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AN INVESTIGATION OF THE EFFECTIVENESS OF BEHAVIORAL STRATEGIES
APPLIED TO STUDENTS IN INCLUSIVE EDUCATION SETTINGS

by
Theresa Thum Gerber

A Thesis

Submitted in partial fulfillment of the requirements of the
Masters of Arts Degree in the Graduate Division
of Rowan College
April 24, 1995

Approved by _____

Date Approved May 8, 1995

ABSTRACT

Theresa T. Gerber

An Investigation of The Effectiveness of Behavioral Strategies Applied to Students in
Inclusive Education Settings

1995

Dr. Stanley Urban, Thesis Adviser

Learning Disabilities

The purpose of this study was to develop strategies for regular education teachers to use in order to control the behavior/attention problems exhibited by some classified students included in their classrooms.

The study consisted of five regular education teachers grades three through seven and twelve classified students , from Southampton Township Schools, New Jersey. The teachers were obtained through a letter which asked for teachers to volunteer who had classified students exhibiting behavior problems.

Success of the implemented strategies were measured through a pretest, posttest design using the Conners' Teacher Rating Scale-28 (CTRS-28). Analysis of the pretest results and teacher input occurred, and specific strategies were assigned to each member of the study. A two month period of implementation followed. At the end of that period the CTRS-28 posttest evaluation was administered.

Seven students demonstrated improved behavior based on a comparison of the pre and posttest results. These results, however, are considered inconclusive because many factors appeared to affect them. The most significant of these were: Ritalin drug use, parent support, and the amount of time the student received behavioral strategy

intervention. This study did establish a need for specific strategies for maintaining classroom control in an inclusive educational setting.

MINI-ABSTRACT

Theresa T. Gerber

An Investigation of The Effectiveness of Behavioral Strategies Applied to Students in
Inclusive Education Settings

1995

Dr. Stanley Urban, Thesis Adviser

Learning Disabilities

This study investigated the use of specific strategies to remediate the behavior/attention problems exhibited by classified students in inclusive educational settings. A need for strategies to maintain classroom control to improve the learning atmosphere was identified.

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Chapter I: The Problem

Introduction

Since the recent modification of inclusive education policies, regular education teachers have been given the responsibility of educating all students with special needs (Mackinnon and Brown, 1994). As would be expected, with this responsibility comes problems. The regular education teachers have not been properly trained to deal with these unique children in their classrooms (Stoler, 1992). In addition, they are now expected to collaborate with support staff, adapt curriculum to a variety of special needs, assist in difficult scheduling problems, and perform many other jobs which they may or may not have been trained for, or required to do in the past (Gable, McLaughlin, Sindelar and Kilgore, 1993).

Amidst all of the changes, however, some facts still remain constant. The teacher is still the classroom manager; and classroom control must be maintained for learning to take place. In order for this to be achieved, those behaviors which threaten to disrupt an optimal atmosphere for learning, must be eliminated.

The methods the regular education teachers have traditionally used to maintain their classrooms may no longer be effective. Given the diverse population of students the teacher is now responsible for, new or different strategies for controlling problem behaviors may be needed. Specific techniques designed to modify inappropriate behavior and reinforce appropriate behavior may be required.

Need

The need for regular education classroom teachers to have effective strategies for maintaining classroom control has never been more important than it is today. Difficulties in social adjustment exhibited by significant behavior problems, social skills deficits, or poor peer relations have been cited by researchers of children with learning disabilities (Juvonen and Bear, 1992). These children often experience problems with Attention Deficit Disorder (ADD) in addition to their primary learning disability. The co-occurrence of these problems varies from 9-63% across studies, but generally is seen in at least 10-20% of the cases (when stringent identification criteria is applied). There are even higher rates of co-occurrence between ADD and disruptive behavior disorders, such as: aggression, oppositional-defiant behavior and conduct problems (McKinney, Montague and Hocutt, 1992). Combine these statistics with the information that approximately 30% of the students who are not classified are exhibiting, "Some form of classroom problem" (Trovato, Harris, Pryor and Wilkinson, 1992). It is easy to see why it has become increasingly more difficult for the regular educator to maintain control. It is also easy to see why the classroom teachers need modified or different methods to achieve this goal.

Purpose

The purpose of this study is to develop strategies for regular education teachers to use in order to control the behavior/attention problems that are exhibited by some

classified students, who are mainstreamed into their classrooms. The goal is to help the teacher do a more effective job of maintaining classroom control. Another goal is to create an atmosphere where all students are able to learn.

Research Question

Will the adoption of specific teaching strategies improve behavior problems exhibited by special education students enrolled in regular education grades three through seven?

Theory

For the purpose of this study behavior problems are defined as: conduct, hyperactivity and inattention-passivity as described by the Conners' Rating Scale, see Appendix A. The strategies that will be administered were directed toward the objective of modifying inappropriate behaviors in these described areas. The "basic" theory that will prevail in this study is that behavior problems can be controlled through the use of specific teaching strategies. These strategies, which are included in Appendix B, were chosen to alleviate the exhibited problems noted on each subject's Behavior Rating Scale pretest evaluation.

The premise that any one method or technique can be effective in improving behavior problems in a classroom seems rather naïve. In developing the strategies that

were used in this study many theories, techniques and methods were reviewed. The primary goals considered when selecting interventions, were that they would be: 1) successful in remediating behavioral problems and 2) acceptable to teachers which would increase the likelihood of implementation (Ringer, Doerr, Hollenshead and Wills, 1993). When teacher feedback was elicited about intervention acceptability, it was found that: treatment effectiveness, teacher time, teacher skill for implementation, risk to the targeted child, and effects on the other children in the classroom were their concerns. It was also reported that the teachers preferred interventions that they could administer directly (Trovato et al., 1992).

