

**THE EFFECTS OF CONTRACTING ON MODIFYING
THE BEHAVIOR OF LEARNING DISABLED
STUDENTS**

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Abstract

The purpose of the present study was to investigate the effects of the behavior modification technique of contracting with learning disabled students. The teacher and seven male students enrolled in a seventh grade class for the learning disabled developed a contract defining acceptable and disruptive classroom behaviors. A point system with rewards of free time for points earned was included in the contract. All seven students participated in the contract.

Individual rates of behavior were recorded during three baseline and four treatment (contract) observations. During the contract period, increases in acceptable behaviors ranged from 46% to 94%, with a mean percentage of improvement of 75%. A decline in disruptive behaviors ranged from 36% to 100%, with a mean percentage of 74% decrease. The learning disabilities teacher reported that she noticed favorable changes in attitude as well as behavior during the contract period. She indicated that she felt the procedure was effective in reducing time spent for disciplinary reasons.

The results of this study support the contention of other researchers that contracting is an effective behavioral management system for children experiencing learning problems. Although a review of the literature revealed that little research has been done in the area of behavioral

contracting, especially with exceptional students, there does appear to be some justification for a teacher to use the contract method to attempt to bring about changes in the behavior of children with learning difficulties.

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An Abstract
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in Psychology

by
Barbara Schieman Kutchback

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To the Graduate Council:

I am submitting herewith a Thesis written by Barbara Schieman Kutchback entitled "The Effects of Contracting on Modifying the Behavior of Learning Disabled Students." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

Linda Rudolph
Major Professor

We have read this thesis and
recommend its acceptance:

Garland E. Blair
Minor Professor
or
Second Committee Member

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Third Committee Member

Accepted for the
Graduate Council:

William H. Ellis
Dean of the Graduate School

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TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION TO THE PROBLEM	1
Characteristics of the Learning Disabled Child	2
Methods Used With the Learning Disabled Child	4
Contract Method	9
II. METHODOLOGY	18
Subjects	18
Procedure	18
III. RESULTS	22
IV. DISCUSSION	23
REFERENCES	27
APPENDIXES	30

CHAPTER I

INTRODUCTION TO THE PROBLEM

Educators are becoming more aware that children with mild or subtle learning handicaps which prevent them from achieving their academic potential are often unnoticed or misunderstood by a great many professionals and parents. Ellington (1967) contends that the child with these learning handicaps is usually "average or above in intelligence, so he does not qualify for special education. At the same time, he cannot learn without special help to acquire the proper tools with which to learn. Usually, therefore, he is either ignored or accused of being lazy and uncooperative" (p. 7). While this attitude has been prevalent for a long time, fortunately it is changing. Our knowledge concerning children with learning handicaps is increasing. Professionals now recognize that handicapped children may perform up to their capabilities if their disabilities are accurately identified.

The National Advisory Committee on Handicapped Children (1968) has established a definition of the learning disabled child as one who exhibits

a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written languages. These may be manifested in disorders of listening, thinking,

talking, reading, writing, spelling, perceptual handicaps . . . They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbances, or to environmental disadvantage. (p. 4)

Lerner (1976) stated that the Committee "has estimated that the hardcore cases of learning disabilities constitute approximately one to three percent of the school population" (p. 11). However, Lerner also pointed out that estimates may vary from one to thirty percent of the school population depending on the criteria used to classify the learning disability.

Characteristics of the Learning Disabled Child

The characteristics used for identification of the learning disabled (L.D.) child vary according to different professionals. One of the more accepted symptoms of L.D. is hyperactivity. A hyperactive child is described as one who exerts an overabundance of energy, more than that which is required for the task. The child may appear to be in constant motion, flitting from one object or activity to another. There may be other difficulties in motor development such as problems with fine motor or visual-motor coordination which contribute to general clumsiness and interfere with learning and behavior.

The L.D. child may also be hindered by visual, auditory perceptual and/or association problems. Letters and numbers are frequently reversed in reading and writing,

resulting in confusion for the child. The child with an auditory disability has difficulty discriminating similar sounds or identifying familiar sounds. Poor auditory perception problems may lead to impaired speech development. The child may experience difficulty in distinguishing between up and down, right and left, big and little, or similar concepts. Poor discrimination of time, space, distance, or direction may compound learning problems.

