

AN EVALUATION OF RADIO PROGRAMS FOR USE IN  
AGRIBUSINESS AND NATURAL RESOURCES EDUCATION

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There is always a need for new and useful materials that can be effectively used in classroom instruction. This includes a need for audio and visual materials as well as conventional reading material. Miller and Rose (1975) reported the value of audio and visual aids in vocational instruction. McKeachie (1969) outlined recent trends in the use of audiovisual materials in the future. Phipps (1972) also related the importance of effective audiovisual aids in agriculture, indicating the need for a diversified, multi-media approach to classroom instruction.

The Institute of Food and Agricultural Sciences (IFAS) in Florida, through the Cooperative Extension Service, disseminates information to the public utilizing a variety of methods, among which are taped radio programs which are used. These radio programs are produced in a variety of formats and deal with a wide array of subjects. They are designed to inform the public of recent developments and trends in agriculture. The radio programs are sources of new ideas and current information for the general public.

In an effort to further utilize the taped radio programs, the Department of Agricultural and Extension Education at the University of Florida recently selected and duplicated a number of these programs and conducted a study with selected teachers. The purpose of this study was to determine, through teacher opinion, the applicability of selected radio programs to both vocational and pre-vocational agribusiness and natural resources education programs in Florida.

*Methodology*

The IFAS produces several different series of radio broadcasts. For this study, the "Impact on Life" series was selected. This is aimed at the general public and designed to inform people regarding new developments and current trends in all areas of agriculture. Because of the non-technical format, the variety

of subjects covered, and the intended level of the audience, this series was chosen over the others produced by IFAS.

Each daily radio broadcast is approximately four minutes long; however, usually three segments are taped on the same subject, thereby comprising a program approximately 12 to 14 minutes in length. This includes a 30 second pause between each segment. Using cassettes that would record 15 minutes on each side, one subject was recorded on each side of the cassette.

In order to effectively determine the applicability on a broad base, nine different subjects were taped on five cassettes. They were grouped as follows:

1. Tape One                    Sides One and Two--Consisted of an interview concerning recent changes in farming methods and farming life--recorded May, 1975.
  
2. Tape Two                    Side One--Consisted of a brief description of the College of Agriculture at the University of Florida--recorded October, 1974. Side Two--Presented an explanation of the annual Career Conference at the University of Florida, held for prospective students--recorded April, 1974.
  
3. Tape Three                 Side One--Presented a brief overview of the ornamental horticulture industry in Florida--recorded March, 1975. Side Two--Outlined some of the latest methods of plant and insect control--recorded June, 1975.
  
4. Tape Four                    Side One--Presented an overall explanation of the citrus industry in Florida--recorded February, 1974. Side Two--Consisted of an interview describing timber production in Florida--recorded April, 1975.
  
5. Tape Five                    Side One--Described selected aspects of beef cattle prices--recorded July, 1975. Side Two--Contained a description of research findings on vegetable viruses--recorded May, 1972.

These selections were chosen either because of up-to-date accuracy or because complex ideas were explained in terms the general public could understand. Each tape was reproduced five times for a total of 25 cassettes. This comprised the materials that were studied.

Supervisory data were collected from all regions of the State. The tapes were mailed in January and April. A total of 50 surveys were mailed. For the January survey, a number was assigned to every agribusiness and natural resources education teacher in each region listed in the State Personnel Directory (Florida Department of Education, 1975). This included both vocational (grades 10-12) and pre-vocational (grades 7-9) teachers. For each region, five random numbers were generated within the limit of the number of teachers in that region and the tapes were randomly assigned to the selected teachers.

For the second mailing, each of the five regional consultants for agriculture was contacted by telephone. The project was explained and they were asked to suggest five pre-vocational agriculture teachers (grades 7-9) to participate in the survey. Pre-vocational teachers were included in the study due to the more pressing need for instructional materials in that area.