The application of psychological principles by the educational community has become popular due to the increase of unacceptable classroom behavior (Trovato et al., 1992). In this study, the principles of the two most common nonpharmacological treatments: behavior therapy and cognitive-behavioral therapy were considered in developing the intervention strategies. Behavior therapy refers to strategies that use reinforcement and punishment to establish or reduce targeted behaviors. Cognitive-behavioral therapy combines behavioral techniques with cognitive strategies designed to directly address problems of impulse control, higher order problem solving, and self-regulation (Fiore, Becker and Nero, 1993). The Sample System For Self - Monitoring Appendix C, is an example of a cognitive - behavioral strategy.

It is a fact that students experiencing academic and/or behavior problems often have deficient social skills. It has been discovered that these deficits may be modified through social skills training. To remediate the social skills problems exhibited by some of the

subjects of this study; social skill training strategies were included. An example of this technique from the strategy list is: Give student opportunities to display leadership roles in the classroom (line leader, pass out papers, team captain, etc.) (Bain, 1991).

Finally, classroom management plays a vital role in improving classroom behavior. The most basic component of classroom management is to have specific classroom rules. Once the rules are established, it is important that these rules are continually reinforced. The combination of visual and verbal reminders for reinforcing the rules is most effective (Buckoff, 1990). In developing the strategies some of the components of a management system called "Active Teaching Strategies" will be used (Valet, 1989). A list of the components of this system will be included in the Other Studies section of Chapter II. Chapter II will also include a more detailed discussion of the strategies and how they were developed.

Overview

After the presentation of the problem in Chapter I, the pertinent literature is reviewed in Chapter II. In Chapter III is a description of the design of the study, and the results are analyzed in Chapter IV. The study is summarized and conclusions are drawn in Chapter V.

Chapter II: Review of The Literature

Introduction

The literature I reviewed for this paper will be presented in sections. Each section will include a discussion of information that is pertinent to the development of this study. The first section will contain information about Attention Deficit Hyperactivity Disorder and Attention Deficit Disorder. The next section will discuss behavior rating scales, with specific information about the rating scale that was used in this study, The Conners' Teacher Rating Scale. The third section will present a discussion of various teaching strategies. The fourth section will present other studies which used behavior intervention strategies, and a summary will conclude Chapter II. Although all of the information being reviewed in this chapter may not be used directly, it did contribute to the development of strategies or the selection of processes employed.

Attention Deficit Hyperactivity Disorder and Attention Deficit Disorder

Attention deficit hyperactivity disorder (ADHD) can be defined as: developmentally inappropriate degrees of inattention, impulsiveness, and hyperactivity. People with this disorder generally exhibit some difficulty with each of these areas, but to varying degrees. They also exhibit these behaviors in most situations: home, school, work, and social situations, but again to varying degrees. The criteria for identifying ADHD includes fourteen general behaviors. It states that at least eight of the behaviors must be present to

be diagnosed with this disorder. It also states that the behaviors must be exhibited for at least six months at a more frequent level than that of most people of the same mental age. In addition, onset of these behaviors must be observed before the age of seven. The following items were obtained through a national field trial of the DSM-III-R criteria for Disruptive Behavior Disorders and are listed in descending order of discriminating power:

- 1). often fidgets with hands or feet or squirms in seat
- 2). has difficulty remaining seated when required to do so
- 3). is easily distracted by extraneous stimuli
- 4). has difficulty awaiting turn in group situations
- 5). often blurts out answers to questions before they have been completed
- 6). has difficulty following through on instructions from others
- 7). has difficulty sustaining attention in tasks or play
- 8). often shifts from one uncompleted activity to another
- 9). has difficulty playing quietly
- 10). often talks excessively
- 11). often interrupts or intrudes on others
- 12). often does not listen to what is being said to them
- 13). often loses things needed for tasks
- 14). often engages in physically dangerous activities

* This list is presented in abbreviated form, however, all fourteen criteria items are included (Henker and Whalen, 1989).

In attention deficit disorder (ADD) the focus is on the basic cognitive process of attention. The presence of ADD might indicate defective processes. Such defects might be noted in: "1) the investment, organization, and maintenance of attention and effort; 2) the inhibition of impulsive responding; 3) the modulation of arousal levels to meet situational demands; and 4) an unusually strong inclination to seek immediate reinforcement" (Douglas, 1983).

Research studies and teacher observation accumulated over the years has indicated that attention problems are a major symptom of learning disabilities. Most researchers and special educators also agree that attention problems are caused by a combination of factors including (but not limited to): the learning setting, the type of task, the child's personality, and the verbal strategies of the teacher. Of these factors, the one that contributes to the attention or inattention of handicapped students most often is the manner in which teachers communicate with them both verbally and nonverbally (George, 1986).

In this research project the strategies will not be developed for students who are diagnosed as having ADD or ADHD, but rather, to remediate "behaviors" exhibited in schools by classified students which are inappropriate for conduct, hyperactivity and inattention - passivity, based on the Conners' Teacher Rating Scale criterion.

Behavior Rating Scales

Behavior rating scales are useful for characterizing patterns of behaviors both in school and at home. They collect and organize information so the teacher or evaluator can more effectively remediate the problems. The best method for evaluating behavior problems, however, is still careful and thorough observation.

Not surprisingly, education testing companies have produced instruments which attempt to objectively evaluate these behaviors (Kounnik, 1992). These scales have become a necessary component of clinical diagnosis (Reid, Maag and Vasa, 1993). They help link diagnosis to intervention (Kounnik, 1992). A carefully devised teacher rating scale can give information that is easy to interpret and useful when formulating, and ultimately monitoring intervention methods. They are also useful for identifying a group of children for research related activities because they can establish a cutoff score (Reid, et al., 1993).

Although behavior rating scales have become a popular and effective method of evaluating student behavior, they are not without their flaws. First, there are no valid cutoff points that empirically identify a student's behavior problems. Second, Likert-type frequency descriptors (e.g. not at all, just a little, pretty much, very much) of behaviors tend to be interpreted differently from one rater to the next. Also, many children with behavior disorders have multiple difficulties and may receive high ratings on several dimensions of the scale when, in effect, they only received a high rating in a single area (e.g. conduct) causing higher ratings in other areas "halo effect". Another problem is that

certain behaviors are more often noticed and reported for referral or observation, and these behaviors tend to weigh more heavily in the formatting of the rating scales. Finally, the factors themselves are not clear cut. The same behavior may load on different dimensions of the scale even when the factors are specified to be statistically independent (Reid, et al., 1993).

