Research on group structure and process suggests ways of enhancing participation and problem solving in workshops.

Creating Participatory, Task-Oriented Learning Environments

Mary L. Pankowski

With Chapter One on the workshop as a unique instructional format as background, this chapter will focus on ways of creating participatory, task-oriented learning environments. It is written mainly from the perspective of the resource person or workshop leader. Chapter Four will deal with results-oriented workshops from the vantage point of workshop planners and managers. Research has shown that a number of factors inhibit or facilitate group interaction and affect both the quality of a group's solutions to problems and the learning that takes place during the problem-solving process. I will discuss those factors in this chapter. They include the nature of the problem, the size and composition of the group, the communication network, motivation, cohesiveness, and leadership. I will also suggest ways in which research findings can be applied to workshop design.

The Nature of the Problem

The relative proficiency of groups and individuals in problem solving depends in part on the characteristics of the problem that is

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addressed. Some problems are so complex that solving them is best accomplished by assigning specialized tasks to different persons. Others demand more information or different points of view than a single person is likely to possess (Kelley and Thibaut, 1969). Still other kinds of problems can best be dealt with by individuals working alone—perhaps because two or more individuals get in each other's way (Thorndike, 1938) or because the solution, once it has occurred to one person, is so obvious that the others accept it immediately (Faust, 1959).

Depending on the amount of information available, problems can be classified as well structured, semistructured, or ill structured (Von Grundy, 1981). For a well-structured problem, all the information needed to close the problem gap is available. Such a problem is typified by its routine, repetitive aspects, and it usually can be solved using standard operating procedures that provide ready-made solutions. For a semistructured problem, there is enough information to define the nature of the problem, but uncertainty about the actual state or the desired state or about how to close the problem gap precludes exclusive use of routine procedures. Typically, a combination of standard operating procedures and creative responses is required to solve this type of problem. An ill-structured problem provides the problem solver with little or no information on the best way of developing a solution. Thus, the ill-structured problem is best dealt with by groups.

Fisher (1974) distinguishes between problems or decisions that require high-quality technical expertise and problems and decisions that require group acceptance and commitment. In his view, the correctness of a solution to a group task cannot be validated by external means. The only criterion for validating a group solution is the group's acceptance of or commitment to the decision that its members have made. Thus, the only way of validating such a decision is by determining whether it achieves group consensus. To ensure the active participation and maximum productivity of workshop participants, the problems being dealt with should be complex and unstructured and require group acceptance of the solutions.

Group Size

To determine the appropriate size for the group to address a given problem, Thelen (1949) suggests the principle of least group size. That is, the group should be large enough that individual members possess all the relevant skills needed to address the problem. However, since opportunities for each member to speak diminish as groups become larger and since larger groups require more control and are generally less

friendly, they tend to be less productive (Hare, 1962). In addition, as the size of the group increases, the average number of ideas produced by each member decreases (Gibb, 1951). According to Doyle and Strauss (1976), a problem-solving group should contain no more than fourteen members. These authors report, however, that if the basic elements of the decision have been sorted out ahead of time, the group can include as many as thirty people. These authors examined the relative advantages of different-sized meetings and established some guidelines about what the resource person can hope to accomplish with groups of various sizes. They divided groups into four categories: those with two to seven members, those with seven to fifteen, those with fifteen to thirty members, and those with more than thirty members. At each of these thresholds, the meeting's dynamics seemed to change.

Working with Two to Seven Participants. Working with two to seven participants has at least two advantages: efficiency in dealing with detailed technical and logistical problems and relatively manageable group dynamics. There are two disadvantages: First, only a few points of view can be represented, so the resulting decisions may not have the same quality and impact as those generated by a group of seven to fifteen; second and more important, this number of people may not be sufficient to generate the sheer number of ideas required for creative problem solving.

