

DISCUSSION

Perhaps the most striking finding of this study is the relatively high agreement in all comparisons made concerning educational goals and philosophies. The only clear difference occurred in the area of occupational preparation. Other goals on which students placed more emphasis than did faculty fall generally into the personal-social development area. Faculty and students seemed to agree that intellectual goals should receive most weight; moral and social appearance goals, least; with service and other-oriented goals intermediate.

Agreement concerning educational philosophies was even greater. Here academic pursuits received most emphasis (more than was given to more purely intellectual ones). The detached, alienated philosophy evidently was not attractive to this academic community, nor was questioning the purpose of one's education in the form of social action and protest attractive to faculty. As one might expect, faculty did emphasize academic and intellectual pursuits more than students did. In summary one might say that faculty and students agreed on all the non-occupational, personal-social educational goals included in this study.

Several impressions may be formed from the statements included in the educational goal clusters. The personal-moral development goal represents the breadth emphasized by the College of Agriculture in its representation of itself to students, as well as to the state at large. The College is seen as promising development in the areas of moral concern, social service, human understanding and the intellect, broadly defined, the very purposes espoused by proponents of liberal education. Thus, at a verbal level at least, the respondents in this survey seem to be recognizing the commitment of their college to a general humanistic education.

The participants distinguished the broad area just described from an area of personal development that one is tempted to depict as superficial. Several of the statements in this latter area appear to focus on the external, less basic aspects of the person: personal comfort, poise, "culture".

In this survey faculty differentiated more in the area of goals than did students. Students saw only one global educational goal.

The differences between students and faculty in the importance they attached to occupational goals call for some explanation. Faculty in large universities seem prone to decry vocationalism in their students. Perhaps faculty opposition to vocationalism is so strong and their frustration with students

oriented in this direction is so great that they feel almost overwhelmed by what must be a pervasive phenomenon. One may speculate even that at a deeper level faculty are reluctant to recognize their own vocational orientation. It has been noted that education in the liberal arts in our large public universities, as well as in many private liberal arts colleges, has become almost literally professional training. We in higher education have been told so often by those who serve as our career models that a student's dominant motive should be learning for its own sake that we are caught between this orientation and the professional one encouraged by our academic disciplines. We feel almost guilty when we are forced to recognize how much our teaching actually involves professional training. By making student vocationalism the villain the instructor may remove some of the negative feelings he might otherwise direct at himself.

The age differences among faculty with respect to personal-social educational development may be explained by the finding in other research that the older and younger members of society (particularly those with college educations) are more likely to be interested in social service. Many writers have noted the pronounced idealism of today's youth. Perhaps one who has achieved recognition and status in his field can then seek ways to serve his fellow man.

¹Published as Paper Number 3484, Journal Series, Nebraska Agricultural Experiment Station.

²See Guilford, J. P. *Fundamental Statistics in Psychology and Education*, third edition. New York: McGraw-Hill, 1956. pp. 464-467 for a description of this statistical technique presented in a way which is both technically sound and relatively readily understood.

³Tables displaying the data in more nearly complete form are available from the first author.

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STUDYING RURAL-URBAN COMMUNICATIONS

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Preparation of college graduates who can deal with agriculturally-related issues in the public arena is the focus of attention in a new course at the University of Illinois.

A society that has viewed agriculture mainly in terms of amount, quality and price of food is broadening its perspective as complex ecological relationships become more apparent. New questions now face agriculturists. What inputs were used to produce the food and what are their effects on the ecological system? What methods were employed? What are the full and long-range effects of all parts of the agricultural enterprise? What is society's responsibility in supporting the agricultural enterprise?¹

Such questions create new kinds of interaction with government agencies, legislators, consumer groups, environmental interests, public news media and others. Decisions that emerge about such questions often are made by the public. Agriculture's serious concern in this regard is mirrored in an intense discussion about its relationship with the general public.²

In short, the agriculture college graduate must be prepared to operate effectively in the public arena. He must learn how to define and communicate about public issues that affect agriculture. And he must have a frame of mind that prepares him to contribute to public decision-making that is efficient and in the general interest.

The new course, entitled "Agriculture and its Publics," uses communications analysis as a tool for dealing with interactions between agriculture and other segments of American society. It differs from general communications courses in two ways: (1) it involves issue-centered analysis of communications phenomena and (2) it is oriented to agriculturally-related issues. Also, "Agriculture and its Publics" is unique among agriculture courses in that it concentrates on communications analysis.

The course was offered in both semesters of 1971-72 under an experimental course number and more recently was approved by the College of Agriculture and the University as a regular course. Positioned as a course for juniors, seniors and graduate

students, it offers three semester hours or $\frac{3}{4}$ unit of credit. Students who enroll must have completed at least nine semester hours of social science coursework. Thus, the typical agriculture student who enrolls has completed enough coursework in the biological, physical, agricultural and social sciences to deal with substantive rural-urban issues. The non-agriculture student who enrolls has some background in biological, physical and social sciences.

