



## Research in Brief

### Program Development Theory

Few people seem to quarrel with the idea that clientele should be involved in educational program determination. Farrell tried to qualify this widely held belief on the basis of the nature of the program area. He identified two major sources of variability for discriminating among various types of planning tasks.

### Theoretical Model of Planning Tasks

One major source of variability is the nature of relevant data (objective compared to subjective). The second variable relates to the range of alternative learning experiences potentially available (limited compared to a wide range). The theoretical model used these two major variability sources, each treated as dichotomous variables, to thus distinguish four types of planning tasks (designated A, B, C, and D).

*Type A* tasks are those for which learning needs can be identified on the basis of objective data and the kind of learning experience(s) that can be prescribed fairly precisely on the basis of existing knowledge (for example, educational program to improve agricultural production). Extensive citizen involvement in planning is probably unnecessary in this type.

*Type B* are those in which learning needs can also be based on data, but the range of alternative learning experience is wide (for example, educational program in the inner city to improve the quality of life for low-income people). Here client involvement is desirable in learning groups initially so that later the group can make decisions among alternatives.

*Type C* planning tasks involve areas where learning needs must be based primarily on the subjective ideas and opinion of clientele and the range of appropriate learning ex-

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periences is limited (for example, an educator working for a community board of educators). Here clientele may be the primary data source, but the data are collected individually rather than as planning committees.

*Type D* tasks are characterized by virtually no constraints on the range of needs and alternative learning experiences that should be considered. Further, no objective data are available to permit a directive role by the educator in needs identification (for example, evolving the educational component of a total resource development plan for a community).

In many respects, the *Type D* planning tasks are those from which the generalized principle of citizen involvement has evolved, through planning committees, as a constant ingredient in the planning process. In this situation, clientele involvement through small group decision making would be the most efficient and valid means of determining program focus.

### Conclusion

The foregoing notions aren't intended as an argument against citizen involvement in program determination. However, they do underline the need for the adult educator to ask "why" and "how."

"A New Dimension in Program Development Theory." G. M. Farrell. Paper presented at Adult Education Research Conference, Montreal, Quebec, April, 1973.

D. Blackburn

### Problem-Solving Skills in Ag

Just telling farmers about a new practice isn't enough. Each farmer also needs certain skills and abilities to use that information. Any new information from Extension to the farmer must first be seen by him as relevant to his goals, resources, understanding of his own situation, and the norms of his group. Then he may move from awareness to interest and possible adoption. What's involved is the farmer's ability to see the new idea as it could apply to his own operation in his present circumstances.

With these premises in mind, Tully has been developing measures of skills in problem solving and planning. She believes that improving these skills is key to more Extension-backed recommendations being adopted and adapted for and by individual farmers.

She tested her methods in a study of Australian dairymen.

### Study in Brief

Tully had been in on the development of a measure of managerial ability, called "conceptual skill," in 1958. Building from this scale, she developed an "Index of Conceptual Skill" to study 86 dairymen. Eight of the 19 items used formed a unidimensional scale:

1. Future prospects for dairy industry:
  - a. Clear understanding.
  - b. Poor or no understanding.

2. Positive ideas about use of credit for farm:
  - a. Yes.
  - b. No.
3. Plans to offset rising costs in farm operations:
  - a. Yes.
  - b. No.
4. Plans for what the farm will be like in 10 years' time:
  - a. Clear idea.
  - b. Vague or no idea.
5. Use of records in planning:
  - a. Yes.
  - b. No.
6. A planned feed program:
  - a. Recognizes relationship between feed and production.
  - b. Doesn't recognize need to match feed to production.
7. What happens to feed in problem periods?
  - a. Understands causes.
  - b. Has no idea of causes.
8. Shortage of paddock feed:
  - a. Recognizes gaps in feed year.
  - b. No recognition of gaps in feed year.

In addition, Tully constructed an "Index of Technical Skill." It was a measure of groups of practices used in the manipulation of production factors, such as nutrition, breeding, pest and disease control.

"Thus a dairy farmer would not score highly in the nutrition field just for having improved pasture or growing oats for winter feed. To score highly he would have a planned feed year programme which would provide adequate nutrition

for his herd in relation to its size and calving pattern."

Butter fat per cow, score on the Index of Conceptual Skill, and score on the Index of Technical Skill all were correlated significantly ( $p < .001$ ) with one another. Score on the Index of Conceptual Skill explained 27 percent of the total variation in production per cow, score on the Index of Technical Skill added almost 7 percent.