Working with Seven to Fifteen Participants. Seven to fifteen participants are ideal for the problem-solving and decision-making tasks that are central to the workshop format. Everyone can participate easily, everyone gets to know everyone else's way of thinking, and the group is small enough that informality and spontaneity can be maintained. This range also seems the most conducive to group creativity. There are two disadvantages: Workshop groups of this size are complex enough that they need to be clearly structured, and the resource person is likely to need both a facilitator and a recorder (Doyle and Strauss, 1976). These roles will be discussed in the section on the communication network.

Working with Fifteen to Thirty Participants. It takes an experienced workshop leader to achieve both productive sessions and active involvement of all participants in groups of fifteen to thirty. As the group gets larger, its members feel less responsibility for making it work. Subgroups often take shape, and they can have hidden agendas. The resulting win-lose mentality and the freezing of viewpoints can make collaboration and consensus difficult. As long as collaborative problem solving and active participation are not expected from such meetings and as long as they are used only for information sharing, meetings of fifteen to thirty can serve some useful purposes.

Working with More Than Thirty Participants. Doyle and Strauss (1976) suggest that, in any attempt to involve more than thirty people in problem solving, the resource person will need to divide them into subgroups of less than fifteen. The resource person can help participants to feel that they are part of a larger team by periodically shuffling the membership of the subgroups. Groups based on interest or problem area should contain a representative cross section of participants. The whole group can reassemble for reporting, information sharing, and informal adoption of decisions hammered out in the subgroups.

Large groups are appropriate for lectures, panel discussions, and formal debates but not for workshop task groups. Once the group exceeds thirty, it makes little difference how many people are present. Any kind of participation has to be subject to a clear set of rules. Parliamentary procedures can be useful for this purpose (Doyle and Strauss, 1976).

Maier (1970) points out that the need for face-to-face discussion limits the number of persons who can be involved in a problem-solving group. One possible way around this handicap is to have problem-solving discussions with representatives of groups. This technique requires groups to choose their own representatives with the understanding that they must be willing to accept any decisions that their representatives reach. For the representatives to be effective, they must be delegated sufficient authority that they can act as responsible participants in efforts to reach a decision. In the absence of such authority, the resource person may face a lose-lose situation. With workshop groups of more than thirty, the resource person and the workshop planner must take care to avoid creating unrealistic expectations for group productivity. Ideally, the resource person and the planner will work to create workshop environments that maximize opportunities for face-to-face communication. Thus, fifteen participants is the optimum size for the results-oriented workshop. Together, the resource person and the workshop planner can act to control group size so as to maximize active participation and group task productivity.

Group Composition

Another factor that research has shown to be critical to successful problem solving meetings is the composition of the group itself. Goldman (1965) studied group performance and concluded that it is uniquely affected by the abilities of its individual members. There is substantial research suggesting that homogeneity of individual characteristics among group members promotes member satisfaction (Hol-

lingshead, 1949) but that heterogeneous groups are more successful than homogeneous groups in solving problems (Hoffman, 1959; Hare, 1962; Fisher, 1974). Shaw (1971) reinforces the second point by noting that groups composed of members with diverse abilities perform more effectively than groups composed of individuals having similar abilities.

Haythorn (1953) explored the kinds of individual behavior patterns that facilitate or inhibit group functioning. The behavior traits of cooperativeness, efficiency, and insight were found to be positively related to productivity, although such personality traits as aggressiveness and authoritarianism tended to reduce group effectiveness. These conclusions were supported by Harrison (1965). However, as Krech and others (1962) point out, the qualities of a group's functioning cannot be accounted for wholly by the characteristics of individual members. The particular pattern of individual characteristics within the group must also be taken into consideration. Thus, to the extent possible, the resource person will want to select participants who have the skills needed to solve the problems at hand. To facilitate group effectiveness, the group should be heterogeneous and contain as few dogmatic personalities as possible. If participation cannot be controlled, the resource person should maximize heterogeneity in assignments to smaller task groups.

