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ABSTRACT

Full study of small group communication must include consideration of task and socio-emotional dimensions, especially in relation to group problem solving. Thirty small groups were tested for their reactions in various "ad hoc" conflict resolution situations. Instructions to the groups were (1) no problem-solving instructions (control), (2) reflective thinking instructions, (3) conflict management instructions, and (4) instructions combining reflective thinking and conflict management. Posttesting yielded group satisfaction, perception of tension, and expression of disagreement. Results showed that there were no significant differences among the various groups and approaches. These findings contradict earlier published research using managed conflict instruction. (CH)

CONFLICT MANAGEMENT IN AD HOC PROBLEM-SOLVING GROUPS: A PRELIMINARY INVESTIGATION

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Abstract

Small group researchers have long recognized the delicate equilibrium between task and socio-emotional dimensions necessary for effective group problem-solving, yet, most investigators have examined these two dimensions separately.

Discussion disagreement, or substantive conflict, is a group phenomenon affecting both task and socio-emotional dimensions. Idea conflict has been established as a requisite for creativity in problem-solving, yet, groups often avoid substantive disagreement in order to prevent the occurrence of affective or interpersonal conflict. The present study investigates the ability of different problem-solving instructions to establish a climate of creative conflict for ad hoc, untrained problem-solving groups. The study is directed toward balancing the task and socio-emotional concerns of groups through written instruction for problem-solving.

Thirty ad hoc groups lacking prior training in group discussion were randomly assigned to four experimental conditions: no problem-solving instructions (control); reflective thinking instructions; conflict management instructions; instructions combining both reflective thinking and conflict management. Groups solved one of Maier's human relations problems and responded to post-discussion questionnaires designed to measure group satisfaction, perception of tension, and expression of disagreement. Results revealed no significant differences on solution quality or post-discussion questionnaire data. These findings contradict earlier published research using managed conflict instructions. Implications for further research are discussed.

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CONFLICT MANAGEMENT IN AD HOC, PROBLEM-SOLVING GROUPS: A PRELIMINARY INVESTIGATION

The literature on small group dynamics has consistently recognized the two primary dimensions of a problem-solving group to be the "task" and "socio-emotional" dimensions.[1] Group efforts to meet task requirements set in motion changes in the socio-emotional relationships thereby requiring the group to maintain a delicate balance--equilibrium--between the two concerns if the group is to reach satisfactory solutions with any degree of group satisfaction.[2] It is apparent that group communication training must respond to these two prime areas of concern with training in methodology and communication skills that will aid groups in maintaining that equilibrium. However, in a recent criticism of group communication research, Fisher indicated that small group researchers and trainers have almost always examined the two dimensions separately.[3] Problem-solving techniques and training have emphasized either a rational (task) approach which outlines developmental steps in problem-solving, or, a process (socio-emotional) approach that manages interpersonal relations to lead to creative problem-solving and not to failure and dissatisfaction.

The traditional approach to group problem-solving has focused on the task dimension through training in rational patterns of discussion. The most popular rational technique has been Dewey's reflective thinking pattern. However, Bayless recently concluded that "there is little empirical evidence to support the reflective thinking pattern."[4] Bormann also suggests that the unique superiority of Dewey's reflective thinking is an assumption in need of question.

He further notes: "The student who makes a radical assumption of rationality will often find his work in groups frustrating."[5]

In response to this realistic appraisal of group experience, a second major approach to group problem-solving effectiveness has focused on the socio-emotional dimension. Group training in this dimension has been known as "process," "human relations," or "T-group training" experience.[6] Although considerable research documents the effects of the "process" method, little comparative data exists between the rational and process approaches. Pyke and Neely found groups trained in both approaches to be superior to untrained groups but found no significant differences in effectiveness between groups trained traditionally (rationally oriented) or with a sensitivity method.[7] Larson and Gratz compared groups having coursework in the process approach with groups having coursework in the rational approach and found the groups with process orientation to be significantly more accurate in solving the test problems.[8]

Concluding that these two basic approaches deserve more investigation, the authors read with interest a recent article by Jay Hall that attempted to establish the validity of a set of instructions for governing group behavior during problem-solving.[9] Hall and Watson have developed a set of instructions designed to promote effective conflict management in problem-solving groups. In a recent comparison of groups that received their conflict management instructions vs. control groups, Hall found significant improvement in decision quality in groups using a conflict management technique. He concluded:

> ...the uninstructed [control] groups responded to internal conflict with compromises, which may have eased group tensions, but did not improve the group's decision. Instructed groups ... used conflict to their advantage as an opportunity for creativity.[10]

This finding is significant to the present discussion when one recognizes that one of the foremost functions of the process method is the successful management of conflict and disagreement.[11]