Despite these flaws, behavior rating scales supply valuable information about a student's behavior.

Conners' Teacher Rating Scale

The instrument of evaluation that was selected for this study is the Conners' Teacher Rating Scale. It was selected because it is "Among the most widely used assessment instruments for childhood problem behaviors in the world". It was originally designed to help identify hyperactive children but has been found to be useful for characterizing many other patterns of a child's behavior. It has been deemed an effective screening device for this purpose (Martens, 1992).

The Conners' Teacher Rating Scale-28 (CTRS-28) includes scales for conduct problems, hyperactivity and inattention-passivity (A.D.D., 1994). This version was selected to be used in this study for many reasons. First, it was normed on children from three to seventeen years of age. It categorized behaviors into three main groups. It also included a hyperactivity index which would zero in on students whose behavior was most indicative of a diagnosis of hyperkinesis. This index also is very useful in measuring progress in a pre and posttest situation (Conners, 1990). Finally, because the scale contained only 28 items, it would be easy to administer and this would be more inductive

of volunteers to participate in the study. Further discussion of this measure will be presented in Chapter III.

Strategies For Teachers

As was mentioned in the "Theory" section of Chapter I of this paper, in addition to treatment effectiveness (Trovato et al., 1992), teachers are most concerned about the amount of time and skill needed to implement a strategy (Valet, 1989). In consideration of this, strategies that were most in compliance with this requirement were those that were selected for this study. Another consideration was the philosophy of maximizing positive consequences, minimizing negative consequences, and modifying instructional procedures (Reeve and Welch, 1993). Many strategies that are currently being used to modify behavior problems have been developed for the special educator. Token economics (Trovato et al., 1992) or a response cost system (Fiore, Becker and Nero, 1992) have both been used effectively to alter inappropriate behaviors. However, both methods require a great deal of time and training to be used properly. They also can be a distraction to the other children in the classroom. What is needed is a method that the regular education teacher can use (Fiore et al., 1993).

Two basic principles of behavior management state that, "Whenever two people interact they change each others behavior", and "Both desirable and undesirable behaviors are learned and can be taught" (Holcomb and Bass, 1988). These principles will become guidelines for the intervention strategies developed. The teacher will change the student's

behavior positively as well as her own. Desirable behavior will occur more often and undesirable behavior will occur less often. Four general areas of change will be emphasized. The teacher will: 1) help get the student organized , 2) help the student become a better listener, 3) reinforce classroom rules, and 4) improve the student's self-esteem (Buchoff, 1990).

In one study where teachers were interviewed about the behaviors they felt most in need of intervention, the following behaviors were mentioned: noncompliance, physical aggression, failure to complete assigned work, speaking out in class, being out of seat, excessive demands of teacher's attention ,and refusing to speak (Trovato et al., 1992). These general behaviors, and those behaviors that were specifically noted on the Conners' Rating Scale by the teachers involved in this study, will be the ones that the intervention strategies will be developed to remediate.

Other Studies

In this section studies that discuss nonpharmacological interventions will be reviewed. These interventions generally fall into two categories: behavioral strategies or cognitive-behavioral strategies. Behavior therapy (which uses reinforcement and punishment) is well liked because it is cost effective, easy and quick to implement, and adaptable to a variety of settings. The most common behavioral interventions currently being used are positive reinforcement, punishment, and response cost. In positive reinforcement a secondary reinforcer is usually used. This may be through a contingency

reward system, token economics, or social praise (Fiore et al., 1993). This type of applied behavior analysis has been used for students with attention deficits, impulsivity and overactivity, and has been found to be a powerful approach for remediating academic and behavior problems (Reid et al., 1993). In this study a contingency system will be implemented. A contingency system is one that uses positive reinforcement to achieve desired behaviors (Brantley and Webster, 1993). It will also include a self-monitoring system where the teacher, or the student and teacher combined, list some target behaviors that need to be improved. Then a system for monitoring improvement of these behaviors by the student is established. Punishment can also be used, however, this method was not chosen for this project (Fiore et al., 1993). Research studies on this topic have found that most parents, teachers, and students consider punishment an unacceptable choice (Trovato et al., 1992). Another method, response cost, combines positive reinforcement and punishment. It can be effective in improving on-task behavior needed to complete academic tasks. One study that compared reward-only and response cost found that both programs were effective in producing immediate gains in on-task behavior (Fiore et al., 1993).

Although behavior therapy is the most practical course for educators to go; cognitive-behavior therapy is also very appealing because it combines behavioral techniques with cognitive strategies. Techniques that are used under this title are: self-instruction training, self-management training (including self-monitoring, self-evaluation, and self-reinforcement), problem-solving training, attribution retraining, and relaxation training (Reid et al., 1993). In developing strategies for this study self-monitoring was

emphasized. This strategy was applied to every member of the study to modify either attention problems or conduct problems.

Another strategy that is useful and important to discuss is social skills training. This training attempts to teach children better ways of interacting, solving problems, cooperating, and communicating. It can be easily administered by incorporating it into the regular school setting. Teachers and other adults working with the children can be trained to cue and reward positive social behavior in children (Bain, 1991). Another way of training a child to monitor their behavior is positive role modeling. An example is: if a child is displaying inappropriate behavior they can be seated near a peer who is behaving appropriately. This "example" may be all the prompt a student needs to begin to modify their behavior (Parker, 1994).

Another method that was relied on heavily in this study is called , "Active Teaching Strategies". This management system was originally presented in a paper at the Annual Convention of the Council for Exceptional Children in 1989. The theory behind these strategies is , "The amount of time spent on direct instruction by the teacher, and the quality of such instruction, are primary factors in pupil achievement". It also contends that, "Teachers can be taught to use these strategies". The following items are a list of those things the teacher can do during a lesson to enhance pupil achievement:

- 1). Clearly explain instructional objectives and tasks.
- 2). Appropriately model and demonstrate assignments.
- 3). Use "special " instructional materials and equipment.
- 4). Ask questions and encourage responses.