The Communication Network

Regardless of the characteristics of individual members, the communication network within the group can be changed in ways that increase its productivity. Feedback from receiver to sender increases the accuracy of the messages transmitted through a communication network (Leavitt and Mueller, 1951) so that groups in which communication is maximized are generally more accurate in their judgments. After studying several hundred small groups, Hall (1971) found that the most effective groups were those that tried to get every member involved. This finding reinforces the theory of Collins and Guetzkow (1964), who suggested that effective problem solving in groups can be facilitated by equalizing participation and communication patterns, because it increases the resources available to the group as a whole.

According to Smith (1983), open and voluntary communication in which a free exchange of ideas, opinions, and feelings occurs is the key to collaborative learning. Making sure that messages are both sent and received as intended must become the responsibility of all group members, not just of the leader. Interpersonal communication becomes increasingly open or authentic to the extent that participants

come to feel that they can trust one another with their cherished opinions and remain free from attack.

Fisher (1974) states that effective group decision making is highly correlated with the active verbal participation of the group's members. For group decision making to be effective, nearly all members must participate in the interaction process. Active participation does not imply equal participation by all members. Obviously, equal participation is impossible, and it is not desirable. The contributions of some members will always be more valuable than those of others.

Facilitator. Two roles—facilitator and recorder—are important to group dynamics. Both functions promote active participation and enhance group productivity. The good facilitator makes sure that every member has an equal opportunity to be heard and that every member is protected from personal attack. To do this, the facilitator establishes a positive, nonthreatening atmosphere. Doyle and Strauss (1976) feel that one important way of increasing the effectiveness of communication within groups is by appointing a facilitator. The facilitator is a neutral servant of the group who does not evaluate or contribute ideas but who focuses group energy on a common task, suggests alternative methods and procedures, protects individuals and their ideas from attack, and encourages individual members to participate. Doyle and Strauss suggest several facilitation techniques: clearly defining the role of the facilitator as the steward of the group; getting participants to agree on a common problem and process before the workshop begins; "boomeranging" problems back to group members (for example, "That's a good question. Who knows the answer?"); being positive, complimenting the group; avoiding talking too much; supporting the recorder; accepting the inevitability of mistakes; and helping to educate workshop members about group dynamics.

Recorder. The recorder plays an important role in maintaining and enhancing the communication network (Doyle and Strauss, 1976). As the meeting unfolds, the recorder creates a group memory of what participants are saying. The best tools for making a group memory are marking pens and large pieces of paper taped or pinned to the wall. If the process results in information spread over many sheets, the recorder can prepare a summary sheet for the next meeting. Since this role entails so much work, Doyle and Strauss recommend that it be rotated within the group and that those who contribute by performing this valuable service be rewarded.

The group memory becomes a powerful visual tool that helps members to concentrate and focus on what is happening. It also increases the productivity of a workshop by serving as a readily accessible

record of what happened after it is over. Group memory helps the group to focus on the task by providing a physical point of reference, it provides an instant record of the session's content and process, and it guards against data overload by providing a short-term memory—we can only juggle about seven pieces of information at one time. Moreover, group memory stores the group's ideas, thereby freeing group members from having to take notes, and it assures that ideas have been recorded and that ideas have been heard by everyone in the group. It helps to prevent endless repetition, it provides a graphic display—a preferred means of presenting visual information—and it facilitates problem solving by retaining information developed in one step for use in a later step. It encourages participation by recording ideas without attributing them to their contributors; it increases the group's sense of accomplishment, because it enables group members to see the work that has been done; and it maintains continuity within a meeting. Finally, it makes it possible to brief latecomers easily, it reduces ambiguity—names, action items, and deadlines are recorded during the sessions to avoid later controversy and confusion about tasks and responsibilities—it is low in cost, and it is easy to use.

Motivation

The effectiveness of a group depends in part on the willingness of its members to work together on solutions to problems. The deleterious effects of low group task motivation on group productivity were documented by Fouriezos and others (1950). These researchers found that the amount of self-oriented behavior—behavior directed not at solution of the group's problem but toward satisfaction of the individual's needs, regardless of its effect of the attainment of the group goal—correlated negatively with measures of group productivity.