Course outline

Elements and systems of communications analysis	3 hours
Communications about agriculture (media used, sources, content)	6 hours
Current expressions from rural sources	
Current expressions from urban sources	
Concept of agriculture's image	
Communications from agriculture (media used, sources, content)	6 hours
Agriculture's story: current focus	
Agriculture's story: evaluation of the concept	
Development of and changes in rural-urban interaction	3 hours
Application of communications analysis to selected rural-urban issues	21 hours
Definition of scope of analysis	
Formulation of questions for consideration	
Identification of viewpoints and holders of them	
Analysis of communications content (appeals used, amount and type of supporting evidence, extent and locus of agreement, unmet arguments)	
Summary, evaluation of communications effectiveness, and possibilities for improving communications	6 hours

Early parts of the course are intended to (1) sensitize the class member to current rural-urban communications, many of which are nonverbal, (2) stress the inherent limitations of broad concepts such as "agriculture's story" and "agriculture's image," (3) sketch the development and current status of rural-urban relationships in this country, (4) suggest that rural-urban communications can be dealt with more productively at the level of specifics than of generalities and (5) introduce a system of communications analysis for use on specific issues.

Applying Principles

Class members then practice using communications analysis on current rural-urban issues of their choice. My experience so far suggests that available time permits the analysis of two to three issues. After the entire class has agreed upon issues that it wishes to analyze, each class member joins one issue-team which gathers and presents material about a particular issue. For example, the issues that class members analyzed in Spring Semester 1972 included:

- "Outside Corporations in Farming"
- "Political Representation of Farmers"
- "Agriculture and the President's Plan to Reorganize the Executive Branch"

Each issue-team had three responsibilities. First, it identified key controversial questions which get to the heart of the issue. Second, it identified participants in the dialogue and the full range of their views about it. Third, it gathered and presented those viewpoints about each key question.

Example: "Outside Corporations in Farming"

1. This team identified ten relevant interest groups in the dialogue: U.S. Department of Agriculture, agriculture colleges, American Farm Bureau Federation, National Farmers Organization, outside corporations that hold farming interests, legislators, labor unions, nonfarm citizens, businessmen in rural communities and what students called "muted voices" (i.e., sharecroppers, migrant farm workers)

2. Questions that the team raised were:

- a) What is the present scope of involvement by outside corporations in farming and what are the prospects for expansion?
- b) What have been the effects of outside corporations in farming (effects upon farmers, communities, consumers, and other segments of society)?
- c) How desirable are outside corporations in farming?
- d) What actions do you propose regarding this issue?

3. Each team member then became responsible for finding and presenting views of one of the ten interest groups. Students used library materials, personal correspondence, telephone, personal contact and other methods for finding information. They were encouraged to present the arguments as completely and forcefully as possible.

4. The entire class then heard arguments of the ten interest groups.

5. As a final step, each student in the class analyzed the dialogue and submitted a written report which became a basis for my evaluation of his or her progress. I used a checklist that paralleled earlier class discussions

about dimensions for communications analysis. In addition, before reading students' reports, I went through the same procedures as each class member, using information that team members provided in class. As complex as the task was, I found that the checklist and my own analysis permitted me to measure with some precision the rigor of each student's work. They also permitted me to offer each student specific suggestions about how he could strengthen his analysis.

As a separate part of my grading, I attempted to give class members credit for their information-gathering efforts as members of issue-teams.

Dimensions of analysis

The course outline presented earlier describes major dimensions of communications analysis used in this course: appeals used, amount and type of supporting evidence, points of agreement, points of disagreement and unmet arguments. They are a marriage between elements of the communication process and elements of critical thinking identified by Robert H. Ennis.³ They also encompass related elements of current models of communication.

In total, these dimensions for analysis carry "Agriculture and its Publics" into an unusual kind of instruction which seems akin to what Joseph J. Schwab has described as "enquiry into enquiry."

The complete enquiring classroom would have two aspects. On the one hand, its materials would exhibit science as enquiry. On the other hand, the student would be led to enquire into these materials. He would learn to identify their component parts, detect the relations among these parts, note the role played by each part, detect some of the strengths and weaknesses of the enquiry under study. In short, the classroom would engage in an enquiry into enquiry.⁴

Schwab explains that the aim of such a classroom is not only the understanding of a body of knowledge but the encouragement and guidance of a process of discovery on the part of the student. As I will comment later, it has real implications in the classroom, both for the teacher and student.

