

EFFECTS OF BEHAVIORAL CONSULTATION ON
TEACHER APPLICATION AND TRANSFER OF
BEHAVIOR MANAGEMENT PRINCIPLES

by

James Curtis Hazzard

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF PHILOSOPHY
In the Graduate College
THE UNIVERSITY OF ARIZONA

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I hereby recommend that this dissertation prepared under my
direction by JAMES CURTIS HAZZARD

entitled EFFECTS OF BEHAVIORAL CONSULTATION ON TEACHER
APPLICATION AND TRANSFER OF BEHAVIOR MANAGE-
MENT PRINCIPLES

be accepted as fulfilling the dissertation requirement for the
degree of DOCTOR OF PHILOSOPHY

John R. Bergan
Dissertation Director

5/26/77
Date

As members of the Final Examination Committee, we certify
that we have read this dissertation and agree that it may be
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John R. Bergan
Ronald W. Anderson
Thomas R. Kratochwill

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James Hazard

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ABSTRACT

The effects of a behavioral consultation model which utilized brief interviews to impart learning principles and implement application of these principles by three public school classroom teachers was studied. Intervention interviews were interspaced and success was measured by daily observation of teachers' application of verbal and non-verbal reinforcement for attending behaviors of referred children. In each classroom one child was the subject of teacher consultation while behaviors of other problem children were measured in an effort to establish if transfer of the intervention plan had occurred. It was found that a treatment plan which involved behavior change on the part of a cooperative teacher could be established without extensive time and training, that verbal and non-verbal reinforcement for attending behavior could increase that behavior among studied children, and that some transfer of learned principles toward students other than the targeted child may be possible but that direct cueing was necessary to initiate transfer of learned principles in most studied cases.

CHAPTER 1

INTRODUCTION

Statement of the Problem

Although in the last two decades there has been numerous volumes of literature promulgating the use of consultation in the field of school psychology (MacLennan, Quinn and Schroeder 1971; Mannino 1969; McClung and Stunder 1970; Newman 1967; Schmidt and Pena 1964; Bijou 1970; Bardon 1972; Bergan 1970; Bergan et al. 1971; Attwell 1974; Wylie and Harris 1961; Itkin 1972; Bersoff and Grieger 1971; Gray 1963; Dorr 1973; Singer, Whiton and Fried 1970; Trachtman 1961; Tindall 1972) little research exists to justify current consultation practices. Mullen (1960) emphasized the lack of research in consultation methods and school psychology. Cottingham (1967) and Newfield (1971) made similar observations with Newfield reporting that to date less than six consultation research studies existed. Bergan and Tombari (1975) again stressed that little research had been done on the verbal interaction effects and success of consultation. They made a similar observation in 1976 (Bergan and Tombari 1976, p. 3): "In view of the potential effects of ideas about

consultation policies relating to training and practices in school psychology one might expect that consultation would be the subject of vigorous research, but this has not been the case." In order to determine the efficacy of the consultation model and its advantages over existing models two assumptions are made.

The first assumption is that consultation can be used effectively to alter the behavior of the referred client and can be less time-consuming than other approaches.

The second assumption is that once a consultee has received the benefit of consultation, the principles learned in their efforts toward the client will be generalized to other clients with similar problems in similar situations.

For the counselor to be optimally effective for the benefit of the client, it is frequently necessary that the counselor spend more time with the client's parents and teachers than with the client himself. The counselor can use this time to help teachers and parents learn how to apply reinforcement contingent upon the improving behavior of the child. When parents and teachers begin to see how reinforcement can be effectively employed, they will generalize the process to other problem cases, and so the counselor's effectiveness will be multiplied many times over (Krumboltz and Thoresen 1969, p. 130).

Consultation meets the problems of the increased demand for services. It permits the teacher to examine the impact and the consequences of the instructional process on children, and helps the teacher understand the effect his behavior has on children . . . the teacher develops an understanding of human behavior which may be used in contacts with other children, thereby reducing the number of children needing individual attention at a later date (Dinkmeyer 1968, p. 189).

Referred children and the resolution of their problems become models for handling future classroom problems. The teacher learns and is better able to handle other problems (Schmidt and Pena 1964, p. 422).

Changes in particular children are of secondary concern; however, it is assumed that alleviating teacher difficulties . . . will result in improved behavior of the referred child. In addition, it is predicted that the same problem would be less likely to occur with similar children which the teacher may face in the future (Meyers 1973, p. 6).

Although consultation intervention utilizing in-service training and extensive instruction has proven successful in most explored literature little research exists using behavioral consultation and interviews to alter consultees' behavior and implement specific changes in clients. Even less studied is the ability of the consultee to transfer learned principles to other clients following consultation. It is these assumptions that will be explored in this paper and will be the focus of this study.

Specifically stated: Will a consultation method that utilizes brief teacher contacts and does not involve extensive teacher training be effective in altering teacher and student behavior and will the teacher having learned to apply behavior change principles toward one child be able to apply these same principles to another child with a similar problem in a like situation?

To answer these questions, the Behavioral Consultation Model was used with several teachers in an effort to

alter nonattending behaviors of referred children through the systematic use of verbal and nonverbal reinforcement while measuring the teacher's transfer or generalization of these principles to other students.

Definition of Terms

Consultation

In its most general definition, consultation refers to the provision of indirect service to a client by a professional. More specifically, it seeks to enhance the fund of knowledge of the consultee and their ability to interact more effectively with the client while simultaneously establishing changes in the client (Cowen 1973). As such, consultation could conceivably involve classes, role playing, individual instruction, bibliotherapy, on-the-job training, or any consultant-consultee interaction that might increase the consultee's knowledge and the application of that knowledge to assist a client.

Several models of consultation have been formulated (Fein and Tyler 1971, Bersoff and Grieger 1971, McDaniel and Ahr 1965, Newman 1967, Valett 1966, Bergan and Caldwell 1967). Perhaps one of the more specifically stated and currently popular models is a Behavioral Consultation method, developed by Bergan (Bergan et al. 1971, Bergan 1977). This method is rather unique in that it utilizes a

series of interviews with the consultee to impart knowledge of behavioral principles which the consultee is then expected to apply toward solution of the client's problem for which the consultee sought assistance. The model has four distinct phases: problem identification, problem analysis, intervention, and problem evaluation.

The purpose of the first phase is to identify in specific terms what behaviors are the target upon which attention, analysis and intervention will focus. The frequency of this targeted behavior and the conditions surrounding its occurrence are explored with the referring party. Procedures are then established for the gathering of baseline information on the targeted behavior, recording of which usually is the function of the referring party.

The second phase, problem analysis again involves an interview. In this phase, the consultant utilizes the baseline frequency of the targeted behavior and attempts through the consultee to extract conditions from the environment that are maintaining or influencing the behaviors in question. From the data and analysis of antecedent, consequent, and sequential conditions, all brought to the interview by the change agent, a goal and an intervention plan is developed.

In the third phase, plan implementation, the consultee acts as the behavior change agent toward the client

(child) in question. This involves applying behavioral principles and recording client behaviors.

The final phase involves an interview in which the current frequency of the target behavior is compared with the baseline frequency for that same behavior. Success or failure is measured by that comparison and the goal behavior developed in the problem analysis interview. If successful, the consultation process for the referred problem behavior is terminated with some suggestions for continued post-modification procedures. If unsuccessful, then a reanalysis of the problem is made and the final phases repeated.

Attending Behavior

Behaviors exhibited by adults and children modified by this or similar consultation models have varied. Ayllon (1959) and Pomerleau, Bobrove and Smith (1973) report the successful use of behavioral consultation in modifying attendants' and aides' behaviors in psychiatric institutions resulting in patient improvements. Sloane and MacAulay (1968) found it successful for therapists in modifying speech problems. Burchard and Tyler (1965) reported its use in modifying delinquents' behaviors, while Zeilberger, Sampen and Sloane (1968) found consultation successful in modifying aggressive behaviors in a preschool child using the mother as a change agent.

A survey of the literature finds the most research in the schools using a behavioral approach has focused upon attending behavior. Attending behavior is considered synonymous with on-task behaviors and includes listening to instructions; writing, reading or working on assignments; participating in group assignments; speaking with permission. Behaviors considered incompatible to the above are termed nonattending or off-task behaviors. These include gross motor movements (walking around, throwing or projecting objects, moving chairs, jumping), fine motor movements (tapping, dropping objects, engaging in repetitious activities that are self-disturbing or disturbing to others), verbal behaviors (undirected talking, talking without permission, crying, screaming, laughing loudly, singing, or repeatedly calling "teacher"), withdrawal or nonactivity (ignoring the teacher when instructions are being given, daydreaming, staring out the window or door, or simply staring).

Perhaps the main reasons that these behaviors have been chosen for study by researchers is that they are high-frequency behaviors which are easily measured. Although these behaviors can certainly not be considered abnormal in either the child or adult and their complete modification would not be desirable (Winett and Winkler 1972), excesses may be detrimental to school progress. The relationship

\ between academic progress and attending behavior has been disputed (Ferritor et al. 1972) although most researchers tend to equate the two (Cobb 1970, 1972; McKinney et al. 1975; Nolen, Kunzleman and Haring 1967; Kirby and Shields 1972; Carnine 1976). Key elements may involve the specific type of nonattending behavior, age, sex, intelligence of the child and/or the material being presented and the manner of its presentation.