- 5). Present appropriate aids, prompts, and cues.
 - 6). Direct pupils in self-mediation and self-management.
 - 7). Praise pupil achievement.
 - 8). Provide correction and feedback.
 - 9). Record pupil performance using systematic token reinforcers and credits.
 - 10). Show enthusiasm and interest in the lesson.
- (Valett, 1989)

Summaries

There is a great deal of literature on behavioral interventions that can be applied to specific learning problems, however, there is little research on interventions that teachers select to use with behavioral problems that occur in their classrooms (Ringer et al., 1993). Since teacher acceptability is an important factor in the success of an intervention, this study will attempt to develop strategies that are acceptable and workable for teachers. It will emphasize those things that research has suggested teachers want and students need. They will be practical, time efficient, and most importantly effective in changing undesirable behaviors and reinforcing desirable behaviors.

Some questions that have been presented in the current research on this subject that the researcher of this study intends to answer are: What strategies can be practically applied by general education classroom teachers to classified students mainstreamed into

their classrooms? and How effective are these intervention strategies in improving behavior problems? (Fiore et al., 1993).

A shortfall of American education has historically been behavior management (Wallis, 1994). This coupled with the fact that the regular education teacher is generally ill equipped to handle the diverse problems of a special needs' student (Stoler, 1992). It makes it more important than ever to teach teachers how to handle these students and their problems.

Chapter III: Design of The Study

Sample

The subjects of this study are twelve classified students who are mainstreamed into the regular education classroom for at least one academic subject. The students range in age from nine to thirteen years old. Of these students, two are third graders, four are fourth graders, five are fifth graders, and one is a seventh grader. The third graders are classified multiply handicapped (MH) and perceptually impaired (PI). The fourth graders are divided between two teachers; one has a neurologically impaired (NI) child, and the other has two neurologically impaired (NI) and an emotionally impaired student (EI). The fifth graders are all classified perceptually impaired (PI), three are females (the only female students in this study). The seventh grader is classified emotionally impaired (EI).

The students attend Southampton Township Schools which is a small rural school district in Burlington County, New Jersey. There are currently 88 classified students in a school district of 887 students. Ten of those 88 are sent out of the district. There are only four students residing in district with a primary classification as emotionally impaired, and two of those students are part of this study. The students are housed in two schools on the same grounds. Kindergarten through 4th grade are in School #1, and 5th through 8th grade are in School #2. Some teachers and facilities are shared by both schools.

There is a complete child study team for the district consisting of one social worker, one learning disabilities teacher-consultant and one psychologist. This year a full-time

administrator was assigned to the team. In the past administrative duties were shared by the team members with the psychologist being considered the head of the team.

The teachers involved in this study were volunteers obtained through a letter sent to all 65 regular education teachers in the district, see Appendix D. The letter asked for teachers to volunteer who had classified students in their classroom who were exhibiting behavior problems. From this initial letter five teachers with a total of twelve students between them became a part of this study. To secure the teacher's anonymity, they have been assigned a letter name, and their students who are the subjects of the study have been assigned a number (Example: teacher = A, student = A-1).

Instrumentation

The teachers' who volunteered for the study were given a questionnaire containing 25 teaching strategies, see Appendix E. These strategies were selected through research on intervention methods currently being developed and used. They were also obtained from the Attention Deficit Accommodation Plan for Teaching written by Harvey C. Parker, Ph.D. (1994). The teachers were asked to rate how often they used the strategies listed on this questionnaire on a scale of 0 to 3. 0 representing never, and 3 representing almost always. Once this data was collected the Conners' Teacher Rating Scale - 28 (CTRS-28) was distributed. This will be the method by which success of the strategy implementation will be measured. The initial administration of this scale was the pretest evaluation given on October 28, 1994. Rating of the students by this scale will occur

again at the end of this study March 3, 1995, and the pre and posttest results will be evaluated at that time.

Collection of Data

Once the teaching strategy questionnaires and the CTRS-28 pretest were collected, the process of matching strategies to teachers and students began. The first thing that was done was actually matching behavior problems as described on CTRS-28 Appendix A, to intervention strategies Appendix E. A number of questions had to be answered before this could occur. First, how strongly did the student exhibit the behavior? (Conners' scale: 0 - not at all, to 3 - very much). Second, was the teacher currently remediating the behavior, and how often? (Strategies scale: 0 - never, to 3 - almost always). Third, (based on research data) does experimenter feel continued remediation through use of this strategy will improve behavior over time? At the conclusion of this process twenty-one strategies were selected to be used in the study, see Appendix B.

Finally, a list of strategies were developed for each member of the study, see Appendix F-J. Two specific strategies were listed for every member of the study because the theory behind these strategies were basic principles of this intervention method. The first strategy was assigned to each student because it is fundamental to any behavior management program. The second strategy was assigned to each student because it reflected cognitive-behavioral principles and seemed to be an easy and effective strategy for teachers to implement from this intervention model. These strategies were: 1)

Establish classroom rules, post rules in classroom and reiterate rules often; and 2) Instruct student in self-monitoring, or self-monitoring of behavior (depending on whether the student scored higher in the conduct or attention subscale of the CTRS-28). An actual sample system for self-monitoring was distributed to each teacher with their list of strategies, to give them some suggestions on how to develop a self-monitoring procedure in their classroom, see Appendix C. The rest of the strategies on the students individual list were selected due to high ratings in these areas on the CTRS-28 pretest. Consideration was also given to the teachers' answers on the Teacher Strategies Questionnaire, Appendix E. If a teacher scored low on an area 0 or 1, and that strategy coincided with a behavior on the Conners' Scale (Appendix A) that received a high rating 2 or 3, this strategy was automatically assigned. Additional strategies may have been assigned for behaviors that received 2's and 3's, with a maximum of 12 strategies per student. The researcher felt that any more strategies would not be manageable for the teacher.