After the respondents were selected and the tapes assigned, a letter was sent explaining the project. The survey instrument was designed to determine the opinions teachers have of the tapes. The survey asked the teacher to identify the audience, course name, and number of times the tape was used. Space was provided for evaluating each tape in relation to content (subject matter), format (structure), relevance to instruction, applicability to classroom use, and total evaluation. The respondents answered on a four-point Likert scale with numerical values being assigned as follows: 3 - Excellent, 2 - Satisfactory, 1 - Needs Improvement, and 0 - Unsatisfactory. The teachers were also asked to indicate the grade level(s) for which they believed the materials were best suited ranging from a choice of sixth grade through the post-secondary level. Finally the teachers were asked if they would use this again in their classes.

The cassette, explanatory letter, a copy of the questionnaire, and a self-addressed mailer to return the cassette and survey form were then packaged and mailed to the selected respondents. Follow-up letters were mailed and personal telephone calls were made to non-respondents.

### *Results and Conclusions*

Forty teachers or 80 percent of those surveyed responded in the study. No meaningful differences in responses were found between pre-vocational and vocational teachers; therefore, the responses were combined for the purpose of analysis. However, the response did vary among the different tapes. Therefore, the data were tabulated separately for each tape.

Table 1 gives a summary of the evaluation of the tapes regarding the content (subject matter), format (structure), relevance to instruction, applicability to classroom use, and total evaluation as viewed by teachers of agribusiness and natural resources in Florida. Content was rated as the highest and the applicability to classroom use the lowest for almost all tapes. Overall responses indicated content to be satisfactory or better. Both format and relevance, based on an average of all five tapes, rated slightly less than satisfactory.

Each teacher surveyed was instructed to circle as many grade levels in which they thought use of the tape would be suited. Usually more than one level was indicated. The results show there was less difference between each tape and more agreement among all respondents. Over 63 percent of all respondents indicated that the eleventh and twelfth grades or post-secondary schools were the most appropriate grade levels for using the radio programs. Furthermore, less than 16 percent believed that the tapes were most appropriate for use at the sixth, seventh, or eighth grade levels.

The question concerning whether the teachers would use the tape again was answered with an unqualified "yes" 41 percent of the time, an unqualified "no" 39 percent of the time, and a qualified response or no response 20 percent of the time.

It was concluded that content was the most desirable feature of the tapes. However, respondents questioned the format, relevance, and applicability of the tapes for classroom use. Furthermore, the total evaluation was less than satisfactory. The tapes were most suitable for eleventh grade, twelfth grade, and post-secondary use. It was concluded that the tapes, if produced for use in the State, would not have wide acceptance because less than half of the respondents indicated that they would use the tape again.

TABLE 1

MEANS OBTAINED FROM RESPONSES OF TEACHERS REGARDING THE CONTENT, FORMAT, RELEVANCE, APPLICABILITY, AND TOTAL EVALUATION OF RADIO PROGRAMS FOR CLASSROOM USE

Criteria	Means					Total
	Tape One	Tape Two	Tape Three	Tape Four	Tape Five	
Content	2.20	2.23	2.5	2.58	2.64	2.43
Format	1.33	2.41	1.7	1.93	2.41	1.96
Relevance	1.40	1.94	1.85	2.0	2.46	1.93
Applicability	1.44	1.88	1.33	1.61	1.76	1.60
Total Evaluation	1.59	2.12	1.84	2.03	2.32	1.98

#### *Implications and Recommendations*

From the results and conclusions, it can be implied that further development of radio tapes for classroom instruction should be for secondary or post-secondary school use. Another study of similar nature should be conducted to focus on the particular level of programs. The material is not suited for use in pre-vocational programs as it presently exists. The data, however, imply that teachers were interested in the content of the tapes, probably due to the up-to-date nature of the material. This might be a reason for the development of similar materials that would present the latest information in a manner more suitable for classroom use.

#### *References*

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