Regardless of the lack of understanding and dynamics involved, attending-nonattending behaviors appear to be of extreme concern to the classroom teacher. Hewett (1971) placed attention as the first step in a hierarchy of educational tasks. Nicholson (1971), in a survey of referral problems in 59 Ohio school districts, reported that more than one-half of the 590 referrals were for emotional and academic deficiencies associated with behaviors incompatible with attending behaviors. A survey reported by Bergan and Caldwell (1967) showed that 95 percent of the referrals in a large metropolitan area involved problems with individual children rather than group or whole-class problems. It further indicated that 62 percent were problems directly related to decelerating certain behaviors, with 32 percent requiring acceleration of behaviors. The most frequently reported behaviors requiring deceleration were talking-out,

walking about without permission, hitting others, tantrums, and crying.

Because of the concern by teachers for this behavior, its high frequency, and amenability to observation, and the current knowledge concerning its amelioration, this behavior was chosen for use in this study.

Principles of Learning of Direct Consideration to This Study

A review of all principles of learning which may have a direct or vicarious effect upon the results of this study would indeed be an impossible task. In a review of the research (offered in the next section of this study), certain principles demand at least a definition and brief review.

The first of these is reinforcement. There are four general aspects to consider in reinforcement: the quality and quantity of reinforcement, the time or delay of reinforcement, the schedule of reinforcement, and the vicarious and cognitive processes of reinforcement (Hilgard and Marquis 1961; Bandura 1969, 1971).

The quality and quantity of reinforcement generally refers to the stimulus value that the reinforcer has to the organism being reinforced, e.g., a glass of water will probably have as much reinforcing value to a mildly thirsty person as two glasses of water, or what may be a strong

reinforcer to one child will have absolutely no reinforcing value to another. Reinforcers must be considered in relationship to the person or organism to be reinforced if they are indeed to be reinforcers. This has important implications for the present study in which the reinforcers for the consultee (teacher) will be the observed change of the client (child's) behavior, and the reinforcers for the child will be the verbal or nonverbal approval of the teacher. Although these have been demonstrated to have high reward value in most of the research to be discussed, they may have no reinforcing value to the individuals to be studied.

The time between the initiation of a response and the application of the reinforcer has also been demonstrated to be of importance. In order to increase the probability that a response will reoccur, Tolman (1934) suggests that the reinforcer should follow or occur simultaneously with the response. Many exceptions to this principle have been demonstrated (Bandura 1969, 1971) and are apparent in the environment, e.g., a workman striving daily for a paycheck at the month's end, a student studying diligently for a diploma four years away. Social learning theorists emphasize both a cognitive mediational factor and self-reinforcement (the ability of the organism to intrinsically reinforce itself for a response) which has a direct

influence on the delay of reinforcement. In experimental practice, reinforcement may occur on every trial or after every correct response or the schedule of reinforcement may be predetermined on an interval (e.g., every three minutes) or a ratio (e.g., every third response). Experimentally, these studies have found the ideal reinforcement schedule for learning a new behavior is to reinforce every correct response (Grant and Schipper 1952; Kimble, Mann and Dufort 1955), while a ratio reinforcement pattern is the most resistant to extinction (Hilgard and Marquis 1961, Statts and Butterfield 1965).

In applied research and in practice, it is difficult to manipulate the reinforcement schedule to such a fine degree as seen in laboratory studies. In reality, when suggesting a teacher reinforce a particular response for a child in her classroom, an interval schedule of reinforcement is what will in all likelihood follow.

The fourth emphasis for reinforcement has been a polyglot of considerations poised by social learning theorists (Bandura 1969, 1971; Insko and Oakes 1966; Levy 1967). One such concept emphasized by Bandura (1969, p. 30) is the vicarious processes of reinforcement: "There is considerable evidence that the behavior of observers can be substantially modified as a function of witnessing other people's behavior and its consequences for them."

Various studies (Berger 1961, Marlott 1968, Bisese 1966, Rosenbaum and Bruning 1966, Bruning 1965) support the influence of vicarious reinforcement. Explanation offered in the interpretation of this phenomena often emphasize the information value of reinforcement, suggesting that observing a model reinforced for a behavior may, through mediational processes, lead the observer to believe that by making similar responses, reward will follow. A similar theory suggests that the cues may offer a discrimination factor which may facilitate the performance of matching responses when cues for which the model had previously been reinforced were present (Church 1957; McDavid 1964; Paschke, Simon and Bell 1967).

Research does appear to indicate that the more alike the model to the observer and/or the closer the model to the observer, the more vicarious reinforcement will occur (Broden et al. 1970, Kazdin 1973, Stotland 1969).

Lastly, a further consideration that confounds many predictable aspects of reinforcement is the theory that some behaviors or responses may be intrinsically rewarding.

Although the controlling power of externally occurring consequences cannot be minimized, self-reinforcement may frequently outweigh the influence of external outcomes in governing social behavior, particularly in the case of older children and adults. Until recently, self-reinforcement phenomena have been virtually ignored in psychological theorizing and experimentation, perhaps as a result of preoccupation with infrahuman learning . . . people typically set themselves certain standards of behavior and

self-administer rewards or punishing consequences depending on whether their performances fall short of, match, or exceed their self-prescribed demands (Bandura 1969, p. 32).

Research with adults (Kanfer and Marston 1963, Eaton and Weil 1955, Hughes et al. 1960) and children (Bandura and Perloff 1967, Bandura and Mischel 1965) attribute the development of self-reinforcement to early modeling and child rearing practices. The effects of self-reinforcement may have unpredictable results when applying operant procedures, e.g., the child's fantasies during daydreaming may be more reinforcing than the teacher's verbal approval for not daydreaming.

A second learning principle, extinction, refers to the decrement of a response when that response is unaccompanied by the usual reinforcer. Some aspects enhancing or impairing extinction have been identified. One such, as indicated earlier, is the schedule of reinforcement, e.g., some schedules of reinforcements (intermittent) are less prone to rapid extinction than others (continuous). Generally, it has been found, the greater the effort required in producing a response, the sooner that response can be extinguished. While serious states of deprivation can cause extinction to be quite slow, visible alterations of conditions of reinforcement (a new person distributing the reinforcement, a setting change, etc.) have been found to increase the rapidity of extinction. Finally, the

availability of alternative responses has been found to enhance or delay extinction. If no readily available alternative behaviors exist, extinction may not occur or may occur only following excessive unreinforced responses.

Although in the current study total extinction of nonattending behaviors may not be attempted nor desired, the elements which will increase or decrease the rapidity of reduction of this behavior should be considered.

The model under study makes no provisions (or exclusions) for informing the child of the change of conditions for reinforcement, but the teacher has been so informed. The schedule of reinforcement for both child and teacher has probably been intermittent, hence somewhat difficult to extinguish. The consistency of the teacher's application of reinforcement for attending and nonreinforcement for the incompatible responses and the child's reinforcement of the teacher by an increase in attending behaviors would be a key to rapid diminution of the former and increase in the latter. The responses involved for both child and teacher are generally small motor or verbal requiring little effort. Both responses have readily available alternative behaviors which should enhance diminution. The need level of the teacher would be assumed to be high as she has requested assistance. This may be a faulty assumption as Fein and Tyler (1971, p. 440) suggest

that "the teacher may actually be seeking ego support rather than specific help with the child"; and Berkowitz (1972, p. 30) points out "while educators have become increasingly open in asking for advice and assistance in dealing with children manifesting emotional disturbances or difficulties in learning, they too have not been unambivalent in their reactions toward clinicians."

The final behavior principle to be considered and perhaps the most crucial to the current study is generalization or transfer of learning from one situation to another.

It has indeed been assumed that in providing lectures, models and instruction at all levels of education that learning will be applied by the student. But few studies can be found which indicate under which conditions and in what situations application of learned principles will follow. A key concept appears just how alike a situation must be to be perceived by an organism as similar. Hilgard and Marquis (1961) list 17 studies demonstrating generalization of conditioned stimulus. Nordquist (1971) and Wahler et al. (1970) found that the reduction of aggressive behavior led to a reduction of bedwetting and stuttering without focus on the latter behaviors. Jones and Eimers (1975) found learning brought about through role playing was readapted by teachers to the classroom while Gardner (1972) in studying the transfer of learning

concluded that the knowledge of principles could be most effectively learned through lectures while their application was achieved more efficiently through role playing.

The transfer of learning from one situation might appear somewhat specific with the elements of this generalization not well understood.

CHAPTER 2

REVIEW OF RELATED LITERATURE

General Comparisons of Treatment Models

Comparative studies using the consultation model are few. Those available often appear attempts to prove the efficacy of one theoretical orientation over another, instead of well-defined studies designed to explore the conditions in which one method might prove advantageous. The lack of definition of which consultation model or type of consultation being compared further confuses the results of most studies in this area.

