

## RELATIVE EFFECTS OF A SEGMENTED MODEL VERSUS A COMBINED MODEL IN TEACHING APPROPRIATE GROUP DISCUSSION SKILLS TO CHILDREN

WILLIAM A. BORGEN

*Department of Counselling Psychology, Faculty of Education  
University of British Columbia*

and

PETER CALDER

*Department of Educational Psychology, Faculty of Education  
University of Alberta*

### Abstract

The purpose of this study was to compare the effectiveness of two different modeling strategies in teaching group discussion skills to grade two students. More specifically, the study investigated whether it was more effective to model a complex behavior (appropriate group discussion) as a unit to break it into a series of segmented component parts (sticking to the point, self-disclosing, and listening). It was found that the segmented treatment was significantly more effective than the control group treatment regarding all three skills while the combined modeling treatment was only significantly better than the control on the listening variable. Findings were discussed in terms of developing strong modeling packages to teach a variety of skills.

### Résumé

Le but de cette étude était de comparer l'efficacité de deux différentes stratégies de préparer des modèles destinés à l'enseignement des compétences de la discussion au niveau des élèves en deuxième année. Plus précisément, l'étude cherche à savoir s'il est plus efficace de présenter un comportement complexe (une discussion appropriée en groupe) à titre d'entité ou de le fragmenter en une série d'éléments segmentés (se tenir au sujet, se révéler et écouter). Par rapport aux trois compétences, on a trouvé que le traitement segmenté était significativement plus efficace que le traitement de groupe contrôlé. Cependant, le traitement des modèles combinés était seulement un peu meilleur que le contrôle de la variable d'écoute. On a discuté les résultats en vue du développement de bons ensembles de modèles destinés à l'enseignement de divers compétences.

The central focus of this study was the development of an effective approach using modeling to systemically teach basic communication skills to elementary school age children.

### *Modeling*

The importance of modeling is underlined by the many instances which can be cited in which children acquire the mannerisms, verbalizations, and attitudes of their culture without specific instruction, but through casual observation. According to Bandura, much of this incidental learning is facilitated by models, adults or children, who serve as examples of different kinds of behavior (Bandura & Walters, 1963; Thomas, 1973).

Modeling has proven effective in creating and altering behaviors in a variety of counselling and teaching situations (Flanders, 1968a; Thomas, 1973). Experiments with elementary school chil-

dren have employed modeling in the induction of aggressive responses (Bandura, Ross, & Ross, 1961), attitudes and values (Harris, 1970), sex role behaviors (Hetherington, 1965) and cognitive learning tasks (Zimmerman & Pike, 1972).

In everyday classroom situations children are confronted with a series of adult and peer models who represent alternate methods of problem solving, playing, interacting, etc. The significance of these models (teachers, fellow students) is readily evident if one observes the similarity of behavior in play groups or the imitation of the mannerisms of a favorite teacher (Hartup & Lougee, 1975; Pusser, 1972).

In seeking an effective method of using modeling to teach basic communication skills, the authors encountered several factors to be considered in increasing the power of the model. These included: (a) A model who is competent and who has characteristics with which observers can relate

would represent a powerful model for elementary school age children (Bandura & Walters, 1963; Carkhuff, 1973), (b) Positive reinforcement to the model and verbalization of the task being modeled increases the strength of the modeling treatment in young subjects (Denny, 1975; Flanders, 1968b), and (c) There is some indication that a complex motor behavior can be modeled using several component modeling segments (Kunze, Bruch, & Thelen, 1974), although no studies were found employing this modeling strategy with elementary school age children.

### *The Task to be Modeled*

Communication skills were chosen to be modeled in this study in recognition of the growing awareness of the need for psychological education programs centered on the improvement of interpersonal relationship skills (Authier, 1977; Guerney, 1977; Ivey, 1977). At the elementary school level this awareness has led to the development of several programs designed to promote effective interaction through group discussions (Bessell & Palomanes, 1969; Dinkmeyer, 1970). However, while authors of these programs often suggest basic rules for group discussion (Dinkmeyer, 1970), they make very little provision for teaching these rules to the children involved.