Although the learning disabled child may have an average or above average IQ, a discrepancy exists between ability to achieve and actual performance. Learning may be hampered by disorders of the child's thinking and memory processes. The L.D. child may have trouble expressing his ideas; his thoughts are frequently disorganized. Sequence recall may prove to be difficult for him as well as recalling directions. He may experience poor short-term or long-term memory problems involving the perception of visual or auditory stimuli. According to Rudolph (1978), these "thinking and memory difficulties are compounded by his short attention span and inability to concentrate on tasks" (p. 164). The L.D. child is easily distracted from a stimulating activity for his age group.

All of these characteristics may contribute to the L.D. child's difficulty in academic and learning tasks. His academic performance may prove to be erratic from day to day and/or uneven from subject to subject. Thus, he

experiences poor achievement in reading, spelling, writing, and perhaps mathematics (Rudolph, 1978).

Many normal children experience one or more of the symptoms of L.D. in varying degrees at some period during their development. The persistence, intensity, and cluster of symptoms should be considered carefully in attempting to determine if a child is learning disabled.

Methods Used With the Learning Disabled Child

Most educators would agree that a student's classroom behavior directly or indirectly influences his academic performance in the classroom. Inasmuch as many of the characteristics of L.D. such as hyperactivity, short attention span, distractibility, and clumsiness are considered to be behavior problems interfering with learning in the classroom, these children are often labeled as disruptive, a behavioral disorder, or even incorrigible. Some have received the special educational assistance needed; however, a large number have failed, withdrawn, dropped out of school, or even have been institutionalized (Brutten, Richardson, & Mangel, 1973).

Forness and Esveltdt (1975) observed 24 male students who were in the process of being referred for school learning or behavior problems. The subjects' behavior was compared to that of normal male peers in the same academic group. The results showed that the experimental group displayed significantly lower on-task behavior than their

classmates. Also, a significant difference was noted in the frequency of teacher responses to their behavior, confirming that the deviant child often receives two or three times more teacher attention in the classroom than the normal child. A follow-up study one year later indicated that such behavior subsequently led to special education needs.

According to Kurtz and Neisworth (1976), "Since the 1960's behavior modification has dramatically influenced the direction and effectiveness of services for the handicapped children" (p. 212). These authors are especially interested in self-management procedures and feel these techniques are quite pertinent for handicapped children. They stated that "Self-management strategies represent pioneering efforts in a promising area of therapy. These emerging approaches have much to offer educators who are dedicated to helping handicapped children assume more responsibility for their own lives" (p. 216).

Behavior modification is based on the principles of operant conditioning. According to Mikulas (1972), emphasis is placed on "the contingency between the person's behavior or response and some event" (p. 87). The theory states that the use of reinforcement will increase the frequencies of desired behaviors, while the use of punishment will decrease the possibility of the responses being repeated. Advocates of behavior

modification in education concentrate on how to manipulate the environment to induce the desired behavior.

Lerner (1976) stated that behavior modification techniques can be used successfully with the L.D. child in managing both the areas of behavior and learning patterns. "The techniques focus on the child's actual behavior rather than its underlying cause" (p. 340). The author emphasized that goals based on the individual needs of the child should be determined and stated in specific behavioral terms. She also pointed out that to implement this procedure, the behavior interfering with the learning process must be identified and observed systematically. Plans may then be formulated to manipulate the environment in order to bring about the desired change in behavior through a rewards system.

A study conducted by Novy, Burnett, Powers, and Sulzer-Azaroff (1973) provided evidence that the attending-to-work behavior of one learning disabled child could be modified through the behavior modification techniques of token reinforcement. These authors regulated the rate of attending by presentation of reinforcement through tokens as a consequence of that response.

The subject selected for study was in a L.D. class, functioning below his normal grade level and had a history of frequently exhibiting distractibility and hyperactivity,

as observed by his former teachers. During the baseline period, his attending behavior (doing what was related to the task) averaged 60 percent during three 30-minute observation periods. In the experimental phase of the study, the subject had to attend to his work consistently for five minutes and was notified of earning a token by a light signal. In the reinforcement period, his attending behavior increased to 88 percent during six 30-minute sessions. The subject was told that the experiment had ended and was unaware that he was observed for the following four days. In this reversal phase, the subject's attending behavior dropped to 67 percent.