Then, using all 19 items dairymen had originally responded to, she looked in detail at the components of conceptual skill. Factor analysis of these items turned up four categories:

1. Recognition of problems in general terms—such as knowing the effects of restricted credit availability on farm development.
2. Recognition of the parameters of problems—such as recognizing the advantages and disadvantages of opportunities for making extra cash from the farm other than in dairying.
3. Recognition of the causes of problems—such as knowing what happens to the nutrition of feed subject to leaching.
4. Items concerned with planning—plans for offsetting rising costs of farm operations, for example.

All four of these categories were also present in the Index of Conceptual Skill. Thus, Tully says,

that index also appears to be a measure of problem solving and planning abilities among those dairymen.

#### Implications for Extension

The importance of conceptual skills—problem solving and planning—in this study point out that farm management is more than financial management . . . keeping financial records, working out cash flows and gross margins and partial budgets.

Tully says, "It is the management of a very complex technical system of soils, plants, and animals all in interaction and interdependence. These interacting parts are subject to many manipulative techniques . . . It is the choice of related sets of manipulative techniques which leads to success and failure in farming.

"Further, a farm system is . . . acted on by other outside systems . . . not under the farmers' control, such as the weather, the economic system . . . and a social system . . .

"It obviously requires mental and intellectual skills of a high order to achieve the required results because the entire system is dynamic. And planned change, such as an innovation or unplanned change such as a fall in prices or a drought have repercussions throughout the entire system."

Problem solving and planning need to be taught as part of farm management. And thus, Extension professionals must know these skills and their applications so they can teach them to farmers.

Finally, new technology can't be promoted just for itself. It must be placed in a broader management setting—problem solving and planning—if it's to get adopted and farmers are to be successful in that adoption.

Tully's idea of an index to test farmers' problem-solving and planning abilities is a useful one. Her particular scale items may or may not work in other countries. Further cross-cultural research should shed light on that question. But, she's showing us a way of attacking the problem of finding out how well farmers do in these abilities. This points out what else may be needed for them to attain the skill levels required to be successful managers.

"Increasing Managerial Skill—A Study of Dairymen." Joan Tully. Brisbane, Australia: University of Queensland, Department of Agriculture, 1973. (Mimeographed)

M. Miller

"Community Involvement in Transportation Planning: A New Approach." *Highway Research Record* (Number 380). Kenneth M. Travis and Stanley C. Plog. Washington, D.C.: National Academy of Sciences, National Research Council, Highway Research Board, 1972, pp. 8-13.

Commenting that public hearings frequently degenerate into an avenue of conflict and working with a small group of prominent individuals is tantamount to excluding the

public, the authors describe a method of citizen involvement with specific techniques involving community organization and community survey.

In this approach, first a leadership profile is used by a study team to identify the most representative leaders from various types of community organizations. This profile is formed from antiproject protest groups and other groups that previously have shown interest in transportation planning (primarily identified at earlier meetings).

Experienced study team members using counselling and interviewing techniques then determine the concerns of the leadership through individual and group interviews. This determination is felt to be the most sensitive and critical area in the entire community involvement effort. Size of groups, informality, time, and place of meetings are the primary factors that contribute to high quality dialogue.

An information release network is a vehicle for achieving and maintaining continual community involvement during the decision-making process. The network releases information pertinent to study direction and major conclusions and recommendations of each meeting. The most difficult tasks are release of correct information, proper phrasing of releases, and acquiring the reactions of leaders or groups to study team decisions.

The authors observed a high desire among individuals and groups to participate in transportation planning. This process of community in-

volvement generated a high level of individual and group satisfaction—derived from the fact that they'd been consulted and their opinions and suggestions taken into consideration.

D. Blackburn

**"The Trouble with Community Action."** Gary English. *Public Administration Review*, XXXII (May/June, 1972), 224-31.

The problems of community action programs (CAP) stem from the structure of the programmatic instruments and the social and political factors of the operational environment.

CAP boards often find membership recruitment difficult and suffer a significant attrition rate every year. Few satisfactions can be gained serving on a CAP board. Little prestige and little opportunity exist to satisfy a constructive sense of power. It's also difficult to recruit and maintain good staff. Salaries are low, yet the central and professional staff must be of better-than-average quality to have a good program.

The notorious insecurity of CAP positions has probably been the greatest hindrance. Government agencies are manifestations of policy, and when such statements are in conflict, the agencies are as well.

Community action is a significant social statement of the inadequacy of welfare agencies, and often the latter aren't eager to cooperate. Staffing problems will continue to be

a major weakness unless comprehensive efforts in training and recruiting are made. It would be useful to establish training schools. Governing boards are the other built-in inadequacy. A stipend of \$25.00 a month for 2 business meetings should be given to board members.

D. Blackburn

**Relationship Between Participation in a Clothing Construction Workshop and Selected Characteristics and Sewing Skills of Low-Income Homemakers in Macon County, Tennessee.** Madeline L. Henry *et al.* Knoxville, Tennessee: Tennessee University, Agricultural Extension Service, 1972.