Workshop leaders and resource persons often must work both with people who have very little vested interest in solving the problem at hand and who may just be passing time and with people who have too much vested interest and who may therefore have hidden agendas that work against group productivity. According to Hon (1980), a perceived mandate, which makes the outcome of the meeting seem to be important to the superiors of those in attendance, can often be used to motivate participants who have no intrinsic motivation.

Coch and French (1948) found that individual motivation to complete group tasks could be increased by involving the members in deciding on which tasks to accomplish. Thus, the resource person may have to develop goals for the group based on its members' suggestions.

The group must first agree on a task. Only then is there some chance of productivity. But, since the very definition of workshop requires this procedure, it should have an explicit place in the outline of events. Another way in which the workshop leader can enhance motivation is by having the recorder display the results of the meeting on flip chart sheets as they occur. This increases the sense of accomplishment of group members, since they can see a summary of the work that they have done on the walls around them (Doyle and Strauss, 1976).

As Maier (1970) states, the problem situation itself may have a good deal of intrinsic motivation for the group. Nevertheless, the workshop leader and the resource person must consider the degree to which individuals will respond to a challenge. Fear of failure and need for achievement depend on personality factors that influence individual motivation. The stage at which an individual gives up is also a factor in determining a group's success. Intense motivation may even serve as a handicap in that it can generate solution mindedness at the expense of problem mindedness. High motivation can stimulate action that precludes real thinking. Thus, a delicate balance must be struck. As Von Grundy (1981) points out, all persons will not be motivated equally by the same problem situation. Because of differences in individuals' values and needs, their levels of motivation to pursue any given problem situation is likely to vary. A basic guideline is that if closing a problem gap is likely to satisfy the personal need or value of an individual or of significant others (for example, friends, employees, employers), it can be assumed that the individual feels a need to solve the problem.

In summary, the resource person must work with the workshop planner to ensure that at least some participants are able and want to change something and that they know how to go about doing it in a group. The roles of facilitator and recorder can enhance the probability of positive motivation among members.

Cohesiveness

Group effectiveness has also been found to be related to cohesiveness, which is reflected by such things as mutual liking among group members, member satisfaction, and other positive reactions to the group (Shaw, 1971). Results from both field studies and laboratory experiments suggest that highly cohesive groups are more productive if members have accepted the group's task goals. If the task goals have not been accepted, sociability may become the primary goal (Krech and others, 1962).

Numerous research studies indicate that cohesiveness is related to both the quantity and the quality of group interaction. A study by Rawls and others (1969) demonstrates that members who perceive themselves to be proficient in carrying out group functions are more satisfied with the group. Members of highly cohesive groups communicate with one another to a greater extent, and the content of group interactions is positively oriented. Members of highly cohesive groups are cooperative, friendly, and generally behave in ways designed to promote positive group interaction, whereas members of groups in which cohesion is low behave much more independently and show little concern for others in their group.

According to Shaw (1971), the most significant influence of cohesiveness on group action affects group maintenance. The first thing that any group must do is to resolve its internal problems. Indeed, unless it resolves those problems, the group may cease to exist. Therefore, a minimum level of cohesiveness is required for any group to continue to function as a group. To the extent that this minimum requirement is exceeded, Shaw suggests that the degree of cohesiveness will be related to other aspects of group process, such as quality of group product and member satisfaction.

Fisher (1974) reports that as groups raise their level of cohesiveness, it becomes more likely that they will also raise their level of productivity. Conversely, as the group becomes more productive, so does the likelihood that it will become more cohesive. However, Fisher points out that the relationship breaks down at the upper end of the two continua. Extremely cohesive groups are more likely to have moderate to low productivity. Although it may not sink to the level of groups in which cohesion is minimal, it is nowhere nearly as high as it is in groups with moderately high cohesiveness. One explanation for this phenomenon is that some groups may have been together so long that their purpose becomes primarily social. Their productivity suffers from the fact that members enjoy each other's company too much. Thus, the group with the highest productivity is generally the group with moderately high cohesiveness. This is an important consideration for the resource person who works with groups that will be together for a long period of time.

