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The results point out the importance of overall rates of prompts and praises, independent of whether they are given by an adolescent mediator or by the experimenter. The need for further research concerning the details of mediator and student interactions was noted.

THE EFFECT OF THE PRESENCE OF A PEER ADOLESCENT MEDIATOR AND THE AMOUNT OF VERBAL PRAISING ON THE SORTING BEHAVIOR OF PRESCHOOL RETARDED CHILDREN

by

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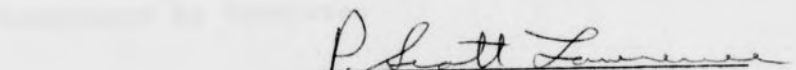

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CHAPTER I

INTRODUCTION

One serious problem facing most schools is the low ratio of teachers to students. It is generally agreed within the field of education that children learn more when they are given large amounts of individual attention from the teacher (Gartner, Kohler, & Reissman, 1971). Only when the teacher is directly observing an individual child can she react to the fine-grained details of his behavioral repertoire and effectively program new learning. However, a single teacher finds it impossible to give each child in a large class the amount of individual attention he needs. A child with a specific problem may have to be passed by in order not to slow down the majority of the class who are responsive to group instruction.

The disadvantages of having large numbers of students for each teacher are especially great in schools for the developmentally disabled. When skills such as self-help, reading, and mathematics are taught to students with developmental disabilities, there is a greater need for individualized instruction than when similar skills are taught to "normal" children. In addition, most "normal" students in a large group situation will remain sitting and attending to the instructional task, allowing the teacher

to spend most of her time with educational programming. On the other hand, teachers of the developmentally disabled must spend a great deal of time maintaining classroom control and attention to the learning materials. This detracts further from the time she can spend with individual children.

As one solution to this problem, in recent years investigators have been studying the use of peers and older students as teachers' aides or tutors within the classroom. The following studies will consider some of the variables which are relevant to the training and use of peer mediators.

Terrell and Stevenson (1965) evaluated the effectiveness of normal and retarded students as social reinforcing agents for their peers. The subjects were normal and retarded boys attending the same classes in elementary grades one to three. Age range for the normal boys was 6.3 to 9.4 years and I.Q. range was 96 to 122 with a mean of 111. Age range for the retarded boys was 7.1 to 11.7 years and mean I.Q. was 72.4. There were four experimental groups: (a) N-N nonretarded peer reinforced by nonretarded peer; (b) R-N nonretarded peer reinforced by retarded peer; (c) R-R retarded peer reinforced by retarded peer; (d) N-R retarded peer reinforced by nonretarded peer. Each subject was assigned to two of the four experimental groups so that he served as the subject in one of the groups and as

the peer mediator in the other experimental group. The task involved a marble-dropping game. The subject was to drop marbles through a plate with six small holes randomly placed in it. The reinforcing agent was to give verbal reinforcement such as "Fine, Good, Very Good, That's Good" when signaled every 30 seconds by the experimenter. This was to reinforce marble-dropping behavior of the subject. The experiment was then replicated with a group of male and female, normal and retarded adolescents. Results indicated that normal reinforcing agents were overall more effective than retarded reinforcing agents. The greatest increase in response rate occurred when normal children acted as both reinforcing agent and subject (N-N). The smallest increase in response rate occurred when retarded children reinforced normal children (R-N). Response rate of retarded subjects was approximately the same when normal and retarded children served as reinforcing agents.

In discussing performance differences, Terrell and Stevenson point out that all the subjects were equally physically capable of the task. They conclude that the differences in effectiveness were due to the reinforcing value placed on a statement made by a normal child versus the value of the same statement made by a retarded child. It was inferred that a normal child's performance was more influenced by the status of the reinforcer than was the performance of a retarded child. There was also a trend

which showed that normal girls had a greater sensitivity to the reinforcer's status than did normal boys. The most important aspect to the retarded children seemed to be the opportunity to perform in the presence of another interested and responsive child. This study therefore gives strength to the use of retarded children as mediators for their peers.

Stamm and Gardner (1968) looked further into the influencing effect of normal and retarded peers on retarded adolescents. They specifically considered the effect that symbolically presented models, defined as intellectually normal or intellectually retarded, would have on the conformity behavior of mildly retarded adolescents. They also looked at the effect of a simulated group technique on conformity behavior. This involved using recorded voices as models to simulate a group atmosphere. Subjects were male and female mildly retarded adolescents enrolled in special education classes. The mean age was 14.5 and mean I.Q. was 69 for females and 71 for males. The task was counting metronome clicks presented at the rate of 80 per minute. Baseline for all subjects consisted of instructions to tell the experimenter the number of clicks that were heard. Subjects were assigned to one of two conditions, model retarded or model normal. They were then told that there were three other subjects in rooms close by, who would tell the experimenter the number of clicks they had heard. The subject was told he was number four and to answer after

he heard the other three answer. The subject was also told that the others could hear his answer just as he would hear theirs. For one half of the total number of trials the model's responses were either one, two, or three numbers discrepant from the actual number of clicks presented. In each trial all three models gave the same response. For subjects in the model normal condition additional comments were made such as "the other subjects go to a regular school, not a special school." For subjects in the model retarded condition comments were "the other subjects go to a special class just like you do, not a regular school."

The results showed a similar conformity effect for both sexes. Both males and females made more errors under the discrepant model conditions than in the alone condition which served as a baseline. There were no significant differences across sexes in the number of conformity responses or error responses between the normal and retarded model conditions. However there was a non-significant trend for retarded females to make more conformity responses under the model-retarded condition and for male retarded subjects to conform more under the model-normal condition. The experimenters considered these differences to be caused by the variation in the amount of social contact with nonretarded peers that occurs between male and female retardates. They conclude by suggesting these findings could lead to the use of peer models to initiate new

desirable behaviors as well as to teach inhibition of inappropriate behavior to retardates. However, the validity of this conclusion must be questioned since the study concerned itself with conformity rather than either the initiation of desirable behaviors or the inhibition of inappropriate behaviors.

