

Improving Instruction: A Case Study

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Improving instruction in Extension depends upon excellence in educational practice and knowledge of content area. Both were included as topics in a recent successful Ohio workshop on improving quality of instruction. Although workshops are often used as a teaching method in Extension, some are successful while others are not. In this case study, procedures are described and concepts and principles are discussed. It is suggested that training (its nature and the manner in which it is conducted) relates directly to the administrative climate of an organization.

EXTENSION administrators in most states use workshops as a method of teaching. Some of these workshops are successful; others are not. Late in 1966 the Ohio Cooperative Extension Service conducted an extremely successful workshop directed toward the Improvement of Quality of Instruction. Why was this particular workshop so successful? And might the concepts and principles used in planning and conducting the workshop have implications for Extension workers in other states?

Discussion of the development and conduct of this workshop will be presented from two points of view: (1) a description of what happened, organized according to the major steps of Extension program development;¹ and (2) a brief reference to relevant theoretical concepts and principles. The description of procedures used is presented in regular type. Description of concepts and principles is set in smaller type and indented.

THE SITUATION

Multiple ways of identifying the need for improvement of in-

¹H. C. Sanders (ed.), *The Cooperative Extension Service* (Englewood Cliffs, New Jersey: Prentice-Hall, 1966), p. 95; and Lincoln David Kelsey and Cannon Chiles Hearne, *Cooperative Extension Work* (Ithaca, New York: Comstock Publishing Associates, 1963), pp. 481-82.

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struction were used in this case. As with most programs, the development process started with a look at the present situation.

In Ohio, as in most states, Extension workers have usually been effective teachers. However, the need to improve the quality of instruction at all levels of the educational system in the United States is a matter of growing concern. Reflecting this concern, staff members of the Ohio Extension Service indicated a desire to improve their educational practices, to be superior teachers. They expressed this desire through answers to a questionnaire on long-time training needs and by comments to supervisors and department chairmen.

As in most program determination situations, knowledge of research and the judgment of the planners were also influential in determining the need and identifying the content to be taught. The state Extension Director encouraged development of a workshop by being the first person to commit himself to participate and by providing ample resources for planning and conducting the workshops. At the annual Extension conference where this program was initiated, Director Roy M. Kottman identified the reason for emphasis on teaching: "That's what we are—teachers."² Thus, through leadership provided by administration, Ohio Extension workers are pursuing professional excellence through a broadened in-service educational program.

After the decision to implement this in-service program, the professional improvement staff began planning, with a representative planning committee. This committee analyzed in more detail the specific needs of staff and developed a preliminary detailed program. All staff members were then involved in reviewing the workshop content and were provided opportunity to make suggestions and indicate areas in which they felt the need for more competence. Final workshop program objectives were then determined.

In this case of program determination, the job of the potential learner, his needs, and his interests were considered by the planners. Available research knowledge was considered. Alternate program plans were developed. Decisions as to priorities were made. Potential learners were involved to the maximum to gain their true feeling and support for the program. As Boyle states, "Pertinent information should be collected and analyzed. . . . Priorities should be established. . . ."³ Thus workshop objectives were determined.

² Roy M. Kottman, "Our Immediate Challenges—Goals and Subject Matter Schools," speech given at Ohio Annual Extension Conference, Columbus, Ohio, October, 1965.

³ Patrick G. Boyle, *The Program Planning Process with Emphasis on Extension* (Madison: National Agricultural Extension Center for Advanced Study, University of Wisconsin, 1965), p. 39.

PURPOSE AND OBJECTIVES

The purpose of this workshop was to improve the competence of Extension personnel as teachers. Development of teaching competence depends primarily upon two major areas of competence: educational practice and technical knowledge. To make it easier to develop technical competence, workshops were designed so persons interested in home economics, agronomy, animal science, or youth would all come with one common interest. This workshop for youth workers was thus directed at what needs to be taught in the 4-H Club program and how this can be taught. The assumption was made that those attending were more competent in what was to be taught than in how to teach it. The workshop was directed primarily toward educational practice. Participants were county Extension agents and state specialists interested in improving their teaching in the 4-H Club program. They enrolled in the workshop to:

1. Improve their understanding of basic learning theories and be able to discuss application of the theories to Extension.
2. Improve their understanding of the concept of educational objectives.
3. Improve their ability to select meaningful objectives for teaching.
4. Improve their understanding of general principles useful in selecting learning experiences.
5. Improve their ability in organizing learning experiences into sequential plans.
6. Improve their understanding of basic knowledge and recent research findings in youth education.
7. Improve their understanding of educational aids and develop the necessary ability to use them effectively.
8. Develop their ability to evaluate results of teaching efforts.
9. Improve understandings and skills necessary to develop effective teaching plans and demonstrate their use.