Membership satisfaction increases with group perception of progress toward achieving group goals and of freedom to participate. Perceived freedom to participate, rather than equal participation, should be the goal of a group whose members are happy with their group experience (Maier, 1970). Thus, as the resource person is able to record success in accomplishing group tasks and provide group

members with opportunities to participate in group discussion, the group will experience the sense of cohesiveness that is essential to workshop productivity.

Leadership

Many of the concepts just discussed, such as nature of the problem, group size and composition, communication network, and cohesiveness, that affect member participation and group productivity, overlap and complement each other. No factor fits this description better than the concept of leadership. In a way, leadership touches all the other factors and either minimizes or maximizes their impact on group productivity.

Cartwright and Zander (1968) summarized the early research on leadership by stating that the conception of leaders as people who possess certain distinctive traits has proven unsatisfactory. A new view of leadership is emerging that stresses the performance of functions that permit the group to achieve its preferred goal. This point of view has been affirmed by a number of researchers, including Cattell (1951), French (1949), Gibb (1947), Stodgill (1948), and Likert (1959). These theorists point out that the nature of leadership varies from group to group. Situational aspects, such as the nature of the group's goals, the group's composition, the needs of group members, and the expectations placed on the group by its external environment, help to determine which functions will be needed at any given time and which members will perform them (Cartwright and Zander, 1968).

Leadership functions have been classified by numerous social psychologists—for example, Newcomb and others (1965), Krech and others (1962), and Cartwright and Zander (1968)—into two categories: achievement of specific group goals and maintenance or strengthening of the group itself. Thus, the leadership functions that must be performed if a group is to be effective are the task function and the group maintenance function.

The task function involves facilitating and coordinating group efforts to solve problems. According to Newcomb and others (1965, p. 477), for a group to be effective in solving problems, its members must possess certain qualities and have mastered the behaviors related to task achievement: "They are knowledgeable about matters related to the task; they are imaginative, innovative; they are hardheaded, realistic; they are persuasive, convincing in obtaining group consensus; they are good at formulating problems or summarizing discussions; they are skilled in planning, organizing, coordinating; they can be depended on to carry through."

The group maintenance function involves member activities

that help to make the relationships among group members satisfying. Behaviors that are directly facilitative in such ways include the following: "providing warmth, friendliness; conciliating, resolving conflict, relieving tension, providing personal help, counsel, encouragement; showing understanding, tolerance of different points of view; showing fairness, impartiality" (Newcomb and others, 1965, p. 481). Achievement of group goals is facilitated to the extent that its members have the skills to perform both the task and the group maintenance functions.

Although the research shows that any member can perform these functions, specialists sometimes emerge. According to Bales and Slater (1955), studies of problem solving by leaderless groups almost always report a differentiation between a person who presses for task accomplishment and a person who satisfies the socioemotional needs of members. Heincke and Bales (1953) have demonstrated that where such specialization arises, effective group performance depends on the development of appropriate coordination between the specialists.

Group Process Training

Research has indicated that the most productive problem-solving groups are those that effectively carry out the major steps in the process of solving task and socioemotional problems for the group and its individual members. To facilitate that process, training in group process is desirable for group members. If sufficient ability and experience are present, favorable interpersonal relationships will allow the group to achieve its potential (McGrath and Altman, 1966).