Full implementation of the strategies including the self-monitoring procedure began January 3, 1995, and ended March 3, 1995 at which time the CTRS-28 posttest evaluation was given. The strategies were actually distributed on December 13, 1994 so the teachers could become familiar with them before full implementation was required.

Procedures

For a two month period the teachers will be using the strategies listed for the targeted children, to remediate or discourage inappropriate behaviors. They have been instructed to implement the strategies in the manner they feel most appropriate (since they know the students best), but to be sure to use all strategies that have been listed for that student on an ongoing basis. They are welcome to use the strategies with other members of the classroom but results will only be compiled from the targeted class members.

At the end of this two month period the teacher will again be given the CTRS-28 and will be required to evaluate each student's behavior. They will not be given a copy of the pretest, nor have they ever seen the results of that evaluation. Therefore, the results of the posttest evaluation will be based solely on their observation of the student at this time.

Chapter IV: Analysis of Results

Research Question

Will the adoption of specific teaching strategies improve behavior problems exhibited by special education students enrolled in regular education classes grades three through seven?

Analysis

Each student's pre and posttest results on the CTRS-28 were compared to determine if their subscale scores went down indicating improved behavior or went up indicating an increase in problem behaviors. These results are presented in Table I. Table II will present an interpretive guideline for the T-scores reported in Table I.

Out of the twelve students' in the study, five students' scale scores went down or stayed the same in all four category areas, and two student's scale scores went down or stayed the same in three category areas. In both of those students the scores went up slightly in the category of inattention-passivity. In an analysis of their test results the increase was in passive behavior which could be considered a positive outcome of students who were initially exhibiting above average scores for conduct problems.

This leaves five students whose scale scores went up. Of those students, four students' scores went up in all four areas and the other student's scores went up in two areas and stayed the same in one area.

Table I

Pre and Posttest Results of Conners' Teacher Rating Scale-28 (CTRS-28)

<u>Teacher</u>	<u>Subject</u>	<u>Sex</u>	<u>Age</u>	<u>Classification</u>	<u>CTRS-28 Individual Scale Categories</u>			
					<u>Conduct Problems</u>	<u>Hyper-activity</u>	<u>Inattentive -Passive</u>	<u>Hyperactivity Index</u>
A	A-1	M	9	MH	98	83	70	85
					54	52	61	57
	A-2	M	9	PI	98	69	72	80
					61	47	61	58
B	B-1	M	9	NI	44	59	64	63
					44	47	50	47
C	C-1	M	10	NI	54	58	73	68
					67	54	76	66
	C-2	M	11	EI	50	45	66	52
					* 58	* 56	73	* 63
	C-3	M	10	NI	82	75	71	81
					78	78	66	78
D	D-1	M	11	PI	61	58	62	60
					56	50	* 64	58
	D-2	F	11	PI	49	48	78	55
					49	43	69	53
	D-3	M	11	PI	56	58	50	57
					67	72	* 62	72
	D-4	F	11	PI	60	43	71	57
					88	* 57	86	78
	D-5	F	11	PI	52	51	57	57
					* 57	73	* 64	* 69
E	E-1	M	13	EI	57	52	68	65
					54	45	* 76	65

Note. In general use by the test developer and in this study, T-scores of 65 or greater are considered clinically significant and will be shaded in the table. From "Conners' Rating Scale Manual", by C. Keith Conners, Ph.D. p. 11. Copyright 1990 by Multihealth Systems, Inc.

Pretest results of the CTRS-28 will be listed first for each subject and posttest results will follow.

* An asterisk * next to a score indicates a higher scale score, or increase in problem behavior.

Table II

Interpretive Guidelines For T-Scores of the Conners' Teacher Rating Scale

Range	Guideline
Above 70	Very much above average
66 to 70	Much above average
61 to 65	Above average
56 to 60	Slightly above average
45 to 55	Average
40 to 44	Slightly below average
35 to 39	Below average
30 to 34	Much below average
Below 30	Very much below average

(Conners, 1990)

When the CTRS-28 posttests were distributed each teacher was given a sheet to elicit additional comments from them. They were asked to: Add any information they felt may have affected the outcome of this study; or any information about the subjects, strategies, or study itself that they felt was important. This information, coupled with the information that was gathered when the pretest was administered, led to the conclusion that many factors apart from the strategies and their implementation affected the outcome of the results. Those factors which seem to be of most consequence will be discussed.

The first factor that seemed to greatly effect the results was the use of Ritalin either before onset of the study or during the study. Ritalin is a methylphenidate, which is a stimulant drug proposed to increase concentration (Silver, 1993). Student A-1 was placed on Ritalin after the pretest was given and exhibited significant behavior improvement, see Table I. Student A-2 was already receiving Ritalin irregularly before the onset of the study, but his parents became more consistent with its' administration after the pretest, again significant behavior improvement was noted, see Table I. B-1 began taking Ritalin about 2 weeks prior to the onset of the study. In posttest results this subject moved from above average ranges to average range in three categories, and stayed the same in one category with a scale score of 44 which is considered slightly below average, see Table II. Subject C-3 was already receiving Ritalin at the onset of this study, however, his dosage was regulated during the study. This student's scores went down in three areas and stayed the same in one. Student E-1 was administered Ritalin shortly before onset of this study. In posttest results improvement was exhibited in two areas, he stayed the same in one area, and went up in the category of inattention-passivity (which teacher noted and test

results confirmed was passive behavior). The teacher stated that the drug may have made him a little too passive and may need to be regulated. Subject C-1 was reevaluated by the child study team during this investigation and a recommendation of Ritalin intervention was prescribed but not yet implemented. This student's scale scores went down in one area, stayed the same in one area, and went up in two areas. In addition, the student was pulled out of the regular education classroom for two periods and was given replacement reading and math. The regular education teacher feels this caused him to be more inattentive when he returned to the regular education classroom. The inattentive-passive category is one area in which his scale score went up.

