, agricultural students have not fully embraced the importance of this trend. Agricultural graduates who fail to appreciate the international aspect of agriculture may be poorly prepared to compete in an increasingly global market for agricultural products and consumers. This apparent incongruity between student perceptions and market trends suggests that agricultural

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Table 3. Student Rankings of Policy Issues in AAE 258, University of Georgia, 1995-96, by Student Background.

| Student Background/ Policy Issue[y] | Mean Ranking[z] | | Change in Ranking | |
|---|---|---|---|---|
| | Pre-Test | Post-test | Class[x] | Students[w] |
| Farm (n=50) | | | | |
| Farms | 3.3 | 3.2 | +0.1 | 1.7 |
| Uncertainty | 3.8 | 4.0 | -0.2 | 1.2 |
| International | 4.0 | 4.7 | -0.7 | 1.9 |
| Environmental | 3.1 | 2.9 | +0.2 | 1.4 |
| Food Safety | 2.8 | 3.0 | -0.2 | 1.2 |
| Technology | 3.9 | 3.2 | +0.7 | 1.7 |
| Rural Nonfarm (n=27) | | | | |
| Farms | 3.6 | 3.8 | -0.2 | 1.2 |
| Uncertainty | 4.0 | 3.7 | +0.3 | 2.0 |
| International | 4.4 | 4.1 | +0.3 | 1.2 |
| Environmental | 3.2 | 3.5 | -0.3 | 1.1 |
| Food Safety | 2.6 | 2.7 | -0.1 | 1.8 |
| Technology | 3.2 | 3.2 | 0.0 | 1.7 |
| Suburban (n=71) | | | | |
| Farms | 4.1 | 3.8 | +0.3 | 1.2 |
| Uncertainty | 4.0 | 4.1 | -0.1 | 1.2 |
| International | 4.2 | 4.7 | -0.5 | 1.5 |
| Environmental | 2.7 | 2.8 | -0.1 | 1.3 |
| Food Safety | 2.3 | 2.2 | +0.1 | 1.0 |
| Technology | 3.6 | 3.4 | +0.2 | 1.3 |
| Urban (n=22) | | | | |
| Farms | 3.6 | 4.0 | -0.4 | 1.1 |
| Uncertainty | 3.8 | 4.0 | -0.2 | 1.1 |
| International | 4.6 | 5.2 | -0.6 | 1.3 |
| Environmental | 2.7 | 2.6 | +0.1 | 1.2 |
| Food Safety | 2.2 | 1.7 | +0.5 | 1.0 |
| Technology | 4.4 | 3.7 | +0.7 | 1.5 |

[z]Based on a scale of 1 to 6, where 1 = most important and 6 = least important.
[y]Policy options were taken from Seitz et al. (1994):
  Farms: *Decline in the Number of American Farmers*
  Uncertainty: *Policy Responses to Uncertainty in Agriculture*
  Internationalization: *Increasing Internationalization of Agriculture*
  Environmental: *Environmental Consequences of Agricultural Production*
  Food: *Food Safety and Availability*
  Technology: *Managing Technological Advances in Agriculture*
[x]Mean (Pre-test minus post-test) change in overall class ranking.
[w]Mean (Pre-test minus post-test) change in individual student rankings in absolute value terms.

Table 4. Student Rankings of Policy Issues in AAE 258. University of Georgia. 1995-96. by Student Major.

| Student Background/ Policy Issue[y] | Mean Ranking[z] | | Change in Ranking | |
|---|---|---|---|---|
| | Pre-Test | Post-Test | Class[x] | Students[w] |
| Agricultural Economics (n=37) | | | | |
| Farms | 3.9 | 3.7 | +0.2 | 1.3 |
| Uncertainty | 3.9 | 3.9 | 0.0 | 1.3 |
| International | 4.2 | 4.9 | -0.7 | 1.4 |
| Environmental | 2.7 | 2.8 | -0.1 | 1.4 |
| Food Safety | 2.5 | 2.5 | 0.0 | 1.1 |
| Technology | 3.8 | 3.2 | +0.6 | 1.5 |
| Animal Sciences (n=81) | | | | |
| Farms | 3.7 | 3.5 | +0.2 | 1.3 |
| Uncertainty | 3.9 | 4.1 | -0.2 | 1.3 |
| International | 4.3 | 4.7 | -0.4 | 1.4 |
| Environmental | 3.0 | 2.9 | +0.1 | 1.2 |
| Food Safety | 2.5 | 2.4 | +0.1 | 1.2 |
| Technology | 3.7 | 3.4 | +0.3 | 1.7 |
| Food Sciences (n=20) | | | | |
| Farms | 3.9 | 4.4 | -0.5 | 1.7 |
| Uncertainty | 4.1 | 3.9 | +0.2 | 1.0 |
| International | 4.8 | 4.5 | +0.3 | 1.8 |
| Environmental | 2.5 | 2.8 | -0.3 | 1.3 |
| Food Safety | 2.1 | 2.7 | -0.6 | 1.3 |
| Technology | 3.1 | 2.6 | +0.5 | 1.4 |
| Family/Consumer Sciences (n=13) | | | | |
| Farms | 3.3 | 3.1 | +0.2 | 1.4 |
| Uncertainty | 3.9 | 4.6 | -0.7 | 1.2 |
| International | 3.6 | 4.8 | -1.2 | 2.2 |
| Environmental | 3.0 | 3.0 | 0.0 | 1.5 |
| Food Safety | 2.6 | 1.9 | +0.7 | 1.2 |
| Technology | 4.4 | 3.6 | +0.8 | 1.1 |
| Plant Sciences (n=11) | | | | |
| Farms | 3.6 | 4.1 | -0.6 | 1.1 |
| Uncertainty | 4.7 | 3.3 | +1.4 | 2.1 |
| International | 3.4 | 3.8 | -0.4 | 1.8 |
| Environmental | 2.8 | 2.9 | -0.1 | 0.6 |
| Food Safety | 3.2 | 3.9 | -0.7 | 1.1 |
| Technology | 3.3 | 3.0 | +0.3 | 0.9 |

[z]Based on a scale of 1 to 6, where 1 = most important and 6 = least important.