Whalen and Henker (1969) designed a study to develop and evaluate methods for teaching adolescent retardates to use behavior modification techniques with younger retardates. Their objective in this research was to provide the adolescents with training which could be vocationally helpful when they were released from the institution. Also by using adolescents as tutors, this would free the professional staff consisting of behavior therapists for other duties. The investigators were specifically interested in whether retardates could learn to apply basic behavior modification principles and whether the adolescents could function as therapists within the institution. The experimenters wanted to create a "therapeutic pyramid," in which a few professionals would train adolescents to act as tutors for two or more younger retardates. The basic training methods used were modeling and reinforcement. These were employed by the professionals in teaching the adolescents and in turn by the adolescents in working with the younger children. The adolescents were put on a token reinforcement system administered by the professionals. The younger trainees

were given edible reinforcers by the adolescents during training sessions along with verbal praise and physical affection.

It was found that moderately retarded adolescents can learn to use the behavior modification techniques of modeling and reinforcement to modify the behavior of other retardates. It was also shown that the tutors can become more and more independent, working with limited supervision. This was evidenced in their planning further advanced programs for the younger children and teaching their techniques to other retarded tutors. This research further extends the idea of using older retardates as teachers for younger children in institutional settings.

The studies reviewed thus far suggest that older retarded children can be used as mediators who effectively influence relatively simple behaviors of younger retarded children. However, they have not concerned themselves with determining the precise psychological mechanism which accounts for this influence. For example, they have not isolated the separate effects of material reinforcement versus social reinforcement on the younger child. Neither have they explored the possibility that the mere presence of the older child may serve as a discriminative stimulus for the younger child. The following studies have begun to bring some of these mechanisms into finer focus. The role of contingent and noncontingent reinforcement along

with the type of reinforcement (social versus material) are considered in terms of their influence on rate of responding.

Surratt, Ulrich and Hawkins (1969) designed an experiment focusing on the mechanism of reinforcement, contingent versus noncontingent. They studied the effectiveness of a fifth grade student acting as mediator for four first grade students. The on-task behavior of the first graders was to be increased through feedback given to the subjects by the mediator via lights on the first graders' desks. Lights were illuminated when the subjects met the criterion for working. This working behavior included either looking at the blackboard, counting with the aid of fingers, counting with the aid of pencils or writing on paper. The amount of time the subjects had to work before receiving reinforcement at the end of a 20-minute session was gradually increased from 12 minutes to 14, 16, 18 and finally 19 minutes. The reinforcement was a ticket allowing them 15 minutes of free time in any activity the following morning.

The results showed that during the baseline condition the mean working time was 52.8%. When response contingent lights and special privilege reinforcement was introduced, working time increased to a mean of 95.6%. A period of noncontingent lights and reinforcement brought working time down to a mean of 2.8%. This study suggests

that reinforcement contingencies mediated by a peer were highly effective and responsible for the high level of performance attained by the subjects. A six-week follow-up showed better performance than during baseline suggesting the experiment produced a lasting improvement in working behaviors. This method of modifying the behavior of several children at one time with little professional involvement has great promise for classroom settings.

Reed and Birnbrauer (1969) conducted a study to investigate the extent to which adults served as discriminative stimuli for different reinforcement contingencies with retarded children. An adult who gave noncontingent reinforcement was compared with another who gave only contingent reinforcement. Target subjects were selected and desired behaviors were playing with toys and cooperative play with other children. The two adults in the experiment dispensed the same number and kind of edible reinforcers; however, one adult's reinforcers were given out contingently while another's were noncontingent. Verbalizations of "good boy, that's right" etc. were given with each edible.

They found that each subject emitted the desired behavior only when the contingent adult was present. This behavior was controlled by the adult's entry and departure. When a period of extinction was in effect, neither adult influenced the subject's behavior. The conditioning was replicated with the adults taking opposite roles. Control

of the desired behavior was found to be specific to the currently contingent adult if he was carrying the reinforcement cup. Thus, it is not the presentation of the reinforcers per se that establishes the mediator as a discriminative stimulus but rather the presentation of such reinforcers in a contingent manner.

In most of the previously reviewed studies, both social and material reinforcement were used simultaneously. As a result it is not possible to determine the extent to which the response was controlled by the material or social reinforcement.

Tramontana (1972) recently conducted a study to look at the relative effectiveness of social and edible reinforcement. The subjects were 72 children with an age range of 4 years 11 months to 10 years 11 months and I.Q. of average, mildly retarded, or severely retarded levels. The task was a simple marble-dropping game. The conditions were: (a) verbal reinforcement in which each child was immediately verbally rewarded after dropping a marble into a box, (b) edible reinforcement in which each child was given an M&M following each marble dropped in the box, and (c) no consequence which consisted of no rewards after dropping a marble.

The results showed for the average intelligence group there was no significant difference in the reinforcing

value, measured by rate of responding, between candy and verbal reward. Candy was significantly different from no consequence in reinforcement value while no consequence and verbal reward differed but not significantly. For the mildly and severely retarded group candy was significantly better than verbal reward and no consequence in increasing response rate. Verbal reward and no consequence did not differ significantly. In summary, in the extent to which they increased the response rate the difference in the reinforcing value of candy and praise decreased as intellectual level increased.