Anderson (1968), using a "client-centered counseling" approach, compared the efficacy of individual student counseling to the utilization of consultation with teachers in an effort to raise the "self-concept" of students. She included in her study 327 elementary school children in grades four, five, and six. She found individual counseling yielded higher self-concepts on her "Anderson Behavior Rating Scale" for fourth grade students, while teacher consultation appeared more effective with sixth graders. No difference in the two methods were found at the fifth

grade level. Self-concept measures were higher for groups receiving either consultation or counseling than for a control group receiving neither. She concluded, "Teachers play an important role in counseling programs and the effect of counseling with teachers may be as significant as the effect of counseling with students" (Anderson 1968, p. 285). A similarly oriented theorist studied the differential effects of play therapy, teacher group consultation, and play therapy-teacher consultation on 20 elementary school children identified as having "emotional problems." Her results as "based on a detailed behavior observation guide prepared by the writer" found a combination of play therapy and teacher consultation the most effective (Hume 1970).

Marchant (1971), in a doctoral dissertation, used a teacher behavior checklist to compare behaviors of elementary students before and after one of three treatments: Adlerian counseling, teacher consultation, and a combination of counseling and consultation. He found no treatment differences but all treatments were more effective than no treatment as per a control group. He noted some teacher dissatisfaction when they were not included in the change program (counseling only group).

Oldridge (1964) offered services to a school in two treatment methods. The first provided individualized counseling for children identified as exhibiting emotional

or behavior problems. This group of children received counseling but no teacher contacts were made. The second method provided consultants who worked with the teachers directly without student contact. He found that teachers preferred the latter form of services. Interestingly his control group of students provided with neither treatment made more positive behavior change than either treatment group. Kranzler (1968) in a much criticized article reviewed experimental results obtained in comparisons of counseling and consulting procedures used in elementary schools and concluded that neither counseling nor consulting has proven to be better than no counselor contact at all. Myers, Friedman and Gaughan (1975) criticized the above types of studies because they neglected to use directly observable behaviors as the criterion for effectiveness hence concluding that they add little to the knowledge of these methods.

The lack of clarity as to the efficacy of one methodology over another is certainly not surprising. Until a theoretical model can specify the principles and behaviors being used to treat specific problems, wholesale comparisons will do little but confuse the issues of what should or could be applied in which setting with what expectancy of success (Kranzler 1969).

Comparative Studies Implementing Behavioral Principles

Studies utilizing observable behavior change as criterion for judging success and failure of consultation methods are almost nonexistent prior to the last decade. Most of these recent studies have involved the instruction of operant techniques or behavior modification to a change agent utilizing lectures, video tapes, micro-counseling, in-service and on-the-job training.

Token Economies

Breyer and Allen (1975) systematically attempted to increase a teacher's positive responding to her first grade students. After obtaining a baseline, they introduced the first treatment, "Some Teaching Considerations" as quoted in Breyer and Pollack (1971), and a list of approval comments and specific instructions for their use. Some increase in the frequency of praise comments were noted toward students and a corresponding decrease in negative comments, but it was not until a second intervention, a token reward system, was implemented along with the previous training, was improvement noted by a substantial increase of positive praise approval comments with a minimum of negative comments by this teacher.

After obtaining a base rate of disruptive behaviors for 7 of 21 children in a second grade class, O'Leary et al.

(1969) introduced successively several treatments: rules, educational structure, teacher praising appropriate behaviors while ignoring disruptive behavior. They found none of these successful, thus they introduced a token system which did produce a decrease in the frequency of disruptive behaviors. It was extremely interesting to note in this study that although the teacher was instructed in the use of praise for appropriate behavior and requested to use it, her frequency of this behavior increased only negligibly during that phase of treatment while during the final phase of treatment, "token phase," her verbal praise increased appreciably confounding any results obtained in this study.

Role Playing

In comparing two approaches to teaching behavior modification to institutional attendants, Gardner (1972) found that the knowledge of behavior modification principles as measured on pencil paper tests were most effectively taught through lectures while the ability to apply behavior modification was best taught through role playing. Jones and Eimers (1975) also found role playing a successful mode through which to teach two third-grade teachers techniques of providing feedback, and negative-positive reinforcement in the reduction of "inappropriate talk" in their classrooms. Success was measured by comparing baseline behaviors of class members with post-training behaviors.

Feedback

Cooper, Thomson and Baer (1970) in a multi-unit, multi-treatment design experiment trained two teachers to attend to appropriate child responses by receiving feedback which included definitions of appropriate child responses. The teacher's frequency of attending to appropriate child responses and a decrease in her frequency for attending to inappropriate responses were recorded resulting in improved responses by the children.

Pomerleau, Bobrove and Smith (1973) studied the effects of feedback and monetary rewards upon aides' use of suggested techniques for patient improvement in a mental hospital. They found that feedback, cash awards, and increased supervision, either used singularly or in combination with these aids, increased their amounts of suggested appropriate behaviors towards patients while aide-psychologist consultation made no improvement. Payan, Boozer and Morris (1970) found that initiation of a feedback system did increase the daily use of operant training methods by non-professional personnel in a state institution for retarded children.

The use of teachers recording behaviors as a feedback method was undertaken by Hall et al. (1971) who conducted six studies successfully utilizing the teacher as experimenter, recorder. He concluded that the importance

of the studies were not to demonstrate that "talking out" behavior in children could be modified by the systematic application of reinforcement procedures (indeed this had been earlier demonstrated by Hanley, Wolf and Hall 1970), but their importance lay in the fact that teachers could gain information as to their behaviors and carry out applied research in the classroom at the same time that they modify childrens' behaviors.

Good and Brophy (1974) were also able to alter first grade teachers' behavior toward targeted students by presenting teachers with information about their previous interaction with the targeted children. A similar finding using parents as recorders in modifying their own children's appropriate and inappropriate behaviors came from Herbert and Baer (1972). Of the three parents used in the study, two were able to alter their attention levels toward their child's appropriate and inappropriate behaviors. The third was not. They concluded that "there are instances in which self-recording may function as an effective and economical parent-training technique for effecting improvements in child behavior" (Herbert and Baer 1972, p. 139).

Cueing

Kazdin (1973) and Kazdin and Klock (1973) found simply telling the teachers what to do and measuring their responses was effective in increasing the verbal and

nonverbal approval statements these teachers made toward their students. Three elementary school teachers with from two to four years' teaching experience were taught to increase their use of praise for students' attending behavior by a systematic application of experimenter's instruction, feedback, and feedback plus social praise (Cossairt, Hall and Hopkins 1973). Becker et al. (1967) measured behaviors of two children from each of five classrooms and successfully taught by instructions teachers to ignore disruptive behavior and praise appropriate behavior.

Surratt, Ulrich and Hawkins (1969) were able to alter the behavior of four first-grade students by using a fifth grade student as a behavioral engineer and telling the older student what behaviors to emit.

Further success has been reported in altering the behavior of the consultee by Loebler (1971) using promise of reward, Iwata and Bailey (1974) using tokens and reward, Woolfolk and Woolfolk (1974) using instruction, and Goodwin, Garvey and Barclay (1971), Wagner (1973), and Ivey (1971) using video tape and micro-counseling.

Modification of Attending Behaviors

As indicated, some of the previous studies have used frequencies of behaviors described as nonattending to measure success or failure of consultation (Jones and Eimers 1975; Cooper, Thomson and Baer 1970; O'Leary et al.

1969; Hall et al. 1971; Hanley et al. 1970)--other researchers have focused attention on these same behaviors in an effort to understand principles of learning and identify situations that may relate to learning problems.

Werner and Simpson (1974) studied the effects of academic performance and attention to task behaviors of 18 first grade students who had been determined by their teachers to be "well-adjusted, moderately adjusted, or poorly adjusted." They found significant differences among the three groups in attention to task but found little variances in these students behaviors in traditional versus open classrooms. Grobe and Pettibone (1975) found that the pace of instruction had an influence upon individual attention and nondisruptive inattentive behavior but had no effect upon disruptive inattentive behavior or "comfortable nervous behavior." Scott and Bushell (1974) in a review of literature concluded that the more positive interactions a teacher has with an individual child the less that child will be "off-task."

Lahaderne (1968) found school achievement at grade six was related to attention. Cobb (1970, 1972) made a similar observation for fourth and first grade pupils. Samuels and Turnure (1974) studied the differential affects upon attention and reading among first grade girls and boys. They found girls to be more attentive than boys and to have

higher reading scores. Among the boys attention was also found to be significantly related ($p > .01$) to word recognition scores. McKinney et al. (1975) after a longitudinal study of 90 second grade students concluded that overt classroom behavior is an important determinant of academic progress but that patterns of classroom behavior may have a greater impact on school learning at certain times during the academic year. Forness, Guthrie and Nihira (1975) found children rated as high risk for academic success at the kindergarten level exhibited observable behavior differences than peers rated by teachers and tests as non-risk students. According to these researchers the high risk children exhibited less eye contact with the teacher, task materials and were off task, e.g., talking to peers without permission, speaking out of turn, hitting classmates, and throwing objects more than their peers. Soli and Devine (1976) examined the classroom behavior of 312 third and fourth grade students during math and verbal skills instruction and found different behaviors significantly correlated with achievement. The behaviors best predicting total high achievement were positive peer and teacher interaction and an absence of self-stimulating activity and nonattending behaviors. The latter behavior, nonattending was more associated with low achievement in math than with low achievement in verbal skill areas.