[y]Policy options were taken from Seitz et al. (1994):

        Farms: *Decline in the Number of American Farmers*
        Uncertainty: *Policy Responses to Uncertainty in Agriculture*
        Internationalization: *Increasing Internationalization of Agriculture*
        Environmental: *Environmental Consequences of Agricultural Production*
        Food: *Food Safety and Availability*
        Technology: *Managing Technological Advances in Agriculture*

[x]Mean (Pre-test minus post-test) change in overall class ranking.

[w]Mean (Pre-test minus post-test) change in individual student rankings in absolute value terms.

Table 5. Impacts of AAE 258 on Student Rankings of Policy Issues.

| Variable Description | Mean | Regression Coefficient[z] |
|---|---|---|
| **Dependent Variable** | | |
| Change in student rankings of policy issues[y] | 8.28 | 5.83* |
| | | (3.54) |
| **Independent Variables** | | |
| Gender = 1 if female; 0 if male | 0.52 | -1.56** |
| | | (0.70) |
| Cumulative grade point average | 2.77 | -0.10 |
| | | (0.59) |
| Previous economics courses taken by student | 0.90 | 0.30** |
| | | (0.17) |
| Cumulative credit hours earned | 70.13 | -0.00 |
| | | (0.01) |
| Percent of college expenses earned by student | 38.21 | -0.01 |
| | | (0.01) |
| Credit hours taken during quarter | 14.99 | 0.29 |
| | | (0.20) |
| Student from rural nonfarm background; 1 if yes; 0 if no | 26.04 | -0.31 |
| | | (1.00) |
| Student from suburban background; 1 if yes; 0 if no | 36.98 | -1.86** |
| | | (0.82) |
| Student from urban background; 1 if yes; 0 if no | 11.46 | -1.98* |
| | | (1.17) |
| Student majoring in Animal Science; 1 if yes; 0 if no | 42.19 | -0.15 |
| | | (0.79) |
| Student majoring in Food Sciences; 1 if yes; 0 if no | 10.42 | 1.47 |
| | | (1.27) |
| Student majoring in Family & Consumer Science; 1 if yes; 0 if no | 6.78 | 1.52 |
| | | (1.42) |
| Student majoring in Plant Sciences; 1 if yes; 0 if no | 5.73 | -1.73 |
| | | (1.53) |
| Student enrolled Winter 1995; 1 if yes; 0 if no | 35.42 | 1.00 |
| | | (0.82) |
| Student enrolled Spring 1995; 1 if yes; 0 if no | 32.29 | 0.20 |
| | | (0.85) |

$R^2 = 0.19$; Number of observations = 127

[z] Coefficients were estimated using ordinary least squares regression. Standard errors shown in parentheses. Coefficient
[y] significant at the alpha = 0.05 (**) and 0.10 (*).
absolute value of Change in Student Ranking, summed for the six policy issues.

schools should seriously reconsider their course offerings in international agriculture. Fourth. while agricultural students have diverse backgrounds and majors. they seem to share a similar set of values and beliefs. This suggests that discussions of values and beliefs in agricultural classes can be focused on a few common topics. Fifth. student values appear to be based on more than just economic criteria and, consequently, are not changed dramatically by the students' completing an economics course. While some agricultural economists may be disappointed that their course had little impact on student values, other faculty in the college may be relieved by this finding.

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# Classroom Behaviors: What Lessons Can Professors Learn?

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## Abstract

Since 1990 the researcher has spent 444 hours with 58 professors at three universities developing a nonthreatening approach to observing faculty as they teach. The five "lessons professors can learn" contained in this paper are couched in the teacher behaviors identified by Rosenshine and Furst (1971): Enthusiasm. Clarity, Variability, Business-like environment, and Opportunity to learn. An examination of these teacher behaviors and the degree to which they are present in college of agriculture classrooms are addressed in this paper.

## Introduction

"There are possibly no more significant and exhilarating interactions than those experienced by professors and students when they are together in stimulating learning situations" (Marjoribanks, 1991, p.3). The difficulty, however, is creating the "stimulating learning situation". If professors are expected to enhance classroom experiences, then there must be a precise understanding of the dynamics of classroom interactions such that the minds of students can be made active. To accomplish this goal, an understanding of the numerous complex factors contributing to exhilarating learning situations is necessary.

A classic study conducted by Rosenshine and Furst (1971) revealed teacher behaviors associated with improved learning and thus set standards for classroom teaching assessment. They concluded that academic achievement reached its highest levels when the following teacher characteristics were evidenced: Enthusiasm, Clarity, Variability, Business-like environment, and Opportunity to learn. An examination of these teacher behaviors and the degree to which they are found in college of agriculture classrooms are addressed in this paper.

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