Teague (1973) recently conducted a study which used older adolescent retardates as mediators for task behavior of preschool retarded children. He investigated two main questions: (a) can a task performance rate be increased by the use of older adolescent trainable retarded as mediators? and (b) what is the relationship of the activity level of the teacher and adolescent mediator on the rate of performance of a sorting task? The mediators were five adolescent males with mean age of 20 years and mean I.Q. of 38 on the Stanford Binet. The subjects consisted of five preschool males with mean age of 5 years and mean I.Q. of 55 on the Stanford Binet. A role-playing and modeling procedure was used by the experimenter to shape the desired mediator behavior in the adolescents. Adolescents were trained to physically and verbally prompt preschool

subjects to sort black and white cardboard squares into appropriate areas. Adolescents were also trained to verbally praise and reward the preschool subjects with a token each time they sorted ten squares. The adolescent mediators received a reinforcer for every thirty squares sorted by the preschooler. The experimental conditions were as follows: (a) Experimenter Passive (EP) in which the experimenter gave no verbal prompts or praise to the preschool subjects engaged in a sorting task; (b) Experimenter Active (EA) in which the experimenter gave verbal prompts and praise to the preschool subjects engaged in a sorting task; (c) Experimenter Passive with Adolescent Active (EPAA) in which the adolescent gave verbal prompts and praise to preschool subjects engaged in sorting task and the experimenter did not; (d) Experimenter Active with Adolescent Active (EAAA) in which both experimenter and adolescent gave verbal prompts and praise to preschool subjects engaged in a sorting task. Teague found that the adolescents did act as effective mediators for preschool subjects when the experimenter was absent but not when the experimenter was present. The condition that was found to be most effective was the combination of adolescent and teacher actively prompting and praising the preschool students.

The studies reviewed have shown that contingent reinforcement has a greater effect on performance than noncontingent reinforcement, that an adult's presence can

act as a discriminative stimulus, and that there are significant differences in the effect of edible and verbal reinforcement depending on the population used. These studies are only a small number of the needed investigations concerning such mechanisms of behavioral change.

Still largely unknown is whether a retarded adolescent mediator needs to prompt and praise academic behavior of preschool children or whether his presence itself might be sufficient to maintain academic performance. Specifically, the current study is concerned with whether changes in the rate of square sorting by preschool retarded children are due to the mere presence of an adolescent or whether such changes are due to the verbal praising and prompting by the adolescent mediator. The extent to which similar amounts of praising and prompting by the experimenter influences sorting performances is also evaluated.

CHAPTER II

METHOD

Subjects

Four male preschool children from Charles D. McIver School for the trainable mentally retarded, Greensboro City Schools, Greensboro, North Carolina, who performed in a previous sorting task experiment (Teague, 1973), served as subjects. Four male adolescents from the same school, who in the same previous experiment placed medium to high in frequency of giving social reinforcement to preschool subjects during a sorting task, served as adolescent mediators.

Materials

The materials consisted of 1400 1" by 1" black cardboard squares and 1400 1" by 1" white cardboard squares, eight one-gallon tin cans and 100 red plastic checkers.

Procedure

The preschool children were asked to perform a sorting task. This task was conducted in the preschool classroom with the other class members engaged in activities in another part of the room. There was a chair adjacent to

that of each child for the adolescent's use. The preschool children were seated at a large table which was divided into four parts by masking tape. Each child was seated directly behind one section of the table. One half of each child's area had a black one-inch square taped to it and on the other half a white one-inch square. The task was to take a square from a can containing 100 black and 100 white squares and place them in the correct area depending on the color. The experimenter placed the sorted squares into a second can. For every ten squares sorted correctly the child immediately received one token from the experimenter, which was redeemed at the end of the session for one M&M per token. The experimenter then gave a back-up reinforcer, an M&M, to the adolescents for every thirty squares the child had sorted.

Two groups consisting of two adolescent and child pairs were formed. Each pair was exposed to four different experimental conditions with the order of presentation differing between groups. Each condition included four fifteen-minute sessions. The conditions were the following: AAB--Adolescent Absent in which the child worked without adolescent present; APNV--Adolescent Present, Nonverbal in which the adolescent observed the child without engaging in any verbal interaction with him; APV--Adolescent Present, Verbal in which the adolescent verbally prompted and praised the child; APNEHV--Adolescent Present, Nonverbal and

Experimenter Highly Verbal in which the adolescent was present but nonverbal, while the experimenter increased the number of prompts and praises he normally gave by the mean frequency of adolescent verbal behavior in condition APV. The order was: Group I--AAB, APNV, AAB, APV, AAB, APNEHV, and Group II--APNV, AAB, APNV, AAB, APNEHV.

In the condition with no verbal interaction between the adolescent and child, the adolescent sat beside the child and observed the sorting task. He gave no verbal or physical prompts to the child. In the condition with verbal interaction between adolescent and child, the adolescent sat beside the child and gave verbal prompts and praise. Adolescents had been previously trained to prompt and praise. Prompts included phrases such as "put the square here," "the white square goes on this side." Praise included phrases such as "good boy," "that's good," and "that's right." Under all conditions the experimenter verbally prompted and praised the children and attempted to keep the number of prompts and praises equated for conditions AAB, APNV, APV. At the beginning of each session there was one minute of instruction to the children and adolescents as to the nature of their task. Instructions to the children were as follows: "Put the white square on the white side and the black square on the black side. Put one square down at a time. Keep the can in your lap. Work hard to get the tokens, then you will get a lot of

candy." Instructions to the adolescents during condition APV were "Watch _____ (the child's name). Tell him good boy when he works." During conditions APNV and APNEHV instructions were "Watch _____ (the child's name). Don't say anything to him, no talking."

The dependent variable was the number of squares correctly sorted by the child during each session. The number of squares sorted during the last five minutes of each session was also recorded. This measure was to control for any effect of switching from one condition to another or from one adolescent to another in certain cases. The experimenter used a four channel counter to record the number of verbal praises he gave to each child during each session. Each session was also taped in order that reliability of the counter measure could be determined. An observer listened to one out of every four tapes to assure reliability of the taped measure. Reliability was calculated using the formula of agreements over the total number of agreements and disagreements. The reliability for the counter-taped measure was 91% for praises and 89% for prompts given.