### *Purpose of the Study*

Given the importance placed upon group interaction in elementary school and the success a modeling approach has experienced in teaching a variety of skills to children, this study was developed to investigate the relative effectiveness of two different modeling strategies in facilitating adherence to rules for group discussion by grade two students. More specifically, the major objective of this study was to determine the relative effectiveness of modeling rules separately or combined.

## METHOD

Dinkmeyer (1970) suggests a number of rules which he feels should be learned by children before they participate in group discussion. From these were selected three which seem to be important and somewhat representative of rules in programs which are designed to promote verbal interaction among students. These are: (a) Self-disclosure; share your own views regarding a topic, (b) Stick to the point; verbalizations should be related to the topic under discussion, and (c) Listen carefully; be able to demonstrate that you have listened to what others have said.

In order to demonstrate adherence to the three rules for group discussion, a group of six grade four students were trained and videotaped interacting with a female teacher. The model

group was videotaped discussing the following topics: (a) What makes me feel happy, (b) What I have accomplished, (c) What I like in a good friend, and (d) Times that I have felt embarrassed. The initial videotaped discussions were edited to make a total of six, six to eight minute videotaped sessions. In three of these sessions (combined) group interactions were chosen that illustrated each of the three basic rules of self-disclosure, sticking to the point, and listening carefully. The second group of three tapes (segmented) was edited so that each would accent adherence to a different rule. A verbal commentary was then added to all of the tapes. In this commentary the rules illustrated on the videotape were described and the student models were complimented for their rule adherence. The combined modeling tapes contained comments on all three rules while each of the segmented tapes contained comments on adherences to one of the three rules.

One hundred and thirty-five grade two students from four elementary schools in the Edmonton Public School System were assigned to one of 27 groups of five children. The children were assigned to groups with the condition that each group have either two boys and three girls or three boys and two girls. These groups were randomly assigned to one of the three different conditions: combined model, segmented model or control.

Each of the groups in the modeling conditions viewed a set of three videotapes while students in control groups viewed three video segments unrelated to group discussion. All of the groups viewed the three videotapes on the same day at approximately one hour intervals. The spacing of the presentations was designed to make the showings somewhat separate to the subjects. The three tapes within each treatment were presented in random order.

After viewing the three tapes each group participated in a seven minute small group discussion on the topic "what makes me feel happy." These discussions were led by one of four female teachers who was not aware of which treatment her group had been given. The leaders were asked to lead the group in a nondirective fashion such as that suggested by Bessell and Palomares (1969) and Dinkmeyer (1970).

The leaders were randomly assigned to the three different treatment groups and their group discussions were videotaped. It was expected that the students could demonstrate whether or not they had acquired the first two rules, self-disclosure and sticking to the topic, through the nature of their input into the discussions. However, measurement of the third rule, listening to one another, presented special problems. In order to assess the degree of acquisition of this rule, the authors re-

questioned the group leaders to ask the question: "Can anyone see anything the same (or different) about what people in the group have said?" The leaders were cued to ask this question at the 1½ minute, 4 minute and 5½ minute mark of each discussion period. Subjects' responses were scored according to their appropriateness within the context of the content of the discussion when the question was asked.

## RESULTS

Three trained judges observed the videotapes and counted the number of rule adherence responses emitted on each tape. The judges were unaware of the nature of the treatments any of the groups had experienced. A one-way analysis of variance with repeated measures was calculated to determine interjudge reliability. The reliabilities were all found to be high; .982 for self-disclosure, .976 for sticking to the topic and .986 for listening.

On the basis of the high reliabilities across judges, mean values were determined for the number of rule adherences for each rule in each treatment group (See Table 1). Then a one-way analysis of variance was calculated to compare the number of rule adherences across the three treatment groups for each of the three discussion rules: (a) self-disclosure, (b) sticking to the topic, and (c) showing evidence of having listened to what others in the group had said.