The necessity for idea conflict has been established as a requisite for creativity in problem-solving.[12] However, groups often avoid idea conflict (substantive conflict) in order to prevent the occurrence of interpersonal conflict (affective conflict). Gouran and Baird recently observed this phenomenon in a small group experiment where they found groups to have "a relatively low level of tolerance for disagreement. For each instance of disagreement on the average, the group changed the theme on which the members were focusing three statements later."[13] Bormann has also noticed this tendency and categorized it "approach-withdrawal behavior."[14] There is a tendency for groups to reduce the strain on the socio-emotional dimension by simply avoiding disagreement. Marvin Shaw recently commented regarding this tendency:

> When the task is being solved, one member may be dissatisfied with the proposed solution but believe that he is the only dissatisfied member--so he remains silent. Or more than one member may react this way. A solution or decision may be accepted that most members find unsatisfactory. This result is most likely to occur with difficult tasks where the correct solution or procedure is not so readily discovered by the group. When a member can signal his feelings about proposed solutions without disrupting group interaction, he presumably feels freer to do so, and this information leads the group to reconsider faulty decisions, thus resulting in better group performance.[15]

Norman Maier, et. al., have found that differences in opinions and ideas among group members need not lead to dissatisfaction and unpleasant experiences but rather can lead to constructive and creative problem-solving.[16] Process training provides groups with the tools for reducing the strain on the socio-emotional dimension frequently caused by substantive conflict; such training

helps the groups maintain the proper balance necessary for solution quality and group satisfaction.

The results of the Hall experiment stirred the present authors to speculate upon the possible applications of the Hall and Watson "process" oriented instructions for ad hoc, untrained groups. For groups lacking instruction and pronounced histories, past study and investigation offers little guidance in the selection of the most effective discussion method. The present study, therefore, is designed to compare "rational" and "process" approaches in ad hoc groups lacking prior instruction in problem-solving. Additionally, the combined effect of the process and rational techniques will be examined in an effort to further the theoretical understanding of the relationship between the task and socio-emotional dimensions. The Watson and Hall technique will be used to create the process condition. As the traditional rational model, Dewey's reflective thinking pattern is perhaps the most representative and thus the model of comparison to be used in this project.

PROCEDURES: A total of 38 groups (32 four-person and 6 five-person) were randomly composed from undergraduate communication courses. Subjects were screened so as to include only those without prior instruction in group problem-solving. The experiment ran early in the term before the subjects had opportunity to engage in orienting behavior. All groups discussed the same problem, one constructed and validated by Maier.[17] Group solutions were rated to be of high or low quality by three judges using criteria established by Maier.[18] Cohen's coefficient of agreement indicated a high degree of interjudge agreement, $K_{ave}=.72$.[19]

Groups were randomly assigned to four different treatment conditions as follows:

No Pattern. As a control, ten groups solved the problem without instructions.

Rational. Ten groups were asked to follow written instructions in the reflective thinking technique.[20]

Process. Nine groups were asked to follow written instructions in the managed conflict technique.[21]

Rational Process. Nine groups were asked to follow written instructions that included reflective thinking and managed conflict.

After the groups reported their solutions, a post-discussion questionnaire was used to measure satisfaction with group productivity, satisfaction with group solution, perception of tension, perception of the amount of idea conflict during the discussion, and the extent to which members expressed divergent viewpoints during the discussion.

RESULTS: A Kruskal-Wallis one-way analysis of variance was performed on the ranked solutions (high quality or low quality) obtained for the four experimental conditions. No significant difference was found ($H = 4.06$ corrected for ties, $df = 3$).

Group questionnaire data were submitted to one-way analyses of variance yielding no significant F values. Table 1 provides a summary of F ratios for the nine questionnaire items.

TABLE 1

ANOVA Summary for Questionnaire Items

Item:	df	F ratio
1. Willingness to work again with the group	3/155	.15
2. Satisfaction with group productivity	3/156	1.57
3. Satisfaction with group solution	3/156	1.23
4. Perceptions of tension in the group	3/156	.64
5. Perceptions of tension resolution	3/96	1.02
6. Satisfaction with member rapport	3/156	.12
7. Perceptions of idea conflict	3/156	1.36
8. Perceptions of conflict resolution	3/131	1.49
9. Expression of divergent views	3/156	2.16

DISCUSSION: The first important observation that emerges from the results is the failure to replicate the earlier "solution quality" success found by Hall for the managed conflict instructions. Although Hall had applied the technique to a scientifically-oriented problem whereas the present authors utilized a human relations problem, the utility of the instructions for ad hoc groups is still in doubt. An earlier study by the present authors replicated the Hall experiment using his scientifically-oriented problem and also failed to find significant difference between control groups and groups instructed in conflict management.[22]

The lack of support for the reflective thinking method offers further challenge toward its assumed superiority as a group problem-solving methodology. However, it might be argued that control groups of college students might naturally follow a logical, quasi-developmental approach to problem-solving stemming from their educational experiences. Further research is already being planned using different populations.