CHAPTER III

RESULTS

No errors in sorting occurred throughout the experiment; so there is no difference in number of squares sorted and number of squares sorted correctly.

Figure 1 depicts the number of squares sorted during each session for the subjects in Group I. It can be seen in Figure 1 that for Dean the number of squares sorted during the second presentation of condition APNV is greater than when the condition was first introduced. The same inconsistency occurred in condition AAB. Figure 1 shows again that for Stevie the number of squares sorted during the second presentation of APNV condition did not return to the level attained during the first presentation. The same tendency though not as great is also seen in condition AAB. In addition, a large amount of variability within each condition occurred.

Figure 2 depicts the number of squares sorted during each session for subjects in Group II. In Figure 2 the number of squares sorted by Carl in condition AAB decreases at each subsequent presentation. The number of squares sorted by Gregg during the AAB conditions decrease in the second presentation, then increase during the third presentation as compared to the number sorted in the first

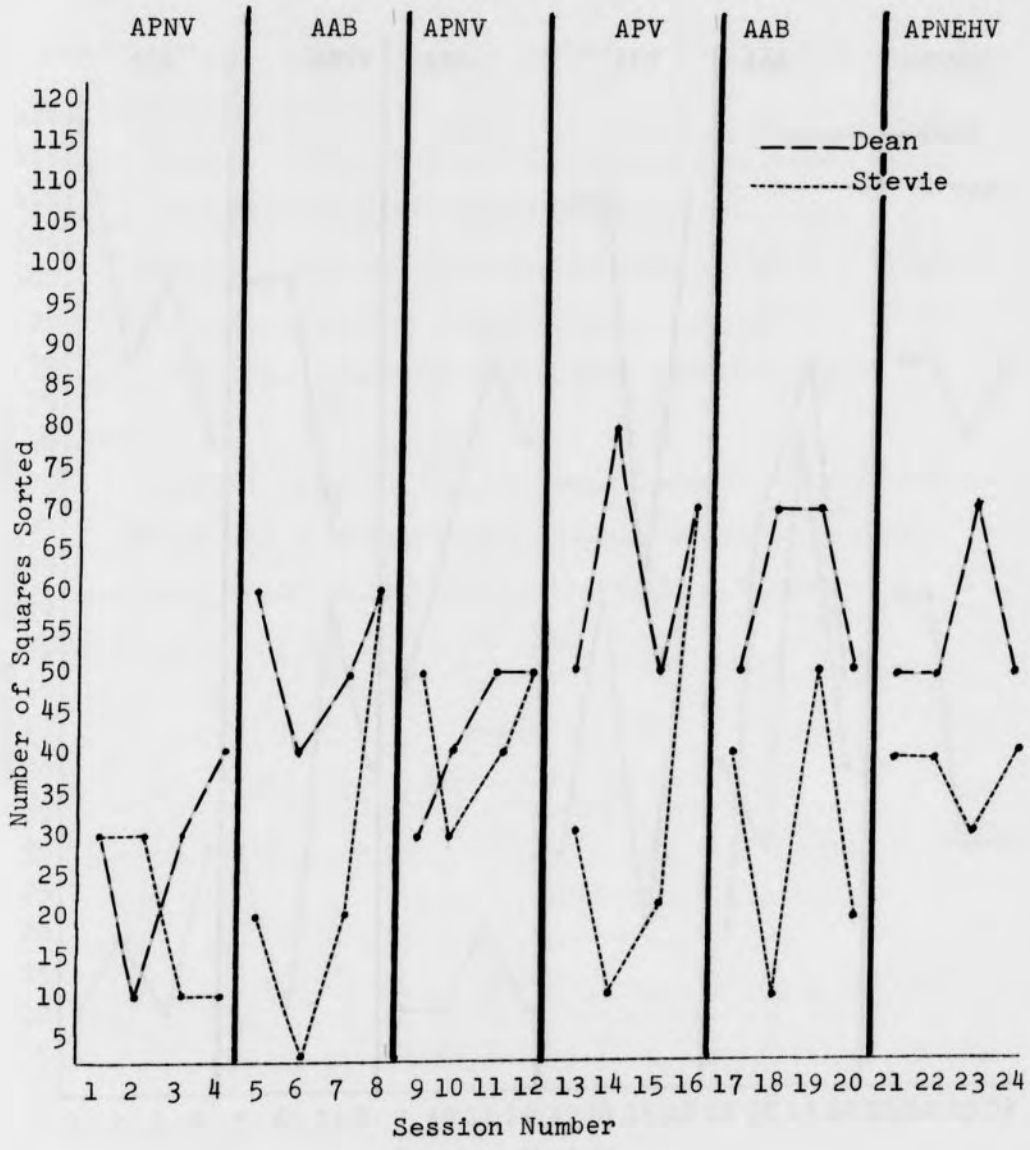

Fig. 1. Number of Squares Sorted by Dean and Stevie in Each 15-Minute Session

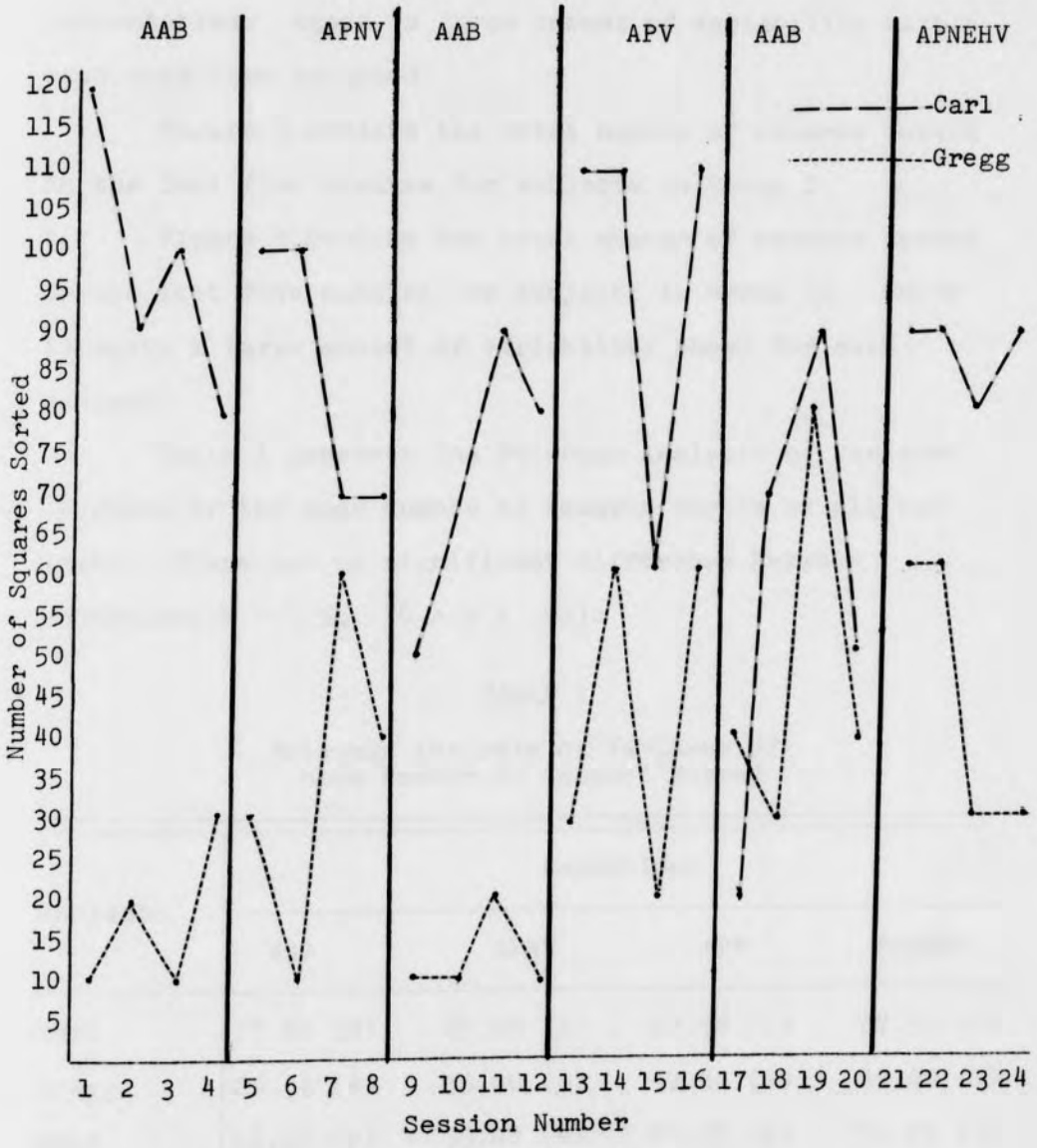

Fig. 2. Number of Squares Sorted by Carl and Gregg in Each 15-Minute Session

presentation. Again, a large amount of variability within each condition occurred.

Figure 3 depicts the total number of squares sorted in the last five minutes for subjects in Group I.

Figure 4 depicts the total number of squares sorted in the last five minutes for subjects in Group II. There is again a large amount of variability shown for each subject.

Table 1 presents the Friedman Analysis of Variance by ranks of the mean number of squares sorted by all subjects. There was no significant difference between conditions($H = 7.5$, $.10 > p > .05$).

TABLE 1

Friedman Analysis of Variance of Mean Number of Squares Sorted

Subjects	Conditions			
	AAB	APNV	APV	APNEHV
Carl	75.80 (4)	85.00 (3)	97.50 (1)	87.50 (2)
Gregg	25.83 (4)	35.00 (3)	42.50 (2)	45.00 (1)
Dean	56.25 (2)	35.00 (4)	62.50 (1)	55.00 (3)
Stevie	27.50 (4)	31.25 (3)	32.50 (2)	37.50 (1)
	(14)	(13)	(6)	(7)
	$H = 7.5$			
	$.10 > p > .05$			