Several researchers have indicated that training in group process tends to increase the effectiveness of group problem solving and decision making (Hall, 1971; Pankowski, 1972). Group process training has been defined as an educational strategy in which a small group works together with a trainer over a period of time to explore their own interpersonal group relations (Golembiewski and Blumberg, 1970). In group process training, members establish, with the help of the trainer, a process of inquiry in which they collect and analyze data about their own behaviors simultaneously with the experiences that generate the behaviors. Each individual can learn about his or her own motives, feelings, and strategies in dealing with other persons. As group members acquire new self-insights, they become able to practice new behaviors, and they obtain feedback on the degree to which the new behavior produces the desired impact. Through group process training, group members can develop skills in diagnosing group behavior and in performing the functions needed to move the group toward its desired goal (Bradford and others, 1964).

Although the opportunities to provide group process training

are severely limited in most workshop settings, there are many brief, interesting, and useful exercises that can be used to sensitize participants to important dimensions of interpersonal interaction. For specific examples and suggestions on what should be included in such training, the reader can consult Miles (1981), Collins and Guetzkow (1964), Pfeiffer and Jones (1972), and Golembiewski and Blumberg (1970).

Conclusion

The resource person or workshop leader who is aware of what research has shown about the factors that inhibit and promote participatory, task-oriented learning environments can do much to facilitate a successful learning experience for workshop participants. The resource person needs to work with the workshop planner to decide on the size and composition of the workshop group and on the nature of the problem to be dealt with in the workshop format.

Perhaps the most critical item on which the resource person can work with the planner is the structuring of the interactions among participants and between participants and resource people so that the time spent in the workshop can be both enjoyable and productive. Planners and leaders must be sensitive to the factors related to group productivity, such as motivation, communication networks, cohesiveness, and group leadership, and employ techniques to foster the type of environment that encourages the best efforts of motivated, talented, and sensitive adult learners.

References

Bales, R., and Slater, P. "Role Differentiation in Small Decision-Making Groups." In T. Parsons and others (Eds.), *Family, Socialization, and the Interaction Process.* Glencoe, Ill.: Free Press, 1955.

Bradford, L. P., Gibb, J. R., and Benne, K. D. (Eds.). *T-Group Theory and Laboratory Method: Innovation in Reeducation.* New York: Wiley, 1964.

Cartwright, D., and Zander, A. (Eds.). *Group Dynamics: Research and Theory.* New York: Harper & Row, 1968.

Cattell, R. "New Concepts for Measuring Leadership in Terms of Group Syntality." *Human Relations,* 1951, *4,* 161-184.

Coch, L., and French, L. "Overcoming Resistance to Change." *Human Relations,* 1948, *1,* 512-532.

Collins, B., and Guetzkow, H. *A Social Psychology of Group Processes for Decision Making.* New York: Wiley, 1964.

Doyle, M., and Strauss, D. *How to Make Meetings Work.* Chicago: Playboy Press, 1976.

Faust, W. F. "Group Versus Individual Problem Solving." *Journal of Abnormal and Social Psychology,* 1959, *59,* 68-72.

Fisher, B. A. *Small-Group Decision Making.* New York: McGraw-Hill, 1974.

Fouriezos, N., Hutt, M., and Guetzkow, H. "Measurement of Self-Oriented Needs in Discussion Groups." *Journal of Abnormal and Social Psychology,* 1950, *45,* 682-689.

French, R. L. *Morale and Leadership: Human Factors in Undersea Warfare.* Washington: National Research Council, 1949.

Gibb, C. "The Principles and Traits of Leadership." *Journal of Abnormal and Social Psychology,* 1947, *42,* 267-284.

Gibb, C. "The Effects of Group Size and of Threat Reduction upon Creativity in a Problem-Solving Situation." *American Psychologist,* 1951, *6,* 324.

Goldman, M. "A Comparison of Individual and Group Performance for Varying Combinations of Initial Ability." *Journal of Personality and Social Psychology,* 1965, *1,* 210-216.

Golembiewski, R., and Blumberg, A. (Eds.). *Sensitivity Training and the Laboratory Approach.* Itasca, Ill.: Peacock, 1970

Hall, J. "Decisions, Decisions, Decisions." *Psychology Today,* 1971, *5,* 41-54.