Potentials

A year of experience with the course suggests several unique potentials and strengths. Of course, one advantage is that it gives the student a system by which he can help identify, analyze and contribute to the solution of rural-urban issues. Issues will change, but a system for approaching them remains useful. This system, while still in a crude stage, seems precise enough to help the student cut through verbiage and sort out main arguments. Then it forces a matching and comparison of those arguments. In a broader sense, it helps perform that purpose of higher education in agriculture which Paul A. Miller has described as arranging "fragments of issues into statements of wholeness."⁵

Another advantage is that the process used in this course has unique potential for influencing the attitudes of class members about agriculture and its role in society. I refer here to the process by which students actively recognize, seek and try to understand a wide range of conflicting viewpoints — some that they do not hold personally. In terms of educational psychology, this is direct experience with the attitude object, one method by which attitudes can be modified. Philip E. Jacob has reported that "students are often deeply affected by participation in experiences which vividly confront them with value issues, and possibly demand decisions on their part whose consequences they can witness."⁶

I underestimate neither the difficulty nor the pitfalls involved in efforts to change attitudes, for the complexities of attitude change are enormous.⁷ However, John Dewey's goal of creating an attitude of intellectual open-mindedness seems worthy of any teacher's efforts.⁸ Whereas agriculturists represent an interest group in society, they can hope to take part in public decision-making only when they recognize, understand and take into account opinions that differ from theirs.

A search for open-mindedness may be particularly important to teachers of agriculture, for observers have noted that agriculture students tend to be less flexible and more protected when they enter (and leave) college⁹, too self-contained¹⁰, provincial in their outlook and pragmatic in their approach.¹¹

To the extent that these tendencies exist, they contribute to a broader problem described by Miller in his discussion about

higher education in agriculture: ". . . the agricultural colleges appear remarkably successful in supplying leadership at the 'middle range' of application; they have yet to be successful in supplying leadership at the 'higher range.' There is a short supply in the United States of college-trained people capable of reflecting on the interdependencies of American agriculture: the ability to understand the aggregation of the crucial elements."¹²

The "Agriculture and its Publics" course also seems unusual to students in stressing a phenomenon that characterizes public decision-making: that an opinion (even in error) may be as important as a fact. Communications analysis takes both into account. The agriculturist who both commands the facts and understands the role of subjective elements operates at an advantage in the public arena.

A side benefit of the course is to acquaint the class with current issues that are important to agriculture and society. In that sense, it becomes a current affairs course that puts us into the midst of today's problems. I have only begun to explore possibilities for bringing resources into the classroom, but the opportunities are great. During Spring Semester 1972 the class members talked personally (by personal appearance or conference telephone) with the president and former president of two national farm groups, the state secretary of agriculture, a group of urban students, two executives representing major agricultural business firms, a U.S. Congressman, the chairman of a national independent businessmen's group, two state-level agricultural lobbyists, a state-level legislative candidate, and the minority counsel of the Government Operations Committee of the U.S. Senate.

Student interest in topics tends to be strong because the topics are timely, important and constantly changing. Pesticides, nitrates, manure disposal, municipal waste disposal on agricultural land, rural zoning, DES, cholesterol, taxation, food prices, farm subsidies and many other issues are open to communications analysis.

Another effect of the course is that it helps students understand the public arena and how it operates. Class members seem to gain from seeing the day-to-day work and interests of lobbyists, legislators and others who help form public decisions that influence agriculture. In that respect the course complements instruction in courses such as farm policy.

Suggestions

One should be careful not to conceive such a course as leading students to the technical solution of particular rural-urban issues. Class members must understand early in the term that their goal is not to arrive at technical decisions about given issues. Limited time and complexity of issues do not permit them to "solve" any given rural-urban problem. Nor would many teachers be qualified to help do so over the full range of issues. Instead, the goal of this course is to develop and practice skills in analyzing the communications that surround such issues. Class members may not be able to identify all participants and obtain all relevant facts and viewpoints in a given dialogue, yet they still can learn by applying the analysis system. Most certainly they will become more aware of the bewildering complexities of most rural-urban issues.

A second suggestion is that both teacher and students must realize that they will use teaching and learning skills that are not *common*. For the student, this means that facts and viewpoints become material to be analyzed, not just learned. Class members were able to operate at both levels after they understood the dual task.

The teacher's role also changes. I found that two of the usual teacher functions became more important in this course than in other courses that I have taught.¹³ The teacher must actively help students find information sources, for the effervescent nature of timely issues makes textbooks of limited use. I tried to give each issue-team specific ideas and references that could help it launch its search. Even then, information-gathering was a major challenge.

The second especially-vital stage was in summary. After class members have inundated themselves with conflicting facts and

opinions, the teacher must help them summarize, clarify and develop ways to improve on what they have seen and heard. Each student should leave the course feeling more confident about dealing with complex communications situations that he will face.