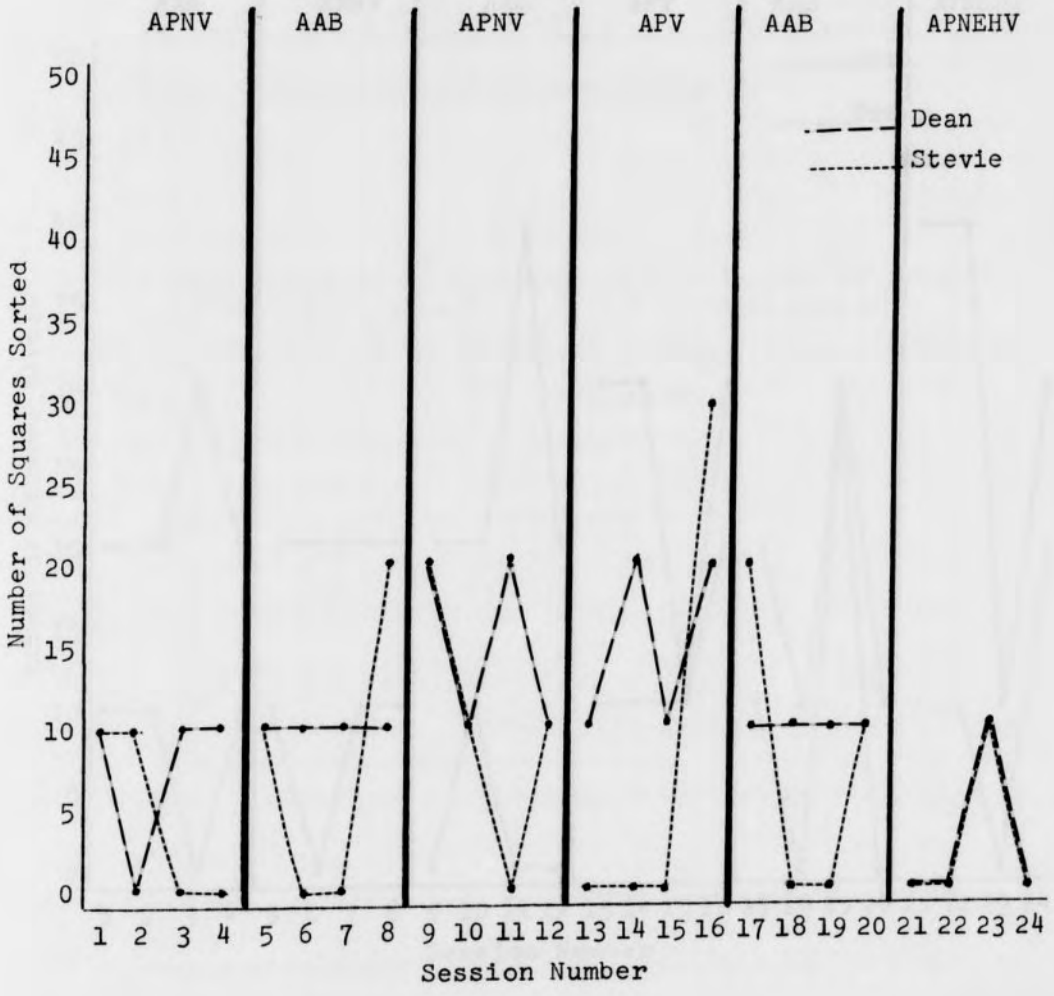

Fig. 3. Number of Squares Sorted in the Last 5 Minutes of Each Session by Dean and Stevie

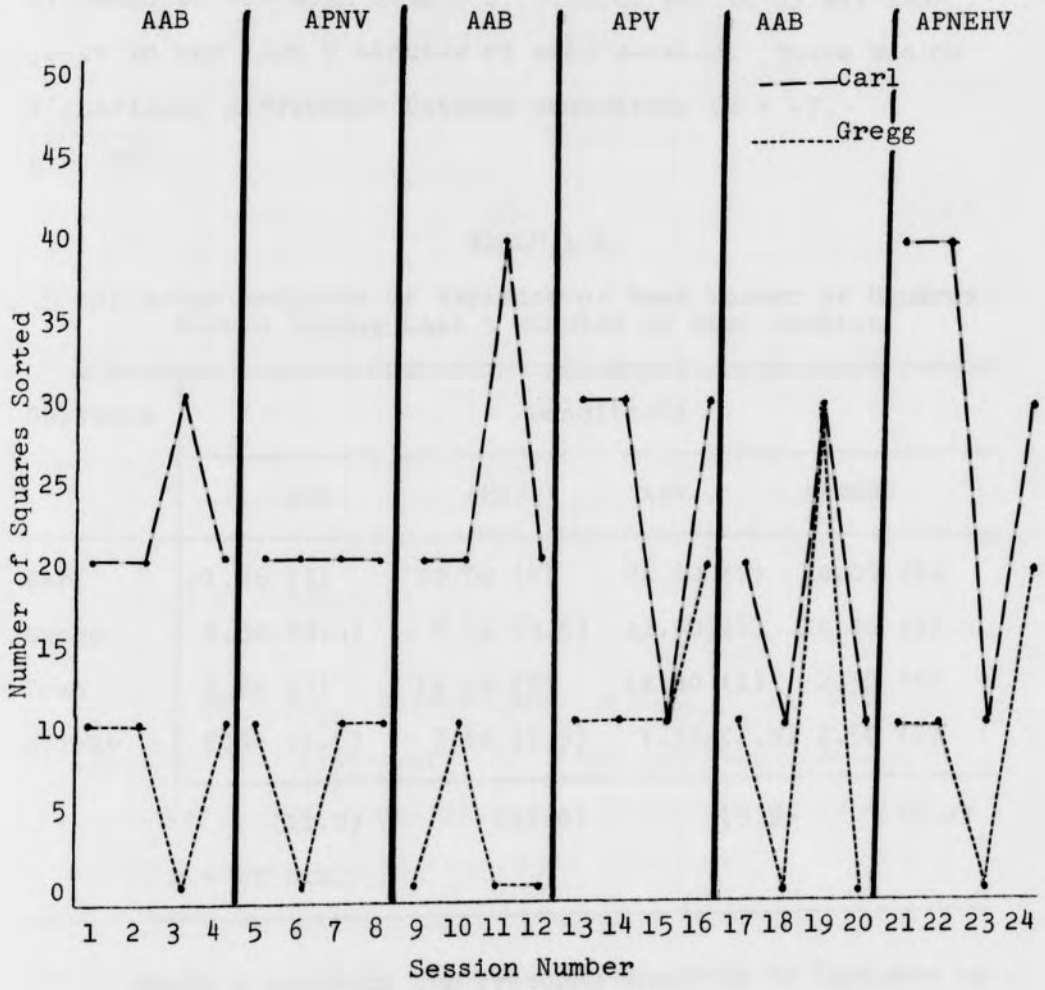

Fig. 4. Number of Squares Sorted in the Last 5 Minutes of Each Session by Carl and Gregg

Table 1-1 presents the Friedman Analysis of Variance by ranks of the mean number of squares sorted by all subjects in the last 5 minutes of each session. There was no significant difference between conditions ($H = -7$, $p > .05$).