In summary, five of the seven students whose behaviors improved from pretest to posttest evaluations were receiving Ritalin drug intervention by the time the posttest was given. Two teachers in the study commented that (based on previous knowledge of their students before Ritalin) the success they felt was achieved with the strategies, would not have been as significant without Ritalin intervention.

Another factor that seemed to significantly effect the outcome of the results was the degree of parent support and the amount of reinforcement that was generally received at home. From a survey of comments by the teachers, four subjects' parents were reported as being supportive of the child and the teacher. All four of these students' scale scores improved. The parents were reported as monitoring and helping students with homework, and corresponding with the classroom teacher on a regular basis.

A third factor that the teachers seemed to feel aided in their use of the strategies was the amount of time the student was in their class during the day. It was stated by a

number of the teachers, and agreed upon by the others, that the more time the student spent in their classroom during the day, the easier it was to implement the strategies (more consistency was achieved). They also felt that when this consistency occurred, the strategies were more effective. This theory, however, can neither be supported nor refuted based on the results of this study. Out of the seven students who demonstrated progress in behavior from the pretest to posttest evaluation, three of those students were in the inclusive class for three or more periods a day. However, two students who were also receiving the strategies for more than two periods a day exhibited an increase in inappropriate behavior, based on the CTRS-28 posttest evaluation. One of these students received higher scores in all four category areas, and the other student increased his scores in two of the categories. It should also be noted that, although student A-2 (who exhibited significant improvement) was only receiving the strategies in his inclusive class for one period a day; he was spending the rest of the day in a resource room which had already been using many of the strategies presented in this study. Therefore, consistency may have been established through this source.

The teachers also commented that, had they had a chance to use these strategies over a longer period of time more improvement would have been achieved. In one study of a similar nature it was reported that, students who consistently received behavioral interventions in schools achieved more behavioral gains than students who did not (Trovato et al., 1992).

Another factor that the teachers felt affected their ability to implement the strategies was their educational training in working with special education students. Also,

monitoring and consultation by an LDT-C, special education teacher, or other persons trained in this field on a regular basis, would have helped make implementation of these strategies more feasible for them. As a whole the teachers commented that the strategies themselves were practical and workable. They stated that ongoing use on a consistent basis would make behavior management easier. However, generally they felt that their background knowledge in special education was limited and this hindered their ability to implement the strategies as effectively as they would have liked. They felt that improved training or inservicing in this area and support in implementing strategies like these, would be helpful.

Chapter V: Summary, Conclusion and Discussion

Summary, Conclusion and Discussion

The purpose of this study was to develop strategies for regular education teachers to use to control the behavior problems that are exhibited by some classified students who are included in their classrooms. Over a two month period five teachers administered intervention strategies as described in Appendixes F - J, to twelve students who were the subjects of this study. Out of those twelve students, seven demonstrated improved behavior measured on the CTRS-28 posttest evaluation. Although it would appear that a degree of success was achieved through use of the intervention method, caution must be taken when evaluating this success. Many factors, other than those already inherent in the implementation of the strategies and the reliability and validity of the test results, appeared to influence this study and its' subjects. These factors included: Ritalin drug use, parent support, and the amount of time the student spent in the inclusive classroom receiving the strategies. Some students may have exhibited improved behaviors that were not based solely on the implementation of the strategies, but rather, on the degree to which these factors affected them. In addition, it was noted by the teachers, that had the strategies been administered over a longer period of time more improvement may have been demonstrated. It was also cited, that more training in working with special needs students, and closer monitoring by special education support staff, would make strategies like these more feasible for a regular education teacher to use.

Generally, the teachers' felt comfortable with the strategies and felt that the use of strategies like these improved their ability to manage a class that included special needs students. Although the results of this study were inconclusive, it did establish the fact that a method for maintaining classroom control which includes specific techniques for special education students in the regular education classroom, is needed.

Recommendations For Further Study

As a result of my research and findings in this study some questions have intrigued me. I would like to present these questions for further study:

- While medications like Ritalin significantly reduce the symptoms of inattention and hyperactivity (Buchoff, 1990), are they more effective when used with a behavior management program?
- Do students who consistently receive structure at home respond more favorably to a behavior management program in school?
- Does consistent use over a long period of time, of behavioral intervention strategies, result in continued decrease of targeted inappropriate behaviors?

APPENDIX A
CONNERS' RATING SCALES

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APPENDIX B

COMPLETE LIST OF STRATEGIES USED IN STUDY

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The following list of strategies were selected to remediate the behaviors described on the Conners' Teacher Rating Scale-28, see Appendix A. The numbers that follow each strategy are the behaviors from the Conners' Scale which these strategies were selected to modify. Many of these strategies could be used to remediate behaviors other than those listed; this is just an example of how they were used in this study.

- Establish classroom rules, post rules in classroom and reiterate rules often. 2, 3, 4, 8, 12.
- Instruct student in self-monitoring of behavior (hand raising, calling out, etc.). 2, 5, 8, 10, 11, 12, 15, 16, 23, 27.
- Instruct student in self-monitoring (stay on task, pay attention, etc.). 7, 9, 21.
- Allow student to stand at times while working. 1, 7, 14.
- Reduce distracting stimuli by having the student put away books, pencils, etc. on and around desk. 7.
- Reduce directions to steps (make them clear and distinct). 21, 26, 28.
- Give student opportunities to display leadership roles in the classroom (line leader, passing out papers, team captain, etc.). 17, 18, 20, 22, 24, 25 .
- Reduce workload when needed to alleviate stress. 16, 21, 26, 28.
- Encourage the student to make eye contact when they are speaking. 7, 9.
- Provide opportunities for seatbreaks (run errands, etc.). 1, 14, 26.
- Provide a quiet place for the student to do seatwork, if need. 7, 8, 21.