Ferritor et al. (1972) found no relationship between attending and academic performance while Harris (1976) concluded that operant conditioning techniques can be used to increase attention but the increase may not result in academic improvement.

Hall, Banyan, Rabon and Broden (1968) and Hall, Lund and Jackson (1968) were able to decrease nonattending and increase study behavior by varying teacher attention to the student, lengthening the break period and providing classroom games as reinforcers.

A study by Schutte and Hopkins (1970) increased five kindergarten students' ability to follow instructions by systematically increasing the teacher's interaction with the students while they were following instructions. Harris, Wolf and Baer (1966) in a series of studies using preschoolers further demonstrated the effectiveness of contingent teacher attention in modifying behavior and attending problems. Patterson and Brodsky (1966) in a single subject study decreased aggressive behavior in a five-year-old child removed from kindergarten through operant conditioning methods.

Further successes utilizing teachers to change disruptive behaviors (Thomas, Becker and Armstrong 1968; McAllister et al. 1969; Okovita and Bucher 1976) and attending behaviors (Walker and Buckley 1968; Broden et al.

1970; Haubrich and Shores 1976; Thomas et al. 1968; Madsen, Becker and Thomas 1968) offers additional support for both the consultation approach and the use of operant conditions in the modification of the attending behavior of students.

But Harris (1976, p. 109) commented after a review of studies, "the data reported support the premise that operant conditioning techniques aimed at increasing attention have been successful in increasing attention" but cautioned that academic improvement has not been proven to follow simple increases in attending behaviors.

Transfer of Principles Learned in Consultation

Although a few researchers attempted to study the transfer of principles learned through various instructional programs (Gardner 1972; Merbaum and Lukens 1968; Morice 1971; Breyer and Allen 1975), to applied setting and others have evaluated to varying degrees the effects of the application of an operant program upon other behaviors of the individual child (Nordquist 1971, Wahler et al. 1970) or other children in approximately to the modified child (Broden et al. 1970, Kazdin 1973, Stotland 1969) studies measuring the transfer of learned operant principles to other children or situations are virtually nonexistent. The only available attempt was made by Gladstone and Sherman (1975). In this unique study the researchers assigned seven high school

trainees the task of teaching two retarded children. One child in each pair was to be taught "bring ball," the other child "sit down" and "come here" (tasks that none of the children could previously perform). Behavior modification techniques were instructed and demonstrated through video taped modeling, rehearsal, corrective feedback and praise in teaching the trainees to teach the "bring ball" concept. Following instructions all trainees were able to apply the techniques learned in teaching the "bring ball" concept to the other concepts and successfully taught their assigned children "sit down" and "come here" without further instruction. Gladstone and Sherman (1975, p. 169) noted:

Despite the increasing use of behavior-modification techniques, experimental demonstration of effective programs to teach such techniques are scarce. An effective training program should accomplish at least two things. First, teach a person to use specific procedures to modify or teach behavior that he or she could not teach before training. Second, establish a set of skills sufficiently general to allow the person to teach different behaviors to different people . . . current studies do not demonstrate that particular training procedures changed trainee behavior or that trainees acquired generalized skills as a result of training.

Summary

In summary previous research comparing consultation models and/or these models with other methods of intervention have remained at the theoretical level failing to accurately describe the approach used or not utilizing measureable success criteria.

Studies which conform to higher standards of research have generally used operant techniques through various consultation approaches and demonstrated a fairly high degree of success in decreasing behaviors referred to as nonattending, although the success rate is far from a 100 percent and appears to vary with the extent and form of consultation provided, teacher cooperation and operant procedure used.

It would seem reasonably well-founded in the research reviewed to expect a decrease in nonattending behaviors with the introduction of nonreinforcement for nonattending behaviors accompanied by the systematic use of verbal and nonverbal reinforcement for attending behavior.

Of question is whether a brief interview with a teacher will increase that teacher's systematic use of these principles toward a targeted child and whether these principles will then be transferred to another child identified as having a similar problem.

CHAPTER 3

METHOD

In conjunction with Tucson School District Number One, a public school in a lower socioeconomic area of Tucson, Arizona, was chosen as the study site. The school contained 12 classes of kindergarten through sixth grade. The ethnic background of its students was representative of the surrounding community with a high percentage of Spanish-speaking students.

Subjects

From the population of this school a total of three teachers and nine children were chosen for use in this study.

Teachers

An initial presentation was made to all teachers of the school explaining that an attempt would be made to increase attending behaviors of selected children for whom they expressed concern and that these behaviors plus teacher-student interaction would be observed and recorded. Nine teachers volunteered to take part in the study.

Of the nine teachers who volunteered, four were excused because they utilized a combined team approach in which the students changed programs every four to six weeks. Such change during the course of the study would undoubtedly have introduced variables which could not have been controlled. Two other teachers were excluded as they were teaching in an adaptive education resource program and their classes were quite small and could not be said to approximate the typical classroom. The three remaining teachers were all young, female teachers with from two to five years' teaching experience. All three were bilingual (English/Spanish). Two of the teachers taught first grade; the third teacher had a second grade class. The classes were composed of 23 students between the ages of five years, seven months to seven years, ten months. The teaching methods utilized in each of the three classes were similar in that skills instruction was provided in centers.

Children

The nine children used in this study were all enrolled in public school. They reflect the socioeconomic and ethnic background of the surrounding community.

Ted was referred by his teacher for "continually being out of his seat, wandering around, hitting and disturbing others." He was an active, well-developed

six-year-old black child. His academic skill level was slightly below average for a first-grade student.

Vincente was referred for "cursing, hitting and kicking others, walking around." He was a small Mexican-American child of seven years. In the classroom, he often spoke in Spanish. His academic level was also described as "below average."

Janet was chosen by the experimenter as she appeared to exhibit a high frequency of walking around, talking, and watching other children. Her estimated skill level in all basic subject areas was considered well below average. Janet was the only Anglo-American child included in this study. She was also six years of age and in the first grade.

Javier was referred by his first grade teacher for "daydreaming, talking, singing, looking around the room." He was of Mexican-American descent but spoke only English in the classroom. Javier was quite small for his six years. Although a very alert and verbally intelligent child, Javier was described as near the bottom of the class in academic skills.

Donald, also six, was referred by his first grade teacher for "constantly fidgeting, being out of his seat, making noises and banging his head." He was of Mexican-American descent and spoke both English and Spanish with

equal facility. Because of his extremely low academic performance this child was also referred for a complete psycho-educational evaluation. The results of that evaluation found normal intelligence and severe academic deficits. According to his teacher this student began making remarkable academic improvements from the time he was first referred for use in this study and the termination of the study.

Betty was chosen by the experimenter as she was observed out of her seat, constantly talking and often hitting and disrupting other students. She was a black six-year-old of average physical stature. Throughout the course of the study her behavior was found to be the most inconsistent of all the children observed. Some days she appeared extremely alert and actively attended to instructions; other days found her almost continually engaging in the behaviors for which she was chosen and still other times she appeared physically tired and would lay with her head on her desk for long periods of time almost oblivious to instruction. She was also referred by her teacher for a psycho-educational evaluation shortly after the study had begun. The reason cited by the teacher for the referral was mood changes and behavior problems.

Dennis, a black seven-year-old, was of average physical stature. He was referred by his second grade

teacher for "constantly disrupting the group, not following instructions, moving around." Academically he was described as below average.

Sammy was a rather small seven-year-old of Mexican-American descent. He often spoke in Spanish especially when communicating with peers. He was referred by his second grade teacher for "tapping and talking to other students, fidgeting, moving around and ignoring instructions." His academic skill level was noted by his teacher as near if not at the bottom of the class. Toward the end of the study this youngster was placed for part of the day in a first-grade classroom because of his inability to handle second-grade work.

Manuel, also seven, was an experimenter chosen child as he was observed out of his seat, talking, hitting and disrupting other students. Manuel was a rather dark complexioned, well dressed Mexican-American child who spoke both English and Spanish. His academic skills were described as average to above average.

Observation and Recording Procedures

Two observers were selected and trained for use in this study. The training consisted of review and discussion of the behaviors to be studied, hypothetical problems that might arise, and direct classroom training and practice in recording. Classroom training was of three weeks' duration

during which time the observers recorded selected children and teacher behaviors in a neutral classroom (not one of the study chosen classrooms), compared their reliability and discussed methods for improvement. The third week of training was in the study selected classrooms to allow the observers to become familiar with the nine children to be observed and to reduce the possibility of teacher or student behavior change with the introduction of an observer in the classroom.