TABLE 1-1

Friedman Analysis of Variance of Mean Number of Squares Sorted During Last 5 Minutes of Each Session

Subjects	Conditions			
	AAB	APNV	APV	APNEHV
Carl	21.66 (3)	20.00 (4)	25.00 (2)	30.00 (1)
Gregg	7.50 (3.5)	7.50 (3.5)	12.50 (1)	10.00 (2)
Dean	6.66 (3)	11.25 (2)	12.00 (1)	2.50 (4)
Stevie	7.50 (1.5)	7.50 (1.5)	7.50 (1.5)	2.50 (2)
	(11.0)	(11.0)	(5.5)	(9.0)

H = -7 N.S.

Table 2 presents the Friedman Analysis of Variance by ranks of the mean number of all verbal prompts given to all subjects by the experimenter and by the adolescent. There was no significant difference between conditions ($H = 5.1$, $p > .05$).

TABLE 2

Friedman Analysis of Variance of
Mean Number of Total Prompts

Subjects	Conditions			
	AAB	APNV	APV	APNEHV
Carl	9.75 (3)	5.00 (4)	24.50 (1)	23.25 (2)
Gregg	22.91 (4)	27.75 (3)	29.75 (2)	40.75 (1)
Dean	21.13 (2)	18.13 (3)	15.00 (4)	26.75 (1)
Stevie	16.13 (3)	17.37 (2)	15.25 (4)	25.25 (1)
	(12)	(12)	(11)	(5)

H = 5.1, N.S.

Table 3 presents the Friedman Analysis of Variance by ranks of the mean number of verbal praises given to all subjects by the experimenter. There was no significant difference between conditions ($H = -.98$, $p > .05$).

In the present study the highest number of squares sorted over all subjects occurred in condition APV when both teacher and adolescent were verbal; however, this figure is not statistically significant. The next highest number sorted overall was in condition APNEHV in which the same amount of prompts and praise issued in condition APV was issued only by the experimenter.

TABLE 3

Friedman Analysis of Variance of
Mean Number of Total Praises

Subjects	Conditions			
	AAB	APNV	APV	APNEHV
Carl	14.67 (4)	18.75 (1)	17.75 (2)	17.25 (3)
Gregg	11.08 (4)	13.00 (3)	13.50 (2)	14.00 (1)
Dean	16.50 (1)	12.62 (4)	15.75 (3)	16.00 (2)
Stevie	8.12 (3)	9.25 (2.5)	9.25 (2.5)	11.25 (1)
	(12)	(10.5)	(9.5)	(7.)

H = -.975, N.S.

CHAPTER IV

DISCUSSION AND CONCLUSION

A consistent factor in the present study was the large amount of within condition variability in the square sorting data. In addition, manipulations of the adolescents' presence and verbalizations had a very weak influence on the rate of sorting. These rather disappointing results could have been due to several factors. The experimental sessions were conducted in the subjects' normal classroom in order to make the setting as natural as possible. Some of the many common classroom distractions were people entering and leaving, disruptions involving other class members, etc. A second factor could have been prior involvement in a similar experiment. The lack of reversibility of the initial condition could have resulted from carryover effects from the previous experiment into the first few sessions of the present experiment. For example, subjects with a previous history of verbal interaction with an adolescent mediator may experience considerable behavioral disruption when faced with a mediator who does not interact. During the non-verbal condition, some of the subjects were observed trying to elicit a response from adolescents by pretending to put a square in the wrong bucket before dropping it in the

correct one. This could have suppressed responding below that which occurs when the adolescent is physically absent. A third factor that could account for the poor control over the sorting behavior by the adolescents is that the preschool children were never given either tokens or primary reinforcement from the adolescents. These always were administered by the experimenter. The effect of the experimenter may have been so powerful in this small group situation that the influence of the adolescent mediator was overridden. As a result praise from the adolescents may not have been established as a conditioned reinforcer and prompts may not have acquired a discriminative function.

In spite of the large variability in the data, as can be seen in Table 1, there was a trend towards greater rates of sorting behavior during conditions APV and APNEHV. The highest rates of prompting and praising also tended to occur in these two conditions. Should this finding hold up in future research with greater experimental control, it would indicate that the overall rates of prompts and praises administered is the relevant variable, independent of whether they are given by an adolescent mediator or by an experimenter or teacher. Additional research is needed to determine the proportion of prompts versus praises that should be given by mediators to maximize the rate of academic behavior.

Because of the type of subjects used in this research and the rather limited set of experimental conditions investigated, it should not be concluded that adolescent retardates cannot be used as effective mediators for younger, severely retarded children. Rather, this effective use may require the more explicit use of material reinforcement in a contingent manner (Tramontana, 1972), the use of more highly trained mediators, or the use of such mediators in a contingent fashion.

CHAPTER V

SUMMARY

Four preschool children were asked to perform a black-white square sorting task under conditions in which an adolescent mediator was absent, present but nonverbal, present and verbally prompting and praising the child, and present but nonverbal with the experimenter increasing his normal output of praise and prompts by the mean frequency of adolescent verbalizations. The experimenter was present and verbal in all conditions.

None of the experimental conditions produced significantly superior square sorting behavior than the others. However, the highest number of squares sorted over all subjects occurred when the adolescent was present and verbal along with the experimenter. The second highest number of squares sorted overall occurred when the same amount of prompts and praises, given previously by both the mediators and experimenter, were given only by the experimenter with mediators present but nonverbal.

The results point out the importance of overall rates of prompts and praises, independent of whether they are given by an adolescent mediator or by the experimenter. The need for further research concerning the details of mediator and student interactions was noted.