Objectives can most effectively be identified through the analysis of the learner, the job, the society in which he lives, and from what we know from research. Many more objectives could have been considered as possibilities for a workshop on teaching. Tyler⁴ has proposed two screens to assist in determining appropriate objectives: (1) our educational philosophy and (2) what we know about the psychology of learning. Evidence that these screens were used by the planners can be seen in their belief that: (1) only a few basic concepts could be dealt with in the two weeks available for a workshop, and (2) the workshop must provide ample time

⁴ Ralph W. Tyler, *Basic Principles of Curriculum and Instruction* (Chicago: The University of Chicago Press, 1950), pp. 22-25.

How did you make it?

for developing a product (i.e., lesson plans) that would be useful to participants when they returned to their jobs. The objectives thus selected were expressed in both the kind of behavior to be developed in the participant and the content to be taught.

PROCEDURES

To improve the ability of Extension teachers who were already competent it was necessary to have carefully planned educational experiences. The workshop method of teaching was selected to provide ample opportunity to use basic principles in adult education. "A true workshop is truly a work shop. People meet in small groups to work together on problems of their own choosing, under the guidance of well qualified consultants."⁵

For any learning to be useful, the learner must have a solid base of theory and principles from which to draw. The theory and principles in this workshop were developed primarily around educational objectives, learning experiences, and evaluation. These are the basic keys to curriculum development as discussed by Tyler.⁶ Attention was also directed toward teaching methods, educational aids, and effective speaking.

Emphasis in the workshop was on helping agents select clear, meaningful teaching objectives that would be helpful in planning the lessons the agents were going to teach. According to Mager, the "most important characteristic of a useful objective is that it identifies the kind of performance which will be accepted as evidence that the learner has achieved the objective."⁷

After objectives were identified, attention was directed toward planning effective learning experiences for intended audiences. Workshop participants were asked to focus on what the *learner* needs to do in order to learn, rather than on the activities they, as teachers, would conduct. Thus emphasis was placed on what the agents and specialists could do during the workshop that would be most helpful to them when they returned to the job.

The third major concept dealt with was evaluation. Participants were encouraged to concentrate on how they would evaluate their teaching efforts, utilizing the notions of measurement, sampling, and objectivity.

A key to satisfaction from such a workshop was the opportunity provided for putting theory into practice. Every participant had the

⁵ Sanders, *op. cit.*, pp. 161-62.

⁶ Tyler, *op. cit.*

⁷ Robert F. Mager, *Preparing Objectives for Programmed Instruction* (San Francisco: Fearon Publishers, 1962), p. 13.

chance to develop and present at least part of one lesson he intended to use when he returned home. Not only was he given the opportunity to make a presentation (with fellow participants playing the role of the intended learners), he was critiqued by co-workers and by consultants on the workshop staff and was provided an opportunity to study a videotape playback of his teaching efforts. This videotape system of self-evaluation, used in educating teachers at Stanford,⁸ was considered useful by Extension personnel participating in the Ohio workshop.

What about the technical competence in 4-H Club work the participant was to gain during the workshop? Three ways were provided for developing this competence:

1. Two members of the state 4-H Club staff developed a series of three sessions for all workshop participants on 4-H member evaluation. This topic was selected because nearly all participants had indicated plans for teaching in this area within the next year. These sessions were especially stimulating because all participants were actively involved on the job in member evaluation work.
2. Two clothing specialists, two 4-H staff members, an animal science specialist, an agricultural engineer, and an agricultural editor participated in the workshop. Holding small work sessions, they helped participants increase their understanding of these specialized areas as they planned their lessons. The specialists also helped critique material presented by workshop participants.
3. Time allowed for agents to plan permitted them to consult with specialists anywhere on campus. The agents could thus be better prepared in a technical area through individual study with specialists.

The procedures were designed so that each individual could work on areas in which he most needed competence. For some this was evaluation, for others it was objectives, educational practice, or technical competence.

The principles that dictated the above design of educational experiences were derived from what we know about learning. Miller⁹ and Tyler¹⁰ relate some of the more important principles which were guides for this workshop:

⁸ Dwight W. Allen and David B. Young, "Television Recordings—A New Dimension in Teacher Education," Stanford University School of Education, Stanford, California (mimeographed).

⁹ Harry L. Miller, *Teaching and Learning in Adult Education* (New York: Macmillan Co., 1964), pp. 33-50.

¹⁰ Tyler, *op. cit.*, pp. 42-44.