The primary observer would enter each of the classrooms during reading instruction. These daily observations took place between 8:50 a.m. and 10:30 a.m. The observer would seat himself at the side of the classroom in such a position that all three children to be observed in that classroom were clearly visible. After allowing time for the class to refocus attention away from the observer and having determined the instructional task for each of the three children the observer would engage a remote control switch that operated a small cassette player carried in a briefcase. Through an earphone worn by this observer, instructions and a timed sequence for measuring behaviors of these children was transmitted, a whole interval time sampling recording procedure was used. The sequence included five seconds of silence in which behaviors of one child and the teacher's behavior toward that child were

observed. This observation terminated when a five-second tone began. Behaviors for both child and teacher were recorded during that tone. A second five seconds of silence then signaled observation of the second child and teacher's behavior toward that child with recording occurring with the resumption of the five-second tone. A third silence and tone of similar length was used for observation and recording of behaviors for the third child and the teacher's behavior toward that child. The entire sequence was repeated 30 times in each classroom for a total observation time of two and one-half minutes for each child per day (see Appendices B and C).

Interobserver agreement was measured weekly by placing both the primary observer and a calibrating observer in the same classroom and using dual earphones from a single cassette. The days for agreement assessment were randomly chosen.

Methods utilized to determine interobserver agreement for each of the three classes and both observed behaviors remained stable throughout this study (see Tables 1 through 10).

Child's Attending or On-task Behaviors Recorded

1. Child is facing the teacher when instructions, lectures, board writing or teacher demonstrations

Table 1. Interobserver agreement for attending behavior--
classroom A.

Observation	Interval by Interval Agreement	Scored Interval Agreement	Unscored Interval Agreement	Phi	Kappa
1	.96	.93	.93	.93	.95
2	.97	.94	.96	.95	.96
3	.96	.93	.93	.93	.95
4	.96	.94	.92	.93	.95
5	.94	.91	.88	.89	.94
6	.98	.96	.94	.95	.95
7	.97	.95	.95	.95	.97
8	.94	.92	.86	.88	.94

Table 2. Interobserver agreement for teachers' approving behavior--classroom A.

Observation	Interval by Interval Agreement	Scored Interval Agreement	Unscored Interval Agreement	Phi	Kappa
1	1.0	1.0	1.0	1.0	1.0
2	1.0	1.0	1.0	1.0	1.0
3	1.0	1.0	1.0	1.0	1.0
4	1.0	1.0	1.0	1.0	1.0
5	1.0	1.0	1.0	1.0	1.0
6	1.0	1.0	1.0	1.0	1.0
7	1.0	1.0	1.0	1.0	1.0
8	1.0	1.0	1.0	1.0	1.0

Table 3. Interobserver agreement for attending behavior--
classroom B.

Observation	Interval by Interval Agreement	Scored Interval Agreement	Unscored Interval Agreement	Phi	Kappa
1	.94	.92	.84	.89	.94
2	.93	.89	.86	.86	.93
3	.94	.88	.90	.89	.94
4	.97	.95	.90	.92	.92
5	.96	.93	.89	.91	.95
6	.96	.95	.78	.85	.95
7	.97	.96	.84	.89	.97
8	.93	.93	.44	.58	.93

Table 4. Interobserver agreement for teachers' approving behavior--classroom B.

Observation	Interval by Interval Agreement	Scored Interval Agreement	Unscored Interval Agreement	Phi	Kappa
1	1.0	1.0	1.0	1.0	1.0
2	.98	.50	.98	.70	.99
3	1.0	1.0	1.0	1.0	1.0
4	1.0	1.0	1.0	1.0	1.0
5	1.0	1.0	1.0	1.0	1.0
6	1.0	1.0	1.0	1.0	1.0
7	1.0	1.0	1.0	1.0	1.0
8	.99	.90	.98	.94	.99

Table 5. Interobserver agreement for attending behavior--
classroom C.

Observation	Interval by Interval Agreement	Scored Interval Agreement	Unscored Interval Agreement	Phi	Kappa
1	.96	.90	.93	.91	.95
2	.96	.88	.92	.91	.95
3	.98	.95	.96	.96	.98
4	.98	.94	.97	.95	.98
5	.98	.89	.98	.93	.98
6	.94	.92	.84	.87	.94
7	.99	.98	.98	.98	.99
8	.93	.90	.84	.86	.93

Table 6. Interobserver agreement for teachers' approving behavior--classroom C.

Observation	Interval by Interval Agreement	Scored Interval Agreement	Unscored Interval Agreement	Phi	Kappa
1	1.0	1.0	1.0	1.0	1.0
2	1.0	1.0	1.0	1.0	1.0
3	1.0	1.0	1.0	1.0	1.0
4	1.0	1.0	1.0	1.0	1.0
5	1.0	1.0	1.0	1.0	1.0
6	1.0	1.0	1.0	1.0	1.0
7	1.0	1.0	1.0	1.0	1.0
8	1.0	1.0	1.0	1.0	1.0

Table 7. Mean children attending behavior with single observer present.

	Phase I	Phase II	Phase II
Ted	35.90	62.93	75.41
Javier	54.65	71.29	80.36
Dennis	31.93	63.85	64.72
Janet	40.30	62.99	65.63
Donald	56.18	71.01	84.76
Sammy	26.13	26.62	65.21
Vincente	44.30	71.47	78.45
Betty	49.54	51.30	71.44
Manuel	27.80	33.70	30.51

Table 8. Mean children attending behavior with two observers present.

	Phase I	Phase II	Phase III
Ted	50.00	61.29	74.12
Javier	59.96	79.97	97.90
Dennis	33.91	65.80	--
Janet	43.30	48.26	31.62
Donald	59.97	84.97	85.40
Sammy	35.30	61.65	61.65
Vincente	48.30	47.30	68.30
Betty	55.71	63.86	91.65
Manuel	34.97	47.45	66.65

Table 9. Mean teacher approving behavior with one observer present.

	Phase I	Phase II	Phase III
Teacher A	1.19	6.51	13.92
Teacher B	3.25	9.65	11.73
Teacher C	2.24	10.24	14.75

Table 10. Mean teacher approving behavior with two observers present.

	Phase I	Phase II	Phase III
Teacher A	0.00	5.59	14.17
Teacher B	2.09	11.10	13.88
Teacher C	5.03	9.98	8.07

are being conducted (if another student has been assigned the function of teacher, e.g., "show and tell," then for the purpose of this definition, that child becomes the teacher), and the child is not engaging in gross motor activities and is verbally quiet unless such activities are demanded by the instructions, lectures, board writing or teacher demonstration. For example, if the teacher is requesting chorus reading, singing or an activity such as "make a circle in the air," such behaviors would be considered as attending behaviors unless accompanied by behaviors described as "nonattending behaviors" listed below.

2. Child is following instructions as given by the teacher. If the instructions involve verbal or gross motor activities, such as the above described example "make a circle in the air," the child must be attempting this activity and this attempt must be unaccompanied by behaviors described as "non-attending" listed below.
3. When doing seat work, the child must have the assignment on his/her desk and be facing that assignment. In activities involving both board and seat work, e.g., "copying a sentence from the board," face contact shall also include the board

or second source of the assignment. If the assignment involves written work, the child must have a pencil/pen in hand. If the assignment involves silent reading or thinking activities, lip movement and vocalization of written work or thought shall be considered attending behaviors if they cannot be heard from an excess of ten feet from the child. Counting on fingers, nose, chin, or marks on a paper or desk during mathematical computation would be considered attending behaviors. And the above behaviors are unaccompanied by behaviors listed below termed "nonattending behaviors."

4. When participating in group assignments or assigned group activities, verbal and motor responses directed toward group members or the activity should be considered attending behavior unless accompanied by below listed behaviors termed "nonattending behavior."

Nonattending Behaviors

Unless specifically instructed by the teacher, or unless qualified by statements in parentheses, the following behaviors are considered "nonattending behaviors."

1. Gross motor activities:
 - Out of desk or chair
 - Moving desk or chair

Turning around in desk or chair

Throwing or propelling objects

Hitting, pushing others

Spitting

Leaning more than 30 degrees to either side of
desk or chair

Standing in or on desk or chair

2. Fine motor activities:

Tapping pencil, fingers or feet loud enough to be
audible to the observer at a distance greater
than ten feet

Rocking in desk or chair so that a noise is made
which is audible to the observer at a distance
greater than ten feet

3. Verbal behaviors:

Talking, reading, singing, laughing, without per-
mission (if the teacher or another student has
read or told something humorous, permission for
laughter would be unnecessary but if laughter
continues beyond the time it has been signalled
to terminate by the teacher or beyond the time
most of the students have terminated laughter,
this would be considered nonattending).

Screaming, crying, making animal, car, train or
other noises

4. Inactive behaviors:

Sleeping or lying with head on desk

Staring out the window, door, at the observer, another object, or simply staring into space (in the event of a disruption, e.g., someone enters the room, a loud noise or fight occurs, score this as nonattending behavior if the child continues to focus attention on this event for more than one-half of the observation interval, five seconds, if in doubt score as nonattending behavior).

Drawing pictures, coloring, making airplanes or doing task other than what has been assigned by the teacher.