A study was conducted to determine the influence of selected characteristics, family patterns, economic standards, and clothing problems of the low-income homemakers in Macon County on their participation in a clothing construction workshop. Changes in homemakers' sewing skills learned at the workshop were also determined.

Data were collected by two questionnaires and through personal group interviews. A contingency Table Analysis Program was used to analyze data.

Findings include: (1) participation in the workshop wasn't influenced by the personal characteristics of the homemakers; (2) participation was influenced by the sources of homemaking information used, homemakers' knowledge and

involvement in community organizations, and ownership of sewing equipment; and (3) low-income homemakers participating in the workshop made a significant improvement in clothing construction skills.

V. McGaugh

**Enterprise Dominance as Related to Communication and Farmers' Technological Competence and Satisfaction.** C. M. Coughenour. Lexington, Kentucky: Agricultural Experiment Station, May, 1972. [Order number: ED 070 964. Price: not given.]\*

Studied an area in central Kentucky in which beef cattle production was more important than hog production, and an area in western Kentucky in which the two enterprises were equally important. Was looking at cultural and social values that dispose farmer-serving agencies and the farmers themselves to favor interests and activities associated with the dominant enterprise and neglect those associated with the subordinate enterprise.

Agents in the beef-dominant area definitely saw farmers there as less committed to hog production, spent more time on beef than on hogs, got more requests for information about beef, had more of his farm visits dealing with beef problems, most often initiated contact with beef farmers, and gave more emphasis to recommended beef cattle practices relative to those for hogs.

M. Miller

**"A Feasibility Study of Cable Television Utilization for Community Development in Central Appalachia."** Lamar Vincent Marchese. Master's thesis, University of Florida, Gainesville, 1972. [Order: ED 065 745. Price: not given.]\*

This was a multiresearch-procedure study of the feasibility of using cable TV systems in central Appalachia to support efforts in rural community development.

Findings:

1. Local origination of public service program via cable TV is technically and economically feasible and does serve the interest of community development.
2. Emphasis in such local programming should be primarily on local events and activities.
3. Community involvement is a necessary element of cable TV use for community development.
4. Citizen's communications councils should be formed to oversee local programming.
5. The use of low-cost, one-half inch videotape equipment is feasible for cable casting.

A multistate, multipurpose cable TV development center is recommended.

M. Miller

**Nongovernmental Social Planning in Rural Areas of the United States.** Samuel M. Leadley and Joan S. Thomson. Paper presented at the World Congress for Rural Sociology,

Baton Rouge, Louisiana, August 23, 1972. [Order number: ED 070 956. Price: not given.]\*

The Pennsylvania Department of Community Affairs placed two rural planning specialists with a private agency—Community Services of Pennsylvania—to work in two different rural Pennsylvania counties. At the same time, they placed two other specialists with public planning commissions in two other rural areas.

Evaluation of the two different approaches—private versus public—showed:

1. Introduction of the two nongovernmental social planners into the rural areas took about six months less time than for the public agency planners.
2. Personnel selection was more critical to program effectiveness in the private agency program than in that of the public agency.
3. Even private planning of proposed community development projects can be reviewed if the proper informal relationships are established in the rural community setting.

M. Miller

**"Tuning in on Rural Louisiana: A Survey of Adult Radio Listening and Television Viewing Habits."** Douglas W. Darden and Alvin L. Bertrand. Baton Rouge, Louisiana: Louisiana State University, Cooperative Extension Service,

1971. [Order number: ED 067 526. Price: not given.]\*

Solicited information from 25 households in each of 12 parishes. Total sample was 600. Women spend more time watching TV than men. Income level made little difference in media attending behavior. The young and old were the most avid TV and radio fans. Blacks devote more time to radio and TV than do whites.

Magazines are the most important mass media source of home-making and agricultural information. TV was most important for news—local, national, or international. Study points up possibilities of using TV to reach more of the rural population.

M. Miller

**"The Analysis of Self-Selection Techniques Within a Management Training Program."** J. P. Yancey. *Programmed Learning Educational Technology*, VIII (July, 1971), 196-201.

The research focus was on the process of self-selection and the degree of success obtained by the 37 professional and technical employees who participated in the study.

The main hypotheses centered around the relationships of time al-

lotted to self-development, the tempo of the learning, and the success as measured by the number of completed lessons. An after-only design was used to minimize interference and the Spearman rank correlation coefficient was the statistical test. Results were significant beyond the .01 level.

A preliminary conclusion was that self-selection is useful in allowing entry into such programs, but that organizational and individual support is required to maintain that behavior.

C. Trent



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