- Reinforce frequently, especially when signs of frustration are noticed. 6, 23, 26, 28.
- Supervise student closely during transition times. 8, 15, 18.
- Have the student repeat the directions after they are delivered. 7, 9, 23, 28.
- Structure the environment in such a way as to reduce distracting stimuli (seat student away from posters, computers, etc.). 7.
- Reinforce the student for concentrating on a task for a length of time. 1, 7, 9, 14, 21, 26.
- Ignore minor misbehavior. 6.
- Seat student close to the source of information, or move toward student to increase their attention of information being presented. 9, 28.
- Seat student near a good role model or near teacher. 8, 16, 18, 24, 25.
- Separate the student from peers who may be encouraging or stimulating the inappropriate behavior. 2, 4, 8, 17, 18, 22, 24, 25.
- Pair oral instructions with written instructions. 7, 9, 28.

APPENDIX C
SAMPLE SYSTEM FOR SELF-MONITORING

Sample System For Self-Monitoring

Make a list of about 3 to 5 conduct or attention problems that the student may be exhibiting. If the monitoring strategy listed is behavior related , list conduct problems. If the monitoring strategy listed is attention related , list attention problems. Go over the list with the student, they may even be able to contribute to the list. Ask the student to begin to monitor themselves to see if they are demonstrating the behaviors on the list.

* optional - You can put a Post-a-Note on the student's desk and they can make a tally of when they demonstrate one of the inappropriate behaviors listed. 1) They don't have to say anything to the teacher this can just be for their own information; or 2) You can also monitor this and possibly reward them if they show improvement over a period of time (such as a week).

The goal of the strategies and this system is to decrease the amount of inappropriate behavior being exhibited over a period of time.

APPENDIX D
LETTER TO TEACHERS

Dear Teachers:

As part of my master's thesis, I will be developing strategies for regular education instructors to use, in order to control behavior problems exhibited by classified students who are included in your classroom. I am looking for teachers who are: 1) interested in being part of this study by using the strategies I will develop, and 2) have classified students in their classroom who are exhibiting behavior problems. This project has already been approved by Mr. Martin and The Southampton Township Board of Education.

In order to be a part of this study you need only to check yes and tell me how many of your classified students will be involved in the study. There will be no breach of confidentiality on your part since the child's identity is not necessary to conduct the experiment.

The goal of this study is to control the behavior problems of some your students, and aid in classroom management. There will be minimal work required on your part (a few questionnaires and implementation of the strategies at some point during the school year). If this project is successful the outcome will far outweigh the effort.

Thanks for your interest and participation in this project. I look forward to working with you this year.

Please return this form by Friday September 30, 1994

<input type="checkbox"/>	Yes, I would like to participate.
<input type="checkbox"/>	Number of students I will include.
<input type="checkbox"/>	No I do not wish to participate.
Teacher's name <input type="text"/>	
Grade teaching <input type="text"/>	

APPENDIX E
TEACHER STRATEGIES QUESTIONNAIRE

Teacher Strategies Questionnaire

Teacher's Name _____

Grade Teaching _____

Decide how often you currently use these strategies in your classroom, and circle the appropriate response. Consider the students who are part of this study when responding.

0=Never 1=Sometimes 2=Frequently 3=Almost Always

0	1	2	3	1) Establish classroom rules, post rules in classroom and reiterate rules often.
0	1	2	3	2) Seat student near good role model or near teacher.
0	1	2	3	3) Prompt appropriate social behavior either verbally or with private signal.
0	1	2	3	4) Supervise student closely during transition times.
0	1	2	3	5) Provide peer helper when a teacher is unavailable to assist the student.
0	1	2	3	6) Allow student to stand at times while working.
0	1	2	3	7) Pair oral instructions with written instructions.
0	1	2	3	8) Seat student close to the source of information or move toward student to increase their attention of information being presented.
0	1	2	3	9) Reduce distracting stimuli by having the student put away books, pencils etc. on and around desk.
0	1	2	3	10) Involve student as much as possible in lesson presentation.
0	1	2	3	11) Give student opportunities to display leadership roles in the classroom.
0	1	2	3	12) Reduce directions to steps.
0	1	2	3	13) Have the student repeat the directions after they are delivered.
0	1	2	3	14) Praise compliant behavior.
0	1	2	3	15) Ignore minor misbehavior.
0	1	2	3	16) Reduce workload when necessary to alleviate stress.
0	1	2	3	17) Separate the student from peers who may be encouraging or stimulating the inappropriate behavior.
0	1	2	3	18) Encourage the student to make eye contact while they are delivering information.
0	1	2	3	19) Provide opportunities for seat breaks (run errands, etc.).
0	1	2	3	20) Reinforce the student for concentrating on a task for a length of time.
0	1	2	3	21) Structure the environment in such a way as to reduce distracting stimuli (seat student away from posters, learning centers, etc.).
0	1	2	3	22) Provide a quiet place for student to do seatwork, if needed.
0	1	2	3	23) Prompt student when they are off task (gesture or speak to student).
0	1	2	3	24) Reinforce frequently when signs of frustration are noticed.
0	1	2	3	25) Instruct student in self-monitoring of behavior (hand raising, calling out, etc.).

APPENDIX F
TEACHER STRATEGIES - A

Teacher Strategies - A

<u>Subject</u>	<u>D.O.B.</u>	<u>Sex</u>	<u>Classification</u>
A-1	12/2/85	M	MH
A-2	11/17/85	M	PI

1. Establish classroom rules, post rules in classroom and reiterate rules often.
2. Instruct student in self-monitoring of behavior (hand raising, calling out, etc.).
3. Allow student to stand at times while working.
4. Reduce distracting stimuli by having the student put away books, pencils, etc. on and around desk.
5. Give student opportunities to display leadership roles in the classroom (line leader, passing out papers, team captain, etc.).
6. Reduce directions to steps (make them clear and distinct).
7. Encourage the student to make eye contact when they are speaking.
8. Reduce workload when needed to alleviate stress.
9. Provide opportunities for seat breaks (run errands, etc.).
10. Provide a quiet place for the student to do seatwork, if needed.
11. Reinforce frequently, especially when signs of frustration are noticed.
12. Supervise student closely during transition times.