Teachers' Approval Behaviors Recorded

1. Verbal approval or praise:

Any statement made to the student that his behavior meets with the teacher's approval, e.g., "that's right," "now you've got it," "that's what I like," "you certainly please me," etc. Any statement with adjectives denoting positive regard, e.g., good, tremendous, fantastic, etc.

2. Nonverbal approval:

Smiling toward the student (student must see the smile), touching the student, placing something

denoting approval on the student's desk, e.g., gold star, token, etc. Any statement that reflected irony, satire, or was made in a voice tone indicating displeasure, regardless of verbal content, was not recorded as an approval statement.

The observers were unaware as to which child was the consultation, transfer, or control subject and with which teacher, time or type of intervention had or was occurring.

Procedures

Each teacher was given a referral form (see Appendix A) and was requested to refer two or three children who exhibited difficulty attending, "failure or inability to attend to instruction, child daydreams, talks, walks around, sings, laughs, or engages in behaviors that are seriously detrimental to his ability to receive instruction." Two of the teachers referred three children, the third teacher referred two.

From each group of teacher-referred children, one was randomly selected and assigned the "consultation targeted child." This would be the child upon whom consultation and treatment would focus. A second child was

randomly chosen from each group of teacher-referred children and assigned the "transfer targeted child."

This child would not be mentioned during initial teacher consultation and intervention in an effort to assess the extent if any of the teachers transfer of the treatment program toward this child. A third child who appeared to exhibit a high frequency of behaviors described as non-attending but had not been referred by the teacher, was chosen in each of the three classrooms and designated as the control child.

Throughout baseline the teachers were unaware of which children and what behaviors were being observed and recorded. Following the initial intervention all teachers assumed although not so informed that only the consultation targeted child and her behavior toward that child was being recorded.

Baseline

Baseline attending behaviors were recorded during reading centers for each of the nine children selected for the study. Teacher approval behaviors were measured simultaneously during the observation of the children. Baseline periods of 11 to 25 days were gathered.

Intervention Schedule

No fixed schedule of intervention introduction was predetermined. Intervention was made in each instance after a stabilization of behavior had occurred. The first intervention with Teacher A followed 11 days of baseline. A brief contact was made with Teacher A between the 16th and 17th day. The initial intervention with Teacher B occurred on the 20th day. Intervention I with Teacher C was begun on the 25th day and followed by a brief contact prior to observation and recording on the 28th day. The final interviews, Intervention II was conducted on the 30th day with Teacher A, the 33rd day with Teacher B, and the 36th day with Teacher C. The entire study consisted of 43 days not including the three-week observer training period.

Intervention I

Intervention was introduced independently and at varied days for each of the three teachers. The initial intervention for each teacher was a preestablished interview of approximately 500 words (the exact length of the interview varied as interviewer statements reflected teacher comments and specific child behaviors--see Appendix D). The interview was a composite taken from Bergan (1977). This interview was designed to identify in specific terms problem behaviors exhibited by the child, gather

information on the frequency, antecedent, situational and consequential conditions of the behavior, identify a target goal consistent with the teachers' desires, to present a plan designed to increase attending behavior in the targeted child and lastly to develop with the teacher a method to record the child's behavior.

With two teachers who did not demonstrate observable behavior changes a second interview of 63 words (see Appendix E) was conducted, again as per the consultation model of Bergan (1977).

The focus of Intervention I was to increase the teachers' use of verbal and nonverbal reinforcement toward the targeted child when that child exhibited attending behaviors.

Intervention II

A second intervention was conducted following a demonstrated increase in teacher approval behaviors. This intervention, termed problem evaluation, was an interview of approximately 160 words (see Appendix F). Its purpose was to determine with the teacher the implemented plans success and to promote transfer of the program, if it had not already occurred, to the transfer targeted child.

CHAPTER 4

RESULTS

Graphic records of teacher approval toward and child attending behaviors of the consultation, transfer and control children are found respectively in Figures 1, 2, and 3.

Classroom A

During the 11 days of baseline Teacher A's approval behavior toward all study children was somewhat low ($X = 1.00$). Following Intervention I (I_1) her approval remarks toward the consultation targeted child rose to a mean of 18.58 percent and remained stable throughout the study. Her approval behavior toward the transfer targeted child also increased but this increase was not substantial (.62 percent prior to I_1 , 1.89 percent following I_1). Following Intervention II (I_2) Teacher A's approval behavior toward the transfer targeted child, Vincente, increased to a level commensurate with the consultation targeted child. No significant change was noted in Teacher A's behavior toward the control child, Janet, throughout the study.

Ted, the subject of the consultation in Classroom A had a mean attending behavior of 37.31 percent during the

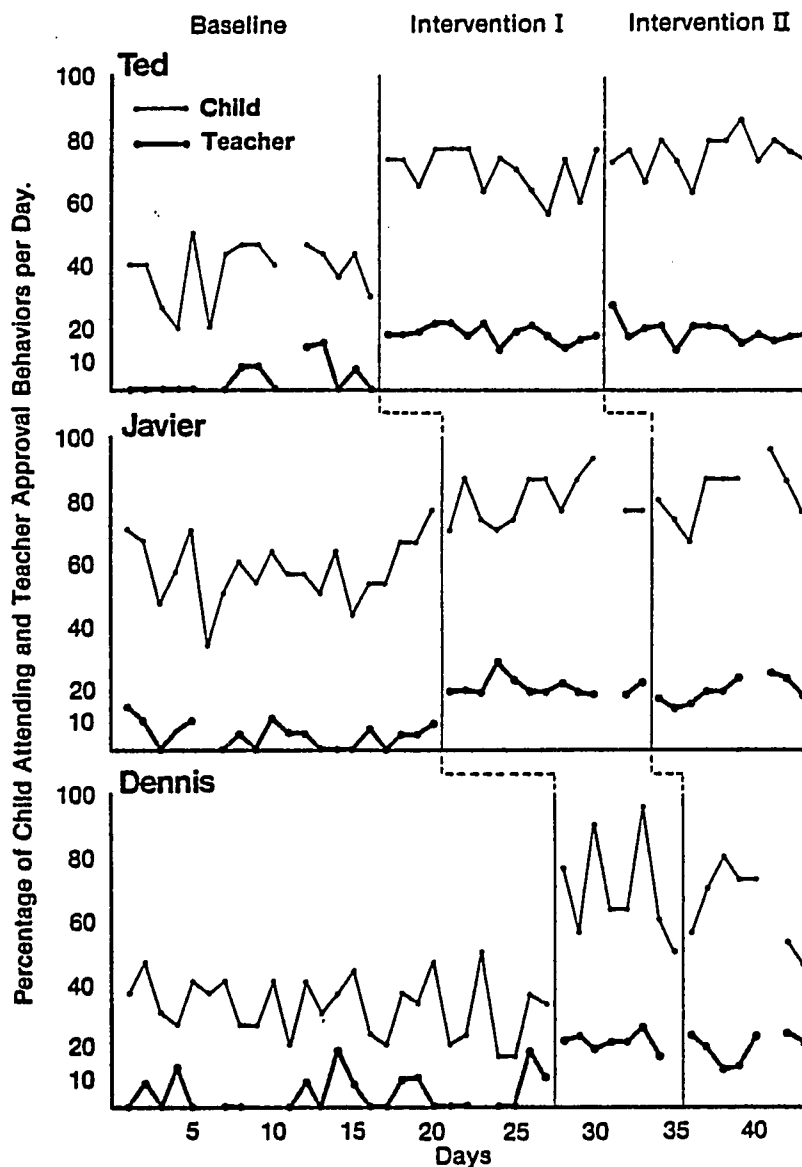


Figure 1. Attending behavior and teacher approval behavior toward consultation targeted children--missing data points reflect student or teacher absence.