The failure of the present study to confirm the utility of these instructions does not dictate the end of useful testing for these techniques. As well as using other populations for subjects, task problems of a different nature should be tested. The human relations problem used in this study lacked real relevance for the college students and, therefore, may have failed to provide a level of involvement sufficient to provide the conflict necessary to test the experimental conditions.

The results of group questionnaire data also indicate no significant differences between groups on variables such as satisfaction, amount of idea conflict, or perception of tension. Of prime interest is the observation that the "managed conflict" instructions did not promote a climate of disagreement (or resolution of disagreement) that differed from reflective thinking or control groups. While the problem of substantive conflict remains a challenging area for small group investigation, these results failed to differentiate an appropriate technique useful for encouraging and controlling that conflict.

Although the authors entered this project in hopes of validating a written instruction technique useful for ad hoc, untrained, problem-solving groups, the results do not support the superiority of the instructions tested. It is possible that research presently underway by the authors will identify types of group tasks and populations for which one of the experimental techniques may be beneficially adapted. Future research is also scheduled to test for differences in group processes that might indicate necessary alterations or adaptations of the instructions that would increase their utility.

NOTES

1. Robert F. Bales, "Adaptive and Integrative Changes as Sources of Strain in Social Systems," in Small Groups: Studies in Social Interaction, ed. by Hare, Borgatta, and Bales; and Ernest G. Bormann, Discussion and Group Methods, 1969, Chapter 7.

2. Robert F. Bales, "The Equilibrium Problem in Small Groups," in Small Groups (see above note 1).

3. B. Aubrey Fisher, "Communication Research and the Task Oriented Group," Journal of Communication (June 1971), p. 139.

4. O. L. Bayless, "An alternate pattern for problem-solving discussion," Journal of Communication (Sept. 1967), pp. 188-197.

5. Bormann, op. cit., p. 279.

6. For a preliminary probe into the application of the T-group approach for training in group communication see Richard L. Weaver, II, "Sensitivity Training and Effective Group Discussion," Speech Teacher (Sept. 1971), pp. 203-207.

7. Sandra W. Pyke and Cathie A. Neely, "Evaluation of a Group Communication Training Program," Journal of Communication (Sept. 1970), pp. 291-304.

8. Carl E. Larson and Robert D. Gratz, "Problem-Solving Discussion Training and T-Group Training: An Experimental Comparison," Speech Teacher (Jan. 1970), pp. 54-57.

9. Jay Hall, "Decisions, Decisions, Decisions," Psychology Today (Nov. 1971), pp. 51-54, and 86-89.

10. Ibid., p. 88.

11. Goodwin Watson notes that sensitivity training strives for "frank, free, open communication." He further notes: "This climate, when achieved, permits the group to use more fully the potential resources of all members, to reach decisions based upon true consensus, and to engage creatively, flexibly, and adaptively in cooperative action toward shared goals." Social Psychology (1966), p. 134. Douglas Bunker found that persons experiencing sensitivity training underwent changes that included (a) a greater acceptance of others; (b) more openness to new information; and (c) more receptive listening. These changes were significant when compared to control groups. "Individual Applications of Laboratory Training," Journal of Applied Behavioral Sciences (1965), pp. 131-148.

12. Norman Maier, et. al., "Differences and Disagreement as Factors in Creative Group Problem-Solving," Journal of Abnormal and Social Psychology (1962), pp. 206-214.

13. Dennis Gouran and John E. Baird, "An Analysis of Distributional and Sequential Structures in Problem-Solving and Informal Group Discussions," Speech Monographs (March 1972), p. 21.

14. Bormann, op. cit., p. 284.

15. Marvin Shaw, Group Dynamics, (1971), p. 319.

16. Norman Maier, op. cit., pp. 206-214.

17. Norman Maier, "An Experimental Test of the Effect of Training on Discussion Leadership," Human Relations (1953), pp. 161-173. The problem was altered slightly from a role playing situation to a managerial problem situation. The alterations were not of substance and, therefore, did not affect the judgments of quality.

18. Ibid.

19. Jacob Cohen, "A Coefficient of Agreement for Nominal Scales," Educational and Psychological Measurement, XX (1960), pp. 37-46.

20. These instructions were adapted from John Brilhart, Effective Group Discussion, (1967), pp. 30-31.

21. Jay Hall, op. cit., p. 86. These instructions were altered slightly to make them applicable to general problem solving situations.

22. By the authors, "Small Group Problem-Solving Techniques, Solution Quality, and Member Reaction: A Preliminary Investigation," (University of Oregon Communication Research Center), January, 1973.