Hare, A. *Handbook of Small Group Research.* New York: Free Press of Glencoe, 1962.

Harrison, R. "Impact of the Laboratory on Perceptions of Others by the Experimental Group." In C. Argyris (Ed.), *Interpersonal Competence and Organizational Behavior.* Homewood, Ill.: Irwin, 1965.

Haythorn, W. "The Influence of Individual Members in the Characteristics of Small Groups." *Journal of Abnormal and Social Psychology,* 1953, *58,* 276-284.

Heincke, C., and Bales, R. "Developmental Trends in the Structure of Small Groups." *Sociometry,* 1953, *16,* 7-38.

Hoffman, L. R. "Homogeneity of Member Personality and Its Effect in Group Problem Solving." *Journal of Abnormal and Group Psychology,* 1959, *58,* 27-32.

Hollingshead, A. B. *Elmstown's Youth.* New York: Wiley, 1949.

Hon, D. *Meetings That Matter.* New York: Wiley, 1980.

Kelley, D., and Thibaut, P. "Group Problem Solving." In Lindzey, M. and Aronson, T. (Eds.), *The Handbook of Social Psychology.* Vol. 4. Reading, Mass.: Addison-Wesley, 1969.

Krech, D., Crutchfield, R., and Ballachey, E. *Individual in Society.* New York: McGraw-Hill, 1962.

Leavitt, P., and Mueller, M. "Some Effects of Certain Communication Patterns on Group Performance." *Journal of Abnormal and Social Psychology,* 1951, *46,* 38-50.

Likert, R. *New Patterns of Management.* New York: McGraw-Hill, 1959.

McGrath, J., and Altman, I. *Small-Group Research: A Synthesis and Critique of the Field.* New York: Holt, Rinehart and Winston, 1966.

Maier, N. *Problem Solving and Creativity in Individuals and Groups.* Belmont, Calif.: Brooks/Cole, 1970.

Miles, M. B. *Learning to Work in Groups: A Practical Guide for Members and Trainers.* (2nd ed.) New York: Teachers College Press, 1981.

Newcomb, T., Turner, R., and Converse, P. *Social Psychology.* New York: Holt, Rinehart and Winston, 1965.

Pankowski, M. L. "The Relationship Between Group Process Training and Group Problem Solving." Unpublished doctoral dissertation, Florida State University, 1972.

Pfeiffer, J. W., and Jones, J. E. (Eds.). *The Annual Handbook for Group Facilitators* and *A Handbook of Structured Experiences for Human Relations Training* (both published annually). La Jolla, Calif.: University Associates, 1972.

Rawls, J., Rawls, D., and Frye, R. "Membership Satisfaction as It Is Related to Certain Dimensions of Interaction in a T-Group." *Journal of Social Psychology,* 1969, *78,* 243-248.

Shaw, M. E. *Group Dynamics.* New York: McGraw-Hill, 1971.

Smith, R. M. (Ed.). *Helping Adults Learn How to Learn.* New Directions for Continuing Education, no. 19. San Francisco: Jossey-Bass, 1983.

Stogdill, R. "Personal Factors Associated with Leadership." *Journal of Psychology,* 1948, *25,* 35-71.

Thelen, H. A. "Group Dynamics in Instruction: Principles of Least Group Size." *Scholastic Review,* 1949, *57,* 139-148.

Thorndike, R. L. "The Effect of Discussion upon the Correctness of Group Decisions When the Factor of Majority Influence Is Allowed For." *Journal of Social Psychology,* 1938, *9,* 343-362.

Von Grundy, A. B. *Techniques of Structured Problem Solving.* New York: Van Nostrand Reinhold, 1981.

Mary L. Pankowski is associate professor of adult education in the Department of Educational Leadership and assistant vice-president for academic affairs at Florida State University (Tallahassee). She is also director of the Center for Professional Development and Public Service, which conducted more than 789 continuing education programs in 1983 in which 31,933 individuals took part.