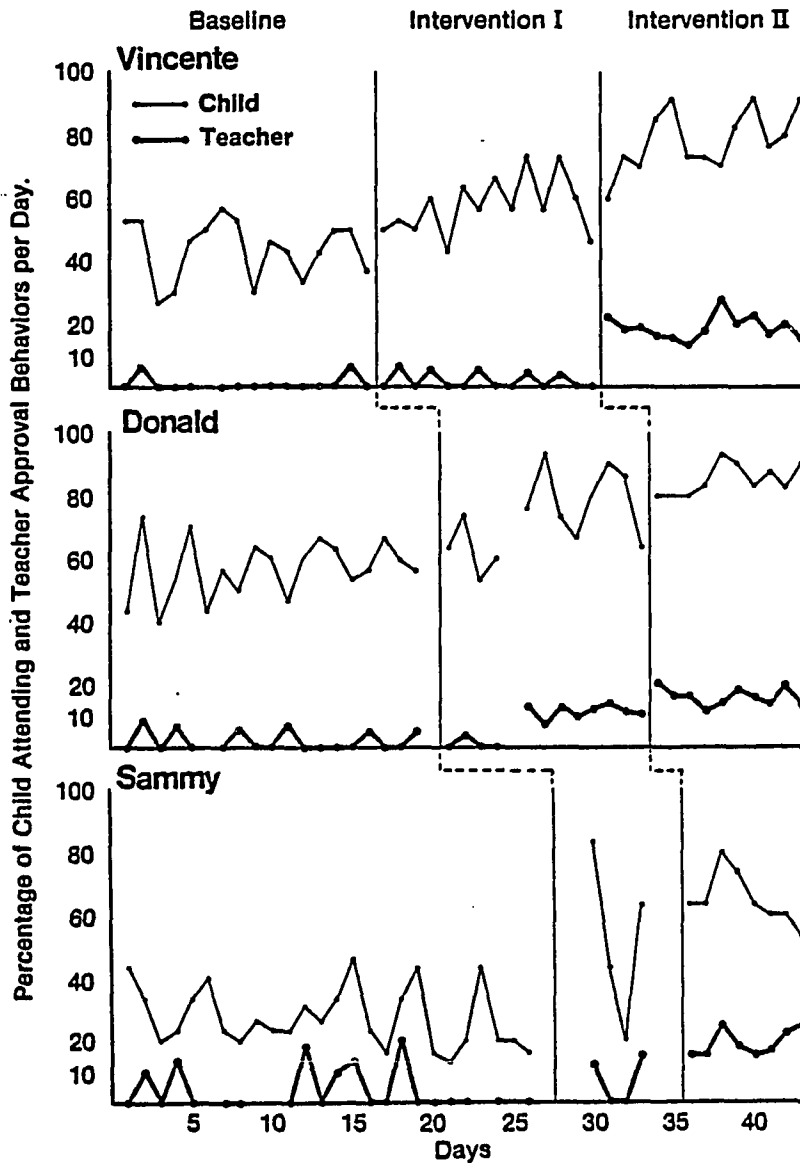


Figure 2. Attending behavior of and teacher approval behavior toward transfer targeted children--missing data points reflect student or teacher absence.

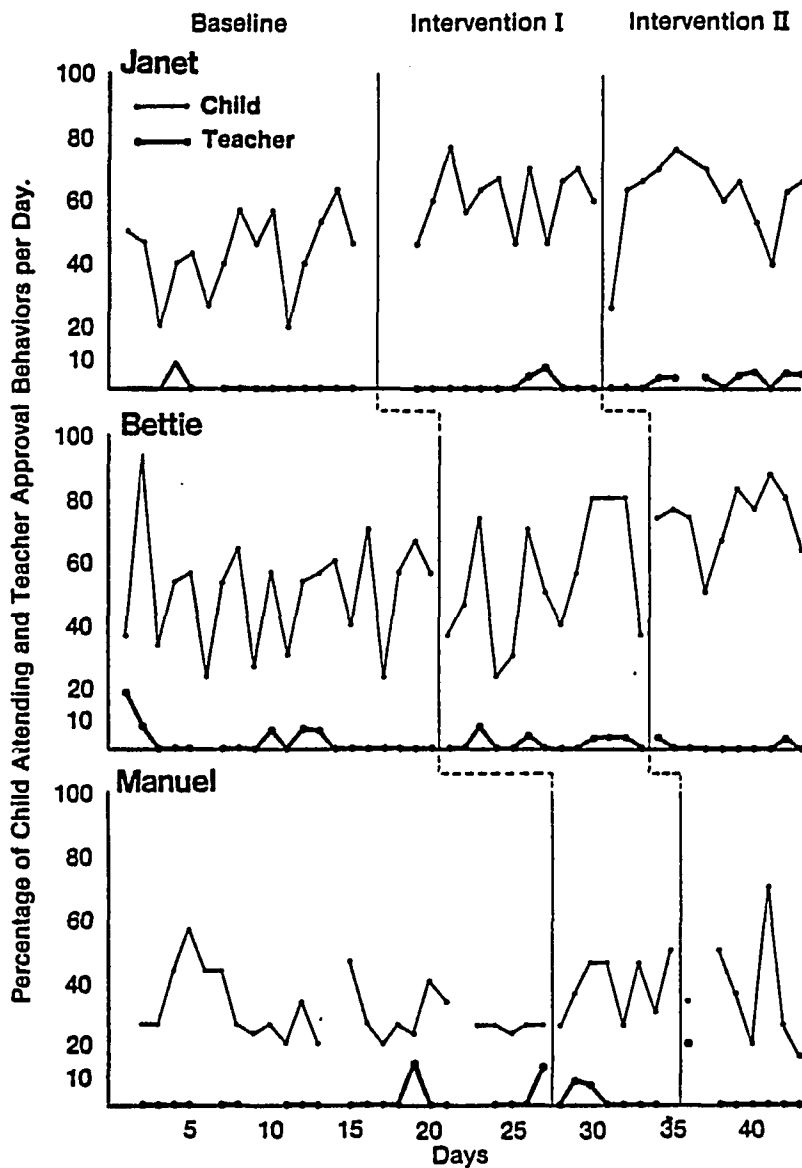


Figure 3. Attending behavior and teacher approval behavior toward control children--missing data points reflect student or teacher absence.

baseline. Following intervention his attending behavior increased to an average of 72.80 percent.

Vincente, the transfer targeted child in Classroom A, demonstrated a small increase in attending behavior from a baseline mean of 48.96 to a mean of 57.82 following I_1 . After I_2 in which program transfer to Vincente was suggested his attending behavior increased to 76.89 percent.

Janet, the control subject in Classroom A, did demonstrate a slight increase in attending behaviors throughout the study but these increases were less than those found for either the consultation or transfer targeted children (see Figures 1, 2, and 3).

Classroom B

Teacher B's average percent of approval behavior during baseline was higher than either Teacher A or Teacher C (3.1 percent). Her referred students also exhibited greater levels of attending behaviors than did either of the other classes.

Following I_1 which necessitated only one contact this teacher increased her baseline approval behaviors toward the consultation targeted child from 4.84 to 19.78 percent. She also increased her approvals for attending toward the transfer targeted child, Donald, from 2.20 to 8.13 percent. This latter increase was made without mentioning this child during consultation. Following I_2

in which a program transfer to Donald was suggested she made additional increases in approval behaviors toward that child. No increases in approval behavior by Teacher B toward the control child, Betty, were observed during this study.

Both the consultation targeted child and transfer targeted child demonstrated increases in attending behavior following I_1 . An 11 percent mean increase in attending behavior was also noted for Betty, the control child in this study although no increase in reinforcement in the form of teacher approvals for attending behavior was present. It was also found that Betty's pattern of attending behavior was the least stable of all observed children (see Figures 1, 2, and 3).

Classroom C

Teacher C increased her baseline approvals from a mean of 3.45 prior to I_1 , to a mean of 20.46 toward the consultation targeted child, Dennis, following the initial consultation interviews. No significant increase in verbal or nonverbal approvals toward other than Dennis were recorded until I_2 . Following the problem evaluation interview her approval behaviors toward both the consultation and transfer targeted children were comparable. No increase toward the control child was noted for Teacher C throughout this study.

Dennis, the consultation targeted child, increased attending behaviors from a baseline average of 32.23 to a mean of 64.63 following I_1 . The transfer targeted child showed an increase in attending behaviors prior to I_2 . This situation corresponded in time to a schedule alteration in which he was removed from his regular classroom and placed part of each day in a different classroom. Observation continued to occur in Classroom C during the time he was there. Following an increase in teacher approvals which corresponded to I_2 , Sammy did demonstrate a stable increase in attending behaviors.

No increase in recorded behaviors was found for Manuel, the control child in Classroom C (see Figures 1, 2, and 3).

CHAPTER 5

DISCUSSION

The consultation approach utilized in this study was somewhat unique in that interviews were conducted with classroom teachers in an effort to alter attending behaviors in referred children. This method involved no teacher training nor did it place the teacher in a subjugate role. Indeed it was emphasized that it was the teacher's role to initiate the treatment plan, to monitor results and to evaluate the program's success.

The method proved successful in its first and perhaps most important role from the applied or practical setting. All teachers following intervention were able to adequately implement a behavior change program which in turn reduced the problem behaviors of the consultation targeted children. The ease and time involved in this change was substantially less than most previous training programs and required no outside source other than the school psychologist who conducted the interviews. Some variance among the three teachers was indicated in both their ability to implement the program and the percent of

increase in their application of reinforcers. While one teacher required only an initial interview, an additional contact was necessary for the other two teachers.

A second major outcome and certainly one expected in light of previous research and literature was the effects of reinforcement upon behaviors described in this study as attending. Each child who received verbal and nonverbal reinforcement for attending behaviors increased these behaviors in an amount corresponding to the reinforcement. Again, this could hardly be considered enlightening from previous knowledge of these behaviors but often this principle appears forgotten in the search for better techniques, materials, medications, etc., in instructing the disruptive, "hyperactive," off-task or nonattending child.

A third major finding and perhaps one not clarified in this study is the transfer effect by the consultee of learned behavioral principles toward the same child in differing situations or a different child in a similar situation. In only one of the three teachers was an observable amount of transfer indicated without a specific statement on the part of the consultant suggesting transfer of the intervention plan to another child referred by the teacher for the same basic behavior difficulties. Consultation interviews further suggested that at least one of the teachers was unable to implement the plan upon the

consultation targeted child in situations other than the classroom. This teacher after agreeing that the targeted child's disruptive behaviors had decreased to a negligible degree in the classroom then stated that she did not know what to do with him as he continued to be extremely disruptive in lunch and recess lines. Generally the assumption that once a principle has been learned it can or will be reapplied appeared to be at best questionable in this study.