TABLE 1

Sample Size, Mean, and Standard Deviation for Rule 1 (Self-disclosure), Rule 2 (Sticking to the topic), and Rule 3 (Listening).

Treatment	Rule 1			Rule 2			Rule 3		
	N	X	SD	N	X	SD	N	X	SD
Segmented	7	15.1	3.59	7	15.6	2.76	7	2.7	1.84
Combined	9	17.0	3.21	9	17.2	3.34	9	2.9	1.10
Control	8	12.6	1.27	8	13.4	2.40	8	1.0	1.11

A Scheffé Multiple Comparisons Test was also calculated to identify which pairs of treatments differed significantly.

### Rule 1 (Self-disclosure)

Analysis of variance revealed significant differences in the number of self-disclosing statements made by subjects in the different treatment groups ( $F = 5.27$ ;  $df = 2,21$ ;  $p = .01$ ). A Scheffé comparison test, which was conducted to investigate which pairs of treatments differed significantly, revealed the following: (a) Subjects in the segmented modeling treatment made significantly more self-disclosures than subjects in the control groups ( $p = .01$ ). (b) No significant differences were found between the two modeling treatments ( $p = .42$ ) or between the combined modeling and control groups ( $p = .25$ ).

### Rule 2 (Sticking to the Topic)

Statistical comparisons on adherence responses to rule two revealed results similar to those found for rule one. There was a significant difference in the number of rule adherences across treatments ( $F = 3.69$ ;  $df = 2,21$ ;  $p = .04$ ). As with rule one, subjects in the segmented modeling treatment made significantly more statements which were judged to be on topic than did subjects in the control groups ( $p = .04$ ).

Results indicated that subjects in the segmented modeling groups did stick to the topic more often than those in combined modeling groups, but differences between the two were not large enough to be statistically significant ( $p = .57$ ). Also, there was no statistically significant difference between the combined modeling and control groups ( $p = .34$ ).

### Rule 3 (Listening)

Rule three was the most difficult to measure in that it required structuring of the subjects' group discussions to have group leaders ask if anyone could recall similarities or differences in what others had said. Results indicated that there was a significant difference in the number of listening responses across treatments ( $F = 5.02$ ;  $df = 2,21$ ;  $p = .02$ ).

Scheffé comparisons indicated that the segmented treatment was significantly stronger than the control ( $p = .03$ ) while the combined modeling group approached significance ( $p = .06$ ). If one was to take a more liberal interpretation of the results of the Scheffé and use .10 as the level needed to reject the null hypothesis (Ferguson, 1971), the combined modeling treatment group would also be significantly different from the control. Again, there was no statistically significant difference between segmented and combined treatment groups ( $p = .98$ ).

## DISCUSSION

Results of this study suggest that the segmented modeling treatment was effective in teaching appropriate group discussion behavior to grade two students. Although there was a trend towards suggesting that the segmented modeling treatment was more effective than the combined modeling treatment, differences between the groups varied with the rule taught and were not statistically significant.

That the subjects were able to acquire the three discussion rules modeled after experiencing a twenty minute treatment speaks to the power of this modeling approach. The authors suggest that the approach could be further strengthened by a counsellor or teacher in teaching communication skills or some other task adding the following steps

to the procedures used in this study: (a) telling the students prior to viewing the tapes the purpose of the project, (b) employing more videotapes and using them interspersed with practice sessions which are evaluated by students as well as by the teacher, and (c) encouraging students to remember the tasks modeled on the videotapes and reinforcing them for performing the tasks.

Further research in the use of segmented modeling treatments could centre on: (a) varying the treatment time for a particular rule or task according to the initial level of competence of the people observing the tapes, (b) applying the approach to difference age groups in teaching a variety of tasks related to affective and cognitive development, and (c) combining the treatment employed in this study with practice sessions to investigate the relative effectiveness of modeling compared with modeling plus practice or practice alone.

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