Finally, as implied earlier, it is important to avoid conceiving this course as a platform for mustering the elements of "agriculture's story." It is not a methods course in promoting agriculture. Instead, it should involve the class member as an analyst rather than as an advocate; it should encourage breadth of thinking rather than narrowness. Even the graduate who becomes a vigorous spokesman of a given group should benefit from the discipline of communications analysis, for it serves as the starting point for effective communicating.

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² See for instance: L. J. Boyd, "Communications Gap," *Hoard's Dairyman*, 115 (August 10, 1970), p. 845; Gamma Sigma Delta, *Communicating Agriculture to the Non-Agricultural Public*. Report of a seminar sponsored jointly by Gamma Sigma Delta and the University of Minnesota Institute of Agriculture, June 29, 1970; D. M. Hall, "The Image of Agriculture," ES-1751, College of Agriculture, University of Illinois, Urbana, November, 1963; John Megown, "Interest in Agriculture's Image," *Feedstuffs*, 44 (April 10, 1972), p. 10; R. T. Meister, "Can We Bridge the Communications Gap?" *Farm Chemicals*, 133 (June, 1970), pp. 56ff; National Agricultural Institute, "Major Study Launched on Farm Communications," *Agriculture USA Newsletter*, 3 (January, 1972), p. 1; Don Paarlberg, "Who Makes Agriculture's Decisions?" *ACE Quarterly*, 54 (January-March, 1971), pp. 21-31; Lane Palmer, "At Last: Farmers Tell Their Story!" *Farm Journal*, 96 (May, 1972), pp. 22ff; R. E. Stevenson, "How Bad is Agriculture's Image?" *ACE Quarterly*, 54 (April-June, 1971) p. 38; Lee Taylor, *Urban-Rural Problems*, Belmont, Calif.: Dickenson Publishing Company, 1968; William B. Ward, "Communications-Public Relations Aspects of Agricultural Pollution," *ACE Quarterly*, 54 (January-March, 1971), pp. 3-15; S. H. Wittwer, "Communicating the Greatest Story on Earth." Paper presented at the annual meeting of the North Central Region of the American Association of Agricultural College Editors, Monticello, Illinois, May 17, 1971.

³ Robert H. Ennis, "A Concept of Critical Thinking: A Proposed Basis for Research in the Teaching and Evaluation of Critical Thinking Ability," in B. Paul Komisar and C. J. B. Macmillan (eds.) *Psychological Concepts in Education*, Chicago: Rand McNally and Company, 1967, p. 116.

⁴ Joseph J. Schwab "Learning as Enquiring" in Donald Vandenberg (ed.) *Teaching and Learning*, Urbana: University of Illinois Press, 1969, p. 33.

⁵ Paul A. Miller, "Philosophy and Objectives of Higher Education in Agriculture," *Curriculum Development*. Report of a Work Conference for Schools of Agriculture, Ft. Collins, Colorado, July 18-21, 1960, p. 20.

⁶ Philip E. Jacob, *Changing Values in College*, New York: Harper, 1957, p. 10.

⁷ See, for example, Samuel H. Throm, Jr., and D. E. Arredonda, "Teaching for Attitude Changes," *American Biology Teacher*, 33 (October, 1971), p. 401; Donald Arnstine, "Some Problems in Teaching Values," in Donald Vandenberg op. cit., pp. 203-213; Lee J. Cronbach, *Educational Psychology*, New York: Harcourt, Brace and World, Inc., 1963, p. 423. Arnstine argues that we should differentiate between attempts to teach "evaluations" and "values."

⁸ John Dewey, *Democracy and Education*, New York: Macmillan Company, 1944, pp. 204-210. He describes four attitudes which are central in effective intellectual ways of dealing with subject matter: directness, open-mindedness, whole-heartedness and responsibility.

⁹ Mary C. Regan, "Stimulating Achievement" in *Motivation and Achievement of Agriculture Students*. Proceedings, Summer Work Conference of Deans and Directors of Resident Instruction in Agriculture in the Land-Grant and State Universities, Squaw Valley, California, August 6-8, 1969, pp. 22-23.

¹⁰ George A. Gries, "Educational Objectives in the Agricultural Sciences," *Journal of Dairy Science*, 48 (January, 1965), p. 117.

¹¹ Thadis W. Box, "Teaching Today's Agricultural Student," *NACTA Journal*, 13 (June, 1969), p. 29.

¹² Miller, op. cit., p. 23.

¹³ For a useful summary of possible teacher actions related to purposeful learning in a school setting, see: Herbert J. Klausmeier and Richard E. Ripple, *Learning and Human Abilities*, New York: Harper and Row, 1971 (Third Edition), p. 40.