The implications of this study stress the obvious need for additional research and understanding of the effects of verbal interaction between the consultant and consultee. Consultation obviously can be a very successful tool in assisting teachers in managing and instructing children but to date knowledge of the method is extremely limited and bears much exploration in the applied setting.

APPENDIX A

REFERRAL FORM (CONSULTATION RESEARCH)

Teacher Date School Address

Number of years teaching experience _____

Behaviors being studied:

Failure or inability to attend to instruction,
child daydreams, talks, walks around, sings,
laughs, or engages in behaviors that are
seriously detrimental to his ability to receive
instruction.

Children exhibiting excesses of the above described
behaviors:

Teacher signature

Date

Principal signature

Date

APPENDIX B

OBSERVER RECORDING PROCEDURE

- I. The observer enters the classroom and seats self at the rear or side of the room. (The observer should be at between 45 degrees to the front and 45 degrees to the rear of the observed child's desk. It is important that the observer see the face of the child.)
- II. After attention has been refocused from the examiner and the nature of the children's tasks have been determined (a five-minute wait is recommended from the time of observer seating until recording begins), the cassette is turned on.
- III. The cassette will have a verbal warning that timing is about to begin followed by a ten-second continuous tone. When the tone terminates, observation begins. The cassette will have the following sequences with observation and recording during specified times:
 1. A verbal warning will inform observer that sequencing is beginning.

2. A five-second continuous tone will inform observer to locate Child A.
3. Five seconds of silence will indicate that Child A is being observed (all observation starts with the termination of the continuous tone and ends with the resumption of the tone).
4. A five-second continuous tone indicates that the observer is to record the behavior of Child A and teacher's behavior, if any, toward Child A during the observation period and will locate Child B.
5. Five seconds of silence will indicate that Child B is being observed.
6. A five-second continuous tone indicates that the observer is to record the behavior of Child B and teacher's behavior, if any, toward Child B during the observation period and will locate Child C.
7. Five seconds of silence will indicate that Child C is being observed.
8. A five-second continuous tone indicates that the observer is to record the behavior of Child C and teacher's behavior, if any, toward Child C during the observation period and will locate Child A.

9. Sequences 3, 4, 5, 6, 7, and 8 will be repeated 30 times for a total of two and one-half minutes observation time for each child. The entire procedure will take 15 minutes.
- IV. During sessions when two observers are present, they will use dual phones from a single cassette and record as if alone.
- V. If, for any reason, the sequence is broken (e.g., child leaves the room), the sequence in which the disruption occurred is begun again with the return of the child. If one of the designated children is absent during scheduled observation, randomly choose another child and proceed as scheduled but indicate which child was absent and do not calculate the randomly chosen child's scores or the teacher's behaviors toward that child.
- VI. All behaviors are to be recorded on the observer sheet. The date and time must be completed.
- VII. If a problem develops, write it down for later discussion.
- VIII. For recording the child's behavior:
If, during the five-second observation period, the child attended as per definition, record a "✓" in the box for that interval. If, during the five-second observation period, nonattending behavior

occurred, place nothing in the box for that interval.

NOTE: The maximum "✓'s" for any child during any observation period is 30. There is no minimum.

IX. For recording the teacher's behavior:

If, during the five-second observation period for a child, the teacher makes an approval response, a circle is placed in the box for that child for that interval. If the teacher does not make an approval response during the five-second observation period, no circle is placed in the box for that interval for the respective child.

NOTE: Approval responses are recorded only once per observation period and only for the respective child being observed. The maximum approvals for any child per session would be 30. There is no minimum.

APPENDIX C

OBSERVER RECORDING FORM

Teacher _____ Room Number _____ Observer _____

Date _____ Day _____ Recording time Began _____
 Recording time Ended _____

Child A	Child B	Child C
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
Total _____	Total _____	Total _____

Comments: _____

APPENDIX D

CONSULTATION INTERVIEW

Today we agreed that we would develop a plan to improve _____'s attention in class. You earlier stated that he/she (specify behaviors).

How often does he/she do these in the classroom?
(Record frequency statement.)

What generally happens before he/she does this?
(Record antecedent conditions statement)

. . . and after he/she (specify behaviors)?
(Record Consequent Conditions statement.)

What times during the day does he/she (specify behaviors) or during what instructional period does this most often occur? (Record Situational Conditions statement.)

Let's summarize the problem and see if I have it right. _____(specify behaviors). This occurs (repeat frequency statement). Before this happens (repeat antecedent conditions statement) and this behavior is generally followed by (repeat consequential conditions statement).

Is this pretty much what seems to be happening?

How often could _____ (specify behaviors) without interfering with his/her ability to receive instruction or what would be the amount or number of times most children (specify behaviors)? (Record Goal Behavior statement.)

Then we need a plan to lower _____'s (specify behaviors). Your comments seem to suggest that _____ may be doing some of these things to get attention. How could you ignore this behavior? What else could you do to ignore _____'s behavior?

What might you do to show _____ that you are pleased when he is doing things you expect like (specify the negative of specific behaviors)? What else could you do to encourage appropriate behavior in _____?

(If teacher does not suggest verbal and nonverbal approval behaviors state (what about showing your satisfaction toward _____ by praising him or commenting about his good behavior?)).

These might be either verbal comments or nonverbal actions to show your pleasure for his good behavior. What are some comments you might make when he (specify negated behaviors)?

(Reinforce approval comments with head nod or statements such as "good," "fine," "good idea.")

What are some nonverbal things you might be able to do that would also show your approval? (Reinforce nonverbal approvals with head nod or statements such as "good," "fine," "good idea.")

Good, then what we will try is ignoring _____ when he/she (specify behaviors) and either verbally or nonverbally approving him/her when he/she doesn't (specify behaviors) or behaves in ways that show you he/she is attending.

Now in order to know how successful we are we are going to need a good estimate of how often and during what circumstances _____ (specify behaviors). For this we need a method of recording _____ behaviors.

A method often successful with this type of behavior is to predesignate a time each hour and observe _____ for 30 seconds, dividing that 30 seconds into six five-second parts as it has been divided here (hand teacher Sheet Number One, Appendix G). You would then watch _____ during the first five seconds and use the second five seconds to put a check in the space here (designate) if he did any of these behaviors, or put a circle if he didn't. You would observe him again during the third five seconds and put those results here (demonstrate) repeating your observation and recording during the fifth and sixth five second periods. You put any comments on what happened

before, after, and during the observation over here (designate). This gives us a good idea of what is occurring and takes only about three minutes a day.

How does this sound? O.K. Then you will record _____ behavior and bring the results to our next meeting.

Thank you very much; we'll see you in three/two weeks.

APPENDIX E

BRIEF CONTACT INTERVIEW

How are the data for _____ progressing?

Can you give me some examples of verbal and non-verbal approvals you're using for _____'s (specify negated problem behaviors).

(Reinforce these with statements, e.g., "good," "fine.")

Would it be possible to increase the number of verbal and nonverbal approvals for _____ when he's not engaged in (specify problem behaviors).

(Summarize teacher's statement.)

Good. Then you'll increase both verbal and nonverbal approvals when _____ is attending and continue gathering data for our next meeting.

APPENDIX F

PROBLEM EVALUATION INTERVIEW

Let's look at the data on _____ attending behavior. The data show that his (negated problem behaviors) increased substantially.

During our initial meeting you indicated that the goal was (specify goal).

The data demonstrate that you have approached/attained the goal.

Do we agree that the goal has been (partially) attained?

In your opinion was the plan you implemented, ignoring him when he (specify problem behaviors) and giving him verbal and nonverbal approvals for (specify negated behavior), effective in increasing on-task behavior for _____?

Good, we need to make sure that these desired behaviors continue at a high rate. Would it be convenient to leave this plan in effect or change it?

(Summarize teacher's statement.)

You'll need to make occasional checks on this behavior to be sure that _____ (specify negated

problem behaviors) continues at this high rate. Could we also implement this procedure with _____ whom you also identified as having similar problems?

(Summarize teacher's statement.)

Good, then you will attempt the same approach with _____. And you could also utilize this method with other students who appear to be experiencing difficulty attending.

APPENDIX G

TEACHER RECORDING FORM

Date _____

Comments:

Time First Observation _____

1st 5 seconds _____
3rd 5 seconds _____
5th 5 seconds _____

Time Second Observation _____

1st 5 seconds _____
3rd 5 seconds _____
5th 5 seconds _____

Time Third Observation _____

1st 5 seconds _____
2nd 5 seconds _____
3rd 5 seconds _____

Time Fourth Observation _____

1st 5 seconds _____
2nd 5 seconds _____
3rd 5 seconds _____

Time Fifth Observation _____

1st 5 seconds _____
3rd 5 seconds _____
5th 5 seconds _____

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