The Use of Debates and Oral Examinations in Teaching Agricultural Policy*

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During the spring semester of 1966 and 1967 I was responsible for the undergraduate and graduate courses in agricultural policy at The University of Arizona. More recently, 1968 and 1969, I have taught only the undergraduate course. During these past four years I have experimented with classroom debates in both classes and with oral examinations in the graduate class. Because of the positive response to these innovations, I decided to summarize their use in hopes that other professors teaching policy-type courses will find my approach useful.

Debates

In 1966 a standard term paper was required from the students in the two policy classes. I was quite disappointed with the outcome of this assignment, particularly in the undergraduate class. In hopes of finding something better, I replaced the term paper assignment with class debates in 1967. The discussion that follows pertains primarily to the 1967 experience.

The debates were organized very much like standard debates: two-men affirmative and negative teams; introductory presentation by each team member in the usual order; and a rebuttal period consisting of a panel discussion between the team members rather than individual rebuttal speeches.

Possible topics were solicited from class members and from other members of the agricultural economics faculty. The final list of topics used in 1967 is as follows:

1. Resolved: That at the expiration of the 1965 Food and Agricultural Act the U. S. Government should end all programs aimed at maintaining cotton producers' net income.[1]
2. Resolved: That the U. S. Government should eliminate all agricultural production controls and aggressively pursue an expanded program of food aid to the hungry nations of the world.[1, 2]
3. Resolved: That the State of Arizona, in the absence of action by the U. S. Government, should finance and construct the Central Arizona Water Project.[1]
4. Resolved: That the use of agricultural chemicals is harmful to human and animal environment, and therefore the U. S. Government should enforce more restrictive controls on the use of these chemicals.[1, 2]
5. Resolved: That the use of marketing order type programs be expanded, and thereby increasing the farmers' bargaining power and ability to control aggregate supply.[2]
6. Resolved: That the family farm is no longer an efficient type of organization for agricultural production in the United States.[1]

In the undergraudate class last spring (1968) topics one and two were reassigned and three new topics added:

7. Resolved: That the U. S. Government should establish a program to retard the movement of people from the farm to the city.
8. Resolved: That the "National Agricultural Bargaining Act" be approved, thereby increasing farmers' bargaining power and ability to control aggregate supply.
9. Resolved: That the U. S. Government should expand the use of import controls in order to raise the net income of livestock producers in the U. S.

Agricultural Economists will note that topic number seven is identical to the 1968 American Agricultural Economics Association (AAEA) Student Section debate subject. Also, number eight is essentially a restatement of number five. The list of topics for the spring of 1969 contained two new subjects of current importance to agriculture.

After the topics were selected, affirmative and negative teams were assigned. The debates were held near the end of the semester with one class period (50 minutes for the undergraduates, 75 minutes for the graduates) allocated for each subject. Hence, in an undergraduate class of 20 students, five periods were required.

The general procedure in the classroom was as follows. Each team member presented his statement of arguments and evidence in a 5 to 10 minute speech. At the conclusion of the formal presentations, a panel discussion was held between the team members. This constituted a rebuttal period in which I acted as discussion director (referee?). Finally, if time permitted, comments and questions were solicited from the class.

As an integral part of the debate assignment, each team jointly authored a paper summarizing their arguments and the evidence used in support of their position. Papers were limited to a maximum of 10 pages in the undergraduate and 15 pages in the graduate class. In all cases, joint preparation of a paper was a new experience.

Grade weights were distributed equally between the oral and the written portions of the assignment, with a maximum of 50 points assigned to each. The debating assignment was therefore equivalent to one midterm (hourly) examination. In addition to my evaluation of the classroom portion of the debate, each student was provided a rating sheet upon which he registered his evaluation of the debators. The rating sheets were adapted from those used in the AAEA debating contest. I used an average of the students' evaluation as a check on my own rating. In a few cases, adjustments were made on the basis of the student ratings.

After the debates were completed in 1967, a simple evaluation sheet containing four questions was distributed to both the undergraduate and the graduate class. The responses were 100 percent favorable. That is, all participating students agreed that

(1) the class debates made a worthwhile contribution to the course,
(2) the topics selected for the debates were appropriate, and
(3) class debates should be utilized the following year.

It is possible that the favorable response may simply mean that the assignment was easy or a "snap." However, the nature of the comments did not support such an interpretation.

Additional comments elicited by the evaluation sheet pertained to (1) the length of the introductory speeches – some desiring more time, some less, and (2) the manner in which team members were selected and topics allocated. I had used a random process, whereas some of the students expressed a desire to choose partners and topics. In subsequent years, in order to incorporate the second suggestion, I had the students indicate their choice of partners and topics. About two-thirds of the class members indicated a preference; this approach appears satisfactory.

In 1967 there was only one complaint about incompatability between team members. (One individual felt he did a disproportionately large share of the work). In general, the team members worked well together. There was a good deal of esprit de corps within the teams and friendly rivalry between teams. One of the teams working on the cotton topic (number one) visited the local ASCS office for information, and in the process, invited the manager to attend their debate. One faculty member also sat in on the same debate. In general, I did not encourage outside attendance, although there was considerable interest expressed by other faculty members.