APPENDIX G
TEACHER STRATEGIES - B

Teacher Strategies - B

<u>Subject</u>	<u>D.O.B.</u>	<u>Sex</u>	<u>Classification</u>
B-1	5/18/85	M	NI

1. Establish classroom rules, post rules in classroom and reiterate rules often.
2. Instruct student in self-monitoring (stay on task, pay attention, etc.).
3. Allow student to stand at times while working.
4. Reduce distracting stimuli by having the student put away books, pencils, etc. on and around desk.
5. Give student opportunities to display leadership roles in the classroom (line leader, passing out papers, team captain, etc.).
6. Reduce directions to steps (make them clear and distinct).
7. Have the student repeat the directions after they are delivered.
8. Reduce workload when needed to alleviate stress.
9. Provide opportunities for seat breaks (run errands, etc.).
10. Structure the environment in such a way as to reduce distracting stimuli (seat student away from posters, computers, etc.).
11. Provide a quiet place for student to do seatwork, if needed.
12. Encourage the student to make eye contact while they are delivering information.

APPENDIX H
TEACHER STRATEGIES - C

Teacher Strategies - C

<u>Subject</u>	<u>D.O.B.</u>	<u>Sex</u>	<u>Classification</u>
C-1	10/3/84	M	NI
C-2	1/24/84	M	EI

1. Establish classroom rules, post rules in classroom and reiterate rules often.
2. Instruct student in self-monitoring (stay on task, pay attention, etc.).
3. Allow student to stand at times while working.
4. Reduce distracting stimuli by having the student put away books, pencils, etc. on and around desk.
5. Reduce workload when necessary to alleviate stress.
6. Provide a quiet place for student to do seatwork, if needed.
7. Reduce directions to steps (make them clear and distinct).
8. Reinforce the student for concentrating on a task for a length of time.
9. Give student opportunities to display leadership roles in the classroom (line leader, passing out papers, team captain, etc.). C-1 ONLY
9. Structure the environment in such a way as to reduce distracting stimuli (seat student away from posters, computers, etc.). C-2 ONLY

Teacher Strategies - C

<u>Subject</u>	<u>D.O.B.</u>	<u>Sex</u>	<u>Classification</u>
C-3	12/4/84	M	NI

1. Establish classroom rules, post rules in classroom and reiterate rules often.
2. Instruct student in self-monitoring of behavior (hand raising, calling out, etc.).
3. Allow student to stand at times while working.
4. Reduce distracting stimuli by having the student put away books, pencils etc. on and around desk.
5. Reduce workload when needed to alleviate stress.
6. Provide a quiet place for student to do seatwork, if needed.
7. Supervise student closely during transition times.
8. Ignore minor misbehavior.
9. Provide opportunities for seat breaks (run errands, etc.).
10. Structure the environment in such a way as to reduce distracting stimuli (seat student away from posters, computers, etc.).

APPENDIX I
TEACHER STRATEGIES - D

Teacher Strategies - D

<u>Subject</u>	<u>D.O.B.</u>	<u>Sex</u>	<u>Classification</u>
D-1	4/27/83	M	PI

1. Establish classroom rules, post rules in classroom and reiterate rules often.
2. Instruct student in self-monitoring (stay on task, pay attention, etc.).
3. Reduce distracting stimuli by having the student put away books, pencils, etc. on and around desk.
4. Seat student near good role model or near teacher.
5. Supervise student closely during transition times.
6. Seat student close to the source of information, or move toward student to increase their attention of information being presented.
7. Have the student repeat the directions after they are given.
8. Structure the environment in such a way as to reduce distracting stimuli (seat student away from posters, computers, etc.).
9. Provide a quiet place for student to do seatwork, if needed.

Teacher Strategies - D

<u>Subject</u>	<u>D.O.B.</u>	<u>Sex</u>	<u>Classification</u>
D-2	10/8/83	F	PI
D-4	8/27/83	F	PI
D-5	3/30/83	F	PI

1. Establish classroom rules, post rules in classroom and reiterate rules often.
2. Instruct student in self-monitoring (stay on task, pay attention, etc.).
3. Reduce distracting stimuli by having the student put away books, pencils, etc. on and around desk.
4. Seat student near good role model or near teacher.
5. Pair oral instructions with written instructions.
6. Seat student close to source of information, or move toward student to increase their attention of information being presented.
7. Reduce directions to steps (make them clear and distinct).
8. Have the student repeat the direction after they are delivered.
9. Provide a quiet place for student to do seatwork, if needed.
10. Structure the environment in such a way as to reduce distracting stimuli (seat student away from posters, computers, etc.).

Teacher Strategies - D

<u>Subject</u>	<u>D.O.B.</u>	<u>Sex</u>	<u>Classification</u>
D-3	11/14/84	M	PI

1. Establish classroom rules, post rules in classroom and reiterate rules often.
2. Instruct student in self-monitoring of behavior (hand raising, calling out, etc.).
3. Reduce distracting stimuli by having the student put away books, pencils, etc. on and around desk.
4. Allow student to stand at times while working.
5. Seat student near a good role model or near teacher.
6. Seat student close to source of information, or move toward student to increase their attention of information, being presented.
7. Separate the student from peers who may be encouraging or stimulating the inappropriate behavior.
8. Provide opportunities for seat breaks (run errands, etc.).
9. Provide a quiet place for student to do seatwork, if needed.
10. Supervise student closely during transition times.

APPENDIX J
TEACHER STRATEGIES - E

Teacher Strategies - E

<u>Subject</u>	<u>D.O.B.</u>	<u>Sex</u>	<u>Classification</u>
E-1	2/8/82	M	EI

1. Establish classroom rules, post rules in classroom and reiterate rules often.
2. Instruct student in self-monitoring (stay on task, pay attention, etc.).
3. Reduce distracting stimuli by having the student put away books, pencils, etc. on and around desk.
4. Allow student to stand at times while working.
5. Pair oral instructions with written instructions.
6. Give student opportunities to display leadership roles in classroom (passing out papers, group leader, etc.).
7. Reduce directions to steps (make them clear and distinct).
8. Reduce workload when necessary to alleviate stress.
9. Provide opportunities for seat breaks (run errands, etc.).
10. Provide a quiet place for student to do seatwork (if possible).

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