Novy, et al. (1973) felt that the success established in the experimental phase of their study could be extended if the token system was intermittently reinstated or if the teacher used praise and other personal rewards frequently. In order for the L.D. child to function at his optimal level, the various behavior problems associated with the L.D. child must be reduced. From the results of this study, the authors concluded that similar behavior modification programs can be used to reduce other disruptive behaviors that are associated with the child labeled as "learning disabled."

Another study by Broden, Hall, Dunlap, and Clark (1970) showed that a token reinforcement system backed with systematic teacher attention to appropriate behavior could

be used successfully to reduce the extremely disruptive behavior of a junior high school special education class. The subjects included 13 seventh and eighth grade students in a special education class. All students were several years behind in at least one academic area and displayed other characteristics of a learning disabled child.

During the baseline period, an observer recorded individual and group study levels. The mean rate of study behavior was 29 percent for this period. In the second period, during which the teacher gave attention only to studying behavior, the mean rate increased to 57 percent. In later sessions, the students were introduced to a token reinforcement system to obtain privileges by allowing the students to earn points for studying behavior. The mean class study rate rose to 83 percent on the first day of the reinforcement period and was maintained at a high level throughout this phase of the experiment. However, one student objected strongly to the point system and became highly disruptive. A modified version of isolation was used the following day, after which the student asked that he be allowed to return to the classroom and participate in the point system again. Upon returning to the classroom, disruptive behavior decreased, and his studying behavior increased dramatically.

Observations continued intermittently for the one and a half months of the remainder of the school year during the

postcheck period. Using the token system accompanied by systematic teacher attention, the postcheck mean study rate of 90 percent was maintained. During reversal periods of the experiment, in which reinforcement of appropriate behaviors was withdrawn, the mean study rate dropped to 18 to 31 percent. When the point system was reinstated, dramatic returns to high study rates reoccurred. Broden, et al. (1970) emphasized that the effectiveness of a given procedure varied from pupil to pupil, therefore the reinforcement procedures were contingent upon pupil choices. Although the authors agreed that a point system may not be appropriate in many junior high school classrooms, it may be very valuable to teachers who have difficulty in maintaining control over children with highly deviant and disruptive behavior.

Contract Method

A more formal means of behavior modification is the contract method. Thomas and Ezell (1972) explained that the contract system was a "logical, self-directing approach to problem solving" (p. 27) in which the person is forced to assume responsibility for his own behavior. The student and teacher (or counselor) first agree on the existence of an area for concern and decide on the methods to be used to fulfill the contract. The terms of the contract are then written out and signed by both. It is now up to the student to act on the written commitment and assume responsibility

for solving his own problems. However, the authors feel that the teacher should aid the student by acting as a resource person who provides assistance through regular conferences and periodic checks with the student to help him evaluate his own progress.

Poppen and Thompson (1974) believed that the conference following the initiation of the contract should begin with a report from the student concerning his progress. If the contract has not been kept, it should be discarded and a new one written up and signed if the student indicates he is still interested in working out his problem. The authors emphasized that the teacher or counselor is most effective if judgements to the student are avoided concerning the incomplete homework.

Advantages of the contract method as identified by Thomas and Ezell (1972) are: the provision of a written agreement stating the course of action decided upon, a motivational device which introduces time limits, allowing the subject to feel success by accomplishing steps toward his solution; and the requirement that the person assume responsibility for his own behavior. Disadvantages of the contract as seen by the authors include: the necessity of a strong desire by the subject to change his behavior and stick to his contract; the novelty of the contract may wear

off with time; and no external rewards or punishments can be imposed by the teacher other than those stated in the contract.

Thompson and Poppen (1972) went one step further in designing a behavior contract by awarding points for acceptable behavior and subtracting points for unacceptable behavior. To allow the students to participate in deciding how the points will be awarded and what rewards the points will earn in benefits encourages more involvement of the student and thus a greater likelihood that the contract will be successful. The authors suggested that the contract method may be used effectively in group settings also. While each student is able to concentrate on changing only his own behavior to meet success, there is also a supportive bond of shared common problems and concerns found in the group.