1. Learning experiences must provide the learner opportunity to practice the behavior implied in the objective. For example, the only way our participants could develop ability to evaluate a lesson was by doing it. They had opportunity to do this in the workshop.
2. The learner must gain satisfaction from carrying on the behavior implied in the objective. Participants in our workshop were able to obtain satisfaction because they were planning for work they had to do when they returned home. In addition to feeling they had done a good job, they were able to see (on videotape) the degree to which their performance was successful.
3. The learner must be able to perform the kind of experiences planned for him. The kinds of experiences arranged for in the workshop were similar to what the participants had been attempting in their job as teachers.
4. The learner must have available a sequence of appropriate materials. References, staff resources and equipment from the Office of Information, and the resources of specialists in the University provided a good supply of material for the participants as they planned for and did teaching.

IMMEDIATE RESULTS OR EVALUATION

One evaluation procedure used during the workshop was that of pre- and post-learning tests. These were used as a means of measuring cognitive learning. With a potential score of 45, the pre-test mean score was 34.2, the post-test mean score 37.9—a gain of 3.7. Since the pre- and post-tests were given to the entire population, a measure of statistical importance to this increase was not appropriate. The staff in the workshop felt that the relatively high pre-test score supported our belief that our staff members already have much understanding of their teaching responsibility. The gain was interpreted as a good gain since the scores were relatively high at the start. In addition to the increase in mean scores, the variation among group members decreased considerably from the beginning to the end of the workshop, indicating more common understanding among all participants.

The workshop was also regularly evaluated through a steering committee. Through efforts of this committee, effective changes were made throughout the workshop. At the end of the workshop, an "emotional response" showed positive feelings for the workshop. Typical comments were:

"This is the best workshop I have attended since I have been in Extension."

"This workshop really provided the opportunity for the application of theory and principles."

Staff consultants could clearly see in the lessons prepared by the participants that all of the agents were using teaching methods based upon sound educational practices. No formal pre-workshop measure of their skills in this area was available. However, from observations made, the staff believed there was improvement.

The long-range effect of the workshop cannot yet be assessed. However, some visible evidence which was volunteered to the author within three months after the workshop included: (1) two agents reported being pleased with their new experience of giving pre- and post-tests to their audience, and (2) two counties completed plans to purchase new overhead projectors.

In a recent *Journal* article, Alexander cited 12 levels of evaluation.¹¹ At least half of these levels were used to evaluate this workshop, ranging from the "habitual, but unorganized" to "a questionnaire or test before and after more than one teaching situation." Evaluation is a continual task which starts with the planning and continues long after completion of a teaching effort.

SUMMARY

Three points summarize briefly the reasons the workshop was so successful:

1. The responsibility of being an effective teacher is important to all Extension workers, and the participating staff really believed that further education would help achieve this perfection.
2. The professional attitude of the participants was excellent. They wanted the workshop to be helpful and successful.
3. The workshop was organized to deal with a few basic concepts and principles; these same concepts were used in structuring and conducting the workshop.

THE WORKSHOP IN PERSPECTIVE

A workshop directed toward the Improvement of Quality of Instruction in Extension is not an entire training program. This workshop, and similar ones in the future, are only a part of a total training effort.

¹¹ Frank D. Alexander, "A Critique of Evaluation," *Journal of Cooperative Extension*, III (Winter, 1965), 205-12.

The Ohio program of in-service education is changing continually to keep up with the changing needs of agents, specialists, and administrators. Staff education is provided at state, district, and area levels. Nearly all training programs are designed to help prepare for immediate and near immediate responsibilities. Each training activity is designed to help staff members become better educators. In addition to in-service training, staff members are given opportunity for study on the job, leave with pay, and short-time study with little loss of vacation, to encourage study at the graduate level.

Other means of professional development are not diminished because of this concentrated effort toward improving quality of instruction. The need for a balanced program of professional development is still essential. Through the proper "administrative climate" staff members have many opportunities to grow professionally.

IT SHOULD BE REALIZED that there may still be people, including people in high positions such as directors and administrators within the organizational structure of extension, who do not realize that technological change may depend on social change, or who do not appreciate the instrumental value of the social sciences in stimulating and supporting social and technological change. They may not realize that change, diffusion and adoption are processes which lend themselves to scientific analysis, diagnosis and therapy. They may tend to see the extension organization as a mechanical carrier of knowledge, which should drop its contents on the farmer's doorstep without stopping to see whether such knowledge is wanted or received, even though it may be of scientific importance. They see extension as a quantity instead of a quality. Extension trainers must often cope with a great deal of resistance from within the extension organization. It is mostly resistance based on lack of knowledge or understanding, but if it is present, it must be dealt with.

—F. F. H. KOLBE