In conclusion, I feel that the debates are far superior to the

normal term paper assignment, particularly for undergraduate students. The students become more involved. It gives them a research experience, a chance for classroom participation, and provides some writing experience as well. The debates can also help in locating potential participants for the AAEA Student Section competition.

ORAL EXAMINATIONS

On the basis of my own traumatic experience and my observations of other students, I concluded that a major problem with U. S. graduate students taking oral examinations is simply a lack of experience. By the time we reach graduate school we are quite well-adjusted to taking written exams, but most M. S. and some Ph.D. candidates have never had an oral exam when the fateful day arrives. I feel that lack of experience alone accounts for the poor performance of many students. How many times have you found yourself saying, "I know he understands the material better than what his oral performance would indicate." How many students "blow" their oral exam because of nervous tension and fear rather than lack of knowledge?

Because of my strong feelings on this subject, the first year I taught the graduate course in policy I made the final exam optional, oral or written. Four of the 15 students were persuaded by my arguments and took an oral final. My impressions and the students' reactions convinced me that an oral final was worthwhile.

Consequently, the following spring (1967) an oral final examination was required for all students in the graduate policy class. There were 12 students enrolled, all M. S. candidates. I allocated one hour for each exam, placing the responsibility on the students not to divulge the nature of the questions. For classes with an enrollment of less than 20, I estimate that it takes about as much total time to prepare, administer, and grade a two-hour written final as it does to give an oral final. I found it fairly easy to develop and use a scoring system to help me evaluate the oral responses and to arrive at a numerical grade for each student.

All of the students in that 1967 policy class have taken their comprehensive written and oral examinations for the M. S. degree. Informal conversations with them indicated some positive contribution from the class oral experience. Obviously, one cannot expect a major improvement *resulting* from only one prior experience with an oral exam. However, I am convinced that widespread use of oral exams in graduate courses would reduce the problems arising in comprehensive orals due to nervous tension and fear. Of course, if we wish to maintain the comprehensive oral as a "trial by fire ritual," then the less experience the better!!

In summary and conclusion, I strongly recommend the use of class debates in policy courses, particularly with undergraduates. I further urge the use of oral examinations in as many graduate classes as possible. I believe that the widespread use of oral examinations for individual courses will result in better performances on comprehensive oral exams and, hopefully, in more articulate members of the agricultural economics profession.

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[1]Used in the undergraduate class.
[2]Used in the graduate class.

Rice – Planting to Harvest in Twelve Days – A Teaching Technique –

I.R.8., sometimes referred to as the "miracle rice" has many desirable characteristics. It has increased the production dramatically in several of the rice producing areas of the world. The International Rice Research Institute at Los Banos in cooperation with the University of the Philippines is making valuable contributions to the development of varieties of rice which will serve to feed the world. But even the "miracle rice" and the advanced technology behind its development have not yet produced the individual plant which can achieve planting to harvest in twelve days.

The educator, however, is not bound to a single plant in crop production training. Yet few have fully utilized the possibilities of the multi-plant process in the sequential training of personnel in crop production.

The instructional staff at the Tropical Rice Production Center has developed an educational program which will bridge the technological gap and allow educators to progress from planting to harvest in twelve days. The program is operated at the Kauai Branch Station of the University of Hawaii at Kapaa, Hawaii. In the brochure which discusses the program, the aims state "This program will prepare participants to work at the 'rice roots' level by acquainting them with rice production . . ."

The curriculum includes:

1. Seed selection and identification
2. Morphology and growth stages of rice
3. Insect identification and control
4. Rice diseases
5. Seed incubation and germination test
6. Seedbed preparation and planting
7. Soils and fertilizations
8. Water use and management
9. Paddy preparation and transplanting
10. Mechanical, manual, and chemical weed control
11. Harvesting
12. Threshing
13. Cleaning and winnowing
14. Drying and storage

The curriculum was most impressive and was designed to include all of the major areas in rice production. Of greater significance than the curriculum headings, however, was the procedure utilized in presenting the items to the class. The students not only received the technical classroom presentations with discussions but they were actively involved in a "learning by doing" experience in all the phases of rice production in twelve days.

This may best be illustrated with an example of one class activity during the training period. The day the itinerary called for consideration of the transplanting of rice seedlings, the class members were active participants. Following the more formal presentation and discussion, the class proceeded to the seedbed. After a demonstration by the instructor, the class members began to pull seedlings. (At this point, more verbal explanation of the activities tends to be inadequate at best. The class or cycle as it was referred to, was composed of men and women representing Peace Corp., registered nurses from the public health and administration sector, anaesthetist, linguist, and agricultural education. The sight of individuals from these diversified professional occupations standing in 10 to 14 inches of mud in the seedbed paddy does not lend itself to verbal expression).

The seedlings were washed and bundled, then transported to the paddy. Earlier in the training cycle, the paddy had been plowed, fertilized, and harrowed by the class members. Following a demonstration of rice seedling planting, the class then proceeded to plant the rice paddy. This was a time-consuming, manual operation as two or three seedlings for each hill were taken from the bundle and placed in the