Barlow (1974) compared students who were taught by the contract method to students taught in the traditional classroom setting. He found that the contract students were able to become more involved in their learning experiences and seemed to exhibit a greater personal pride in their achievements. Barlow concluded that both teaching styles were well organized, but contract learning was dependent on the willingness of the student to accept responsibility for learning and to make a commitment to that task.

Taylor (1971) surveyed students who had experienced the learning contract to determine their reaction to the teaching method. He found no statistical difference between groups taught by the traditional method when compared to those taught by the grade contracts on measures of validity of the course examination, understanding of the objectives of the course, or the quality of the standards for the course. However, the majority of the students who experienced grade contracts did feel that it was a fairer system of assigning grades than the traditional method.

A study by Arwood, Williams, and Long (1974) examined the effects of behavioral contracts on improving student behavior as well as academic progress. Contracting involves mutual planning between teachers and students as to each party's responsibilities and obligations. These authors questioned whether a mutual agreement was necessary to produce the desired academic and social behaviors or whether a proclamation stating the expectations of the student would be just as effective. Their research involved 28 ninth grade students in the same English class. The class was considered to be an average group of students with no chronic behavioral problems. Four students considered to be the worst disruptors were selected as targets. Each target was observed twice for four minutes during the 50-minute class period. Observation of targets was systematically varied by ten trained observers. The dependent

variable was appropriate behavior; that is, the student doing a task-relevant behavior consistent with the classroom learning activity or an appropriate social interaction that was permitted by the teacher. Inappropriate behavior included four classes of disruptive behavior by the targets or engaging in a non-lesson activity. The study consisted of eight phases. During the baseline period, the frequency of student and teacher behavior during regular classroom procedures was established. The teacher conducted class according to her usual routine, with the only exception being the addition of a weekly exam to compare academic achievement across all phases. The second phase involved the implementation of the behavior proclamation in which the teacher developed the plan and presented it to the class. The proclamation was withdrawn and baseline was re-established in the third phase. During the fourth phase, students were given the opportunity to help develop a class-management program through a mutual agreement behavior contract. The final four phases were a repetition of the first four to help establish more consistent results of the various treatments.

Arwood, et al. (1974) concluded that the use of both the proclamation and mutual agreement contract systems did lead to an increased rate of appropriate behavior. During the baseline period, the four target subjects demonstrated an average of 70 percent appropriate behavior, with an

increase to 76 percent during the proclamation phases and 89 percent during the mutual agreement contracting phases. In the second mutual agreement contracting phase the average rate rose to 96 percent appropriate behavior. Furthermore, mutual agreement contracting produced higher levels of appropriate behavior than did the proclamation method. Thus, involving the students in planning a management system will enhance the students' commitment to participate in the program according to this study. Mutual agreement contracting also produced higher levels of academic progress than the proclamation method, reinforcing the idea that a cooperative contract establishes a stronger commitment to perform well, both academically and socially.

Williams and Anandam (1973) conducted a study to determine the effects of behavior contracting on grades. They chose as their subjects two classes of seventh graders from a disadvantaged metropolitan area. The grades attained by students under contract were compared with the grades attained by students not under the contract. The contract contained highly specific definitions of both academic and social behaviors for which the students were awarded points. In addition to earning daily points and receiving a grade each day based on these points, the contract students were also given an examination each Friday.

In order for the contract to be effective, certain desirable teacher behaviors were required. These behaviors

included maintaining records on the students' progress, posting the points gained or lost on a wall chart, giving daily assignments, and providing available free time activities. The students were requested to evaluate how well the teachers carried out their part of the contract.

Williams, et al. (1973) showed that behavior contracting did significantly increase grades of students in a disadvantaged setting, whereas the grades of a similar control group not under a contract decreased slightly. The authors felt that this study also suggests that some teachers are more successful than others in using the contract system. The contract students perceived the teachers as demonstrating varying degrees of consistency and fairness as revealed in their teacher evaluations. The authors suggested that the students would be less inclined to demonstrate appropriate behavior if they learned that they cannot depend on teachers to fulfill their part of the contract, especially in areas of accurately recording their behaviors and providing appropriate consequences for those behaviors.

Research by Gudgeon (1977) also reported that the contract method appears to be effective in producing lower rates of behavior problems in a fifth-grade classroom. The author felt that the contract method provided the students in her study with a means for self-control rather than a reliance on teacher-controlled methods, which proved more satisfactory to the students as well as the teacher.