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APPENDIX

	Condition	# of Squares Sorted		E-Prompts	E-Praises	A-Prompts	A-Praises
		Total Time	Last 5 Min.				
Session 1							
Carl	AAB	120	20	6	14	0	0
Gregg	AAB	10	10	19	11	0	0
Dean	APNV	30	10	17	13	0	0
Stevie	APNV	30	10	24	8	0	0
Session 2							
Carl	AAB	90	20	6	14	0	0
Gregg	AAB	20	10	19	17	0	0
Dean	APNV	10	0	17	14	0	0
Stevie	APNV	30	10	24	3	0	0
Session 3							
Carl	AAB	100	30	9	13	0	0
Gregg	AAB	10	0	21	9	0	0
Dean	APNV	30	10	20	10	0	0
Stevie	APNV	10	0	17	15	0	0
Session 4							
Carl	AAB	80	20	10	15	0	0
Gregg	AAB	30	10	17	17	0	0
Dean	APNV	40	10	15	15	0	0
Stevie	APNV	10	0	28	7	0	0

	Condition	# of Squares Sorted		E-Prompts	E-Praises	A-Prompts	A-Praises
		Total Time	Last 5 Min.				
Session 5							
Carl	APNV	100	20	2	20	0	0
Gregg	APNV	30	10	30	16	0	0
Dean	AAB	60	10	21	15	0	0
Stevie	AAB	20	10	13	6	0	0
Session 6							
Carl	APNV	100	20	5	23	0	0
Gregg	APNV	10	0	25	11	0	0
Dean	AAB	40	10	20	7	0	0
Stevie	AAB	0	0	13	7	0	0
Session 7							
Carl	APNV	70	20	6	16	0	0
Gregg	APNV	60	10	28	15	0	0
Dean	AAB	50	10	19	17	0	0
Stevie	AAB	20	0	10	4	0	0
Session 8							
Carl	APNV	70	20	6	13	0	0
Gregg	APNV	40	10	27	13	0	0
Dean	AAB	60	10	25	15	0	0
Stevie	AAB	60	20	23	9	0	0

	Condition	# of Squares Sorted: Total Time	# of Squares Sorted: Last 5 Min.	E-Prompts	E-Praises	A-Prompts	A-Praises
Session 9							
Carl	AAB	50	20	2	6	0	0
Gregg	AAB	10	0	23	5	0	0
Dean	APNV	30	20	17	8	0	0
Stevie	APNV	50	20	9	10	0	0
Session 10							
Carl	AAB	70	20	8	11	0	0
Gregg	AAB	10	10	25	7	0	0
Dean	APNV	40	10	25	14	0	0
Stevie	APNV	30	10	9	8	0	0
Session 11							
Carl	AAB	90	40	5	17	0	0
Gregg	AAB	20	0	20	4	0	0
Dean	APNV	50	20	14	9	0	0
Stevie	APNV	40	0	11	8	0	0
Session 12							
Carl	AAB	80	20	5	14	0	0
Gregg	AAB	10	0	4	18	0	0
Dean	APNV	50	10	19	12	0	0
Stevie	APNV	50	10	9	11	0	0

	Condition	# of Squares Sorted: Total Time	# of Squares Sorted: Last 5 Min.	E-Prompts	E-Praises	A-Prompts	A-Praises
Session 13							
Carl	APV	110	30	6	16	18	2
Gregg	APV	30	10	13	9	14	10
Dean	APV	50	10	9	15	5	1
Stevie	APV	30	0	9	6	6	0
Session 14							
Carl	APV	110	30	6	15	18	2
Gregg	APV	60	10	8	18	31	4
Dean	APV	80	20	8	20	5	0
Stevie	APV	10	0	13	9	3	0
Session 15							
Carl	APV	60	10	4	13	15	2
Gregg	APV	20	10	22	7	7	1
Dean	APV	50	10	6	12	8	1
Stevie	APV	20	0	9	9	8	0
Session 16							
Carl	APV	110	30	9	18	22	3
Gregg	APV	60	20	9	17	5	0
Dean	APV	70	20	13	13	4	1
Stevie	APV	70	30	5	13	8	0

	Condition	# of Squares Sorted		E-Prompts	E-Praises	A-Prompts	A-Praises
		Total Time	Last 5 Min.				
Session 17							
Carl	AAB	20	20	25	7	0	0
Gregg	AAB	40	10	30	19	0	0
Dean	AAB	50	10	21	15	0	0
Stevie	AAB	40	20	21	12	0	0
Session 18							
Carl	AAB	70	10	6	20	0	0
Gregg	AAB	30	0	20	10	0	0
Dean	AAB	70	10	21	17	0	0
Stevie	AAB	10	0	14	5	0	0
Session 19							
Carl	AAB	90	30	7	20	0	0
Gregg	AAB	80	30	20	17	0	0
Dean	AAB	70	10	21	17	0	0
Stevie	AAB	50	0	14	10	0	0
Session 20							
Carl	AAB	50	10	26	20	0	0
Gregg	AAB	40	0	42	21	0	0
Dean	AAB	50	10	21	17	0	0
Stevie	AAB	20	10	21	9	0	0

	Condition	# of Squares Sorted: Total Time	# of Squares Sorted: Last 5 Min.	E-Prompts	E-Praises	A-Prompts	A-Praises
Session 21							
Carl	APNEHV	90	40	24	18	0	0
Gregg	APNEHV	60	10	38	14	0	0
Dean	APNEHV	50	0	24	12	0	0
Stevie	APNEHV	40	0	15	11	0	0
Session 22							
Carl	APNEHV	90	40	25	14	0	0
Gregg	APNEHV	60	10	32	14	0	0
Dean	APNEHV	50	0	30	20	0	0
Stevie	APNEHV	40	0	23	9	0	0
Session 23							
Carl	APNEHV	80	10	22	18	0	0
Gregg	APNEHV	30	0	45	11	0	0
Dean	APNEHV	70	10	27	15	0	0
Stevie	APNEHV	30	10	34	8	0	0
Session 24							
Carl	APNEHV	90	30	22	18	0	0
Gregg	APNEHV	30	20	48	15	0	0
Dean	APNEHV	50	0	25	13	0	0
Stevie	APNEHV	40	0	27	16	0	0