Thompson, Prater, and Poppen (1974) conducted a study using a teacher-student behavior contract to determine its effectiveness in establishing motivation among students experiencing reading difficulties. The subjects selected for the study were 71 students from grades two to five assigned to special reading classes. Some of the characteristics used to describe the students are similar to those of a learning disabled child: hyperactive, behavior problem, and underachiever. Their behavior was observed for five days during the total class period. During this baseline period, data were collected on the number of occurrences in nine areas of expected class behavior.

The contract used in the study provided for 30 minutes of free time upon earning a total of 100 points for completing individualized assignments. Free time could be spent as the students chose. Students were allowed to select the teacher-offered activities or bring their own activity to school. Penalties stated that the students could not bother other students who were working or the remainder of free time would be forfeited and 200 points would be required for the next free-time period.

During the second five-day observation period conducted at the beginning of the fourth week of the experiment, there was a significant decrease of 88 percent in the area of disruptive behavior and a 95 percent increase in the completion of daily assignments. Similar results were

found in the decreased rate of tardiness to class and the increased number of corrected daily assignments. Sixteen weeks after the initiation of the contracts, a third five-day observation period was held. Continued progress in all four of the above areas was again obtained.

Thompson, et al. (1974) attributed the success of the contract plan to the opportunity for the student to experience daily success, the recognition of individual achievements, and the acceptance of responsibility and accountability for personal behavior. The opportunity for students to make their own choices and decisions was also perceived by the authors as an important motivational factor in the contract plan. The authors felt that the contract plan also assisted the teacher in establishing a positive atmosphere in the classroom.

The studies reviewed have indicated that behavior modification, especially the contract method, has been effective in changing the disruptive behavior of students in the regular classroom. Inasmuch as many of the behavior symptoms of the L.D. child are similar to the disruptive behavior of students in a regular classroom, the purpose of the present study was to determine the effect of the behavior modification technique of contracting with learning disabled students.

CHAPTER II

METHODOLOGY

Subjects

Subjects participating in the present study were members of a seventh grade class for the learning disabled in the Clarksville-Montgomery County School System. All seven of the students in this class were boys ranging in age from 12 to 14 years. The class was described by the teacher as being active, with a few students often displaying chronic behavior problems that generally influenced the other students to be disruptive. The teacher had had previous teaching experience; however, this was her first year of teaching classes for the learning disabled. She volunteered to participate in the study because of her desire to establish efficient procedures for managing the behavior problems exhibited in her third period L.D. class.

Procedure

All seven students in the L.D. class were involved in individualized academic programs to meet their specific learning needs. However, the teacher indicated that these students enjoyed class projects or group assignments; therefore, a contract plan was thus drafted by the teacher and the author to be presented to the students as a class project.

The teacher selected 12 areas of problem behavior she felt interfered with classroom learning for possible inclusion in the contract. The present researcher observed the seven students for three one-hour class periods in order to obtain baseline data. A record of the number of occurrences in all 12 areas of behavior was kept for each student. The teacher was asked to conduct class according to her usual routine in order to obtain the frequency of the designated student behaviors under regular classroom conditions.

At the end of the baseline period, the students were informed they would be able to participate in planning the management of their classroom. They were asked to select specific behaviors they considered as appropriate classroom behavior or disruptive to the class setting. A brief class discussion led to a variety of responses which were listed on the board.

A contract combining the students' and teacher's suggestions was drafted and presented to the class on the first day of the following week. The contract consisted of eight behaviors with points awarded for appropriate behavior each day. "Acceptable" behaviors considered to be necessary for efficient classroom study were: sitting in desk when the bell rings, bringing paper to class, bringing pencil to class, getting permission to talk by raising hand, and leaving the room quietly without running. "Disruptive" behaviors which interfered with class study were defined as:

preventing others from working, getting up from desk without permission, and name-calling in class. The contract plan was organized so each student could earn eight points per class period. Thirty minutes of free time could be earned when a student accumulated a total of 80 points. Free time could be spent as the student chose. Students with special interests were encouraged to bring projects from home or check out various activities from the library for use during this free time. Many games were also available in the classroom. The contract provided one free-time rule to discourage students from bothering those who were working. If the rule was broken, the students forfeited the remaining free time for that day and would be required to earn 160 points for his next free-time period (see Appendix A).

A record sheet to record total points earned each day was kept for each student. If the student was engaging in disruptive behavior, the teacher would signal the student by raising one finger to indicate the loss of one point. A daily and weekly total was charted by each student and turned in to the teacher at the end of each day. It was later agreed by the class that any student who lost his record sheet would have to forfeit his points for that week. As a daily check the teacher also recorded the number of points earned or lost by each student on her own sheet. The treatment period continued for eight weeks. Four

one-hour observations were made by two graduate students majoring in psychology from Austin Peay State University.

Five of the students immediately agreed to the terms of the contract and signed it. The teacher signed each student's contract which obligated both parties to abide by its terms. The contract became effective that class period. The two remaining students were not ready to sign the commitment and asked if they could think about it for a while. These two students were friends and the teacher had identified them as often being the instigators of disruptive behavior in class. Both students rejected the contract the following day. Their behavior grew increasingly more disruptive after their rejection of the contract. The teacher was encouraged to ignore their behavior as much as possible. Upon observing their classmates enjoying their earned free time three weeks later, the two students were individually approached for the second time to participate in the contract plan. Each student agreed and signed a copy of the contract.

CHAPTER III

RESULTS

A comparison of baseline and treatment-period data indicates that all seven subjects showed: (a) improvement in acceptable behaviors and, (b) a decrease in disruptive behaviors during the contract period. A graph comparing the number of acceptable and disruptive behaviors during the baseline period with the incidents of these behaviors recorded during the treatment (contract) period was plotted for each subject. These graphs are found in Appendix B. Two subjects entered the contract agreement later than their classmates. Even though they were not under contract, their behavior was observed and recorded as extended baseline data for this period. Two subjects (6 and 7) returned to the regular classroom before the treatment period ended, hence only six data points are shown on their respective graphs.

The percentage of improvement in acceptable behavior ranged from 46% (Subject 2) to 94% (Subject 4), with a mean percentage of improvement of 75%. Disruptive behavior decreased 36% (Subject 2) to 100% (Subject 6), with a mean decrease of 74%.

CHAPTER IV

DISCUSSION

The purpose of the present study was to investigate the effects of the behavior modification technique of contracting with learning disabled students. From the results obtained (see Appendix B), the contract method seems to be an effective procedure for increasing acceptable behaviors and decreasing disruptive behaviors for the learning disabled students studied.

The results of the present study are in agreement with those of Thompson, Prater, and Poppen (1974) who found that a teacher-student behavior contract was effective in motivating students experiencing reading difficulties. These authors suggested that the contract plan was successful because of the opportunities it provided for the student to achieve measures of daily success, the recognition for these achievements, and the responsibility to be accountable for personal behavior. In the present study, the learning disability teacher made similar references to the students' reactions concerning the contract plan. Each student was responsible for recording his performance according to the contract. His record sheet was later checked with the teacher's own record card. The teacher reported that the students demonstrated great accuracy and

honesty in their record keeping. She also noted that the students appeared to be more eager to complete their work without being asked, and they apparently were quite pleased with their daily accomplishments.

In developing the criteria for the contract, student involvement appeared to be a positive factor in establishing a commitment to perform well. This concurs with the findings of Arwood, Williams, and Long (1974) which suggested that involving the students in the planning of a management system produced higher levels of appropriate behavior than a proclamation method. These authors reported that mutual planning between the teacher and students increased students' participation as well as strengthening their commitment to perform well.

The teacher stated that she was comfortable using the contract method and indicated that the contract method was an effective time saver for her. Much of the time she had previously spent in disciplining the class could now be directed toward learning activities. She noted that free time was an envied reward which helped motivate the students to earn their contract points.

Another encouraging finding of the present study concerned the two students who were transferred to regular classrooms due to improvement in both their academic work and behavior. The learning disability teacher consulted with their new classroom teacher about their adjustment

to the larger classes. The classroom teacher reported that both students often ignored other talkative students in the class and were very eager to complete their work. The teacher praised both students as setting "good-behavior" examples for the remainder of the class.

A period of reversal-to-baseline conditions would have been beneficial in determining the lasting behavioral effects of the contract plan. However, the treatment period concluded as the end of the school year drew near. The learning disability teacher had indicated that the last weeks of school involved the students in a great deal of reviewing and testing. Since class time was very limited at this point in the school year and allowed little time for extra activities, she requested that the study be terminated as each student earned his last free time in the eight-week period. Inasmuch as teacher involvement is equally important to the success of the contract, her suggestion was accepted.

Another factor that could improve the accuracy of the present findings would be an assessment to determine the agreement of the two observers' ratings. Having an observation session to compare the recordings of the two observers for the same behavior would be beneficial in determining the consistency of the reported observations.

Despite the limitations of the present study, the findings do support those of Thompson, Prater, and Poppen

(1974) and Williams and Anandam (1973) and, in accord with these studies, suggest that the contract method is an effective behavior management system with children experiencing learning problems. Although a review of the literature revealed a paucity of research in the area of behavior contracting, especially with exceptional students, there does appear to be some justification for a teacher to use the contract method to attempt to bring about changes in the behavior of children with learning difficulties.

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APPENDIXES

APPENDIX A

Presentation of the Contract

A contract incorporating the teacher's and students' suggestions was presented to the class to initiate the treatment period. The contract form and student's record sheet were explained orally by the author in the following manner:

I combined many of your responses with your teacher's suggestions to make up a class contract for appropriate behavior in the classroom. Here is a copy of the contract which includes eight behaviors both you and your teacher agreed are appropriate for classroom learning. The contract states the behavior you must perform to earn a point. Since there are eight behaviors, you can earn eight points during one class period. When you have a total of 80 points, you have earned 30 minutes of free time to spend in any activity of your choice. You and your teacher will both keep a record of the points you have earned. During your free time you may choose to bring a game from home or select an activity from either the library or classroom.

There are two rules included in the contract. The first states that if you lose your record sheet, then you forfeit all your points on that sheet and start over. This rule makes it clear that it is your responsibility to turn in your record sheet to Mrs. Castleberry at the end of each class period.

The second rule concerns free time. When you are using your free time, it is important that you don't bother anyone in class who is still working. If you intentionally disturb someone working, then you will lose the remainder of your free time for that

day and will be required to earn 160 points for your next free time period.

At the bottom of the contract is a place for you and Mrs. Castleberry to sign your name. By signing your name, that means you agree to the terms of the contract that I have just explained. When Mrs. Castleberry signs her name, that says she agrees to the contract and will allow you to have your 30 minutes of earned free time.

The other sheet I have given you is your record sheet. There is a column for each day of the week. If you perform the behavior that is stated on this sheet, you will earn a point for that behavior that day. It will be your responsibility to mark a point in the box for the correct day. If Mrs. Castleberry notices that you are not exhibiting a specific behavior listed on the contract, she will signal this to you by raising one finger to indicate the loss of one point. It is your job to mark an X in the appropriate box for that day. Mrs. Castleberry will also have a card to keep a daily record of the points each of you have lost. Before you turn in your sheet at the end of the period, you should add and record your day's total along with your running point total.

Class Contract

Class Behavior	Points
1. Sitting in desk when bell rings	1
2. Bring paper to class	1
3. Bring pencil to class	1
4. Do not prevent others from working	1
5. Do not get out of desk without raising hand	1
6. Get permission to talk by raising hand	1
7. Do not use name calling in class	1
8. Leave the room quietly without running	1

- A. 80 points = 30 minutes free time
- B. If I lose my card, then I lose all my points and must start over.
- C. During my free time, I will not bother anyone who is working at their seat. If this rule is broken, I lose the rest of my free time and I must earn 160 points for the next free time period.

D. _____
Student's Signature

Teacher's Signature

Daily Point Totals

's DAILY POINT TOTALS

Behavior	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
1. Sitting in desk when bell rings						
2. Bring paper to class						
3. Bring pencil to class						
4. Do not prevent others from working						
5. Do not get out of desk without raising hand						
6. Get permission to talk by raising hand						
7. Do not use name calling in class						
8. Leave the room quietly without running						
Daily Sum						

Total from last week _____

TOTAL _____

APPENDIX B

Figures

Figure 1. Number of Acceptable Behaviors (AB) and Disruptive Behaviors (DB) During Baseline and Treatment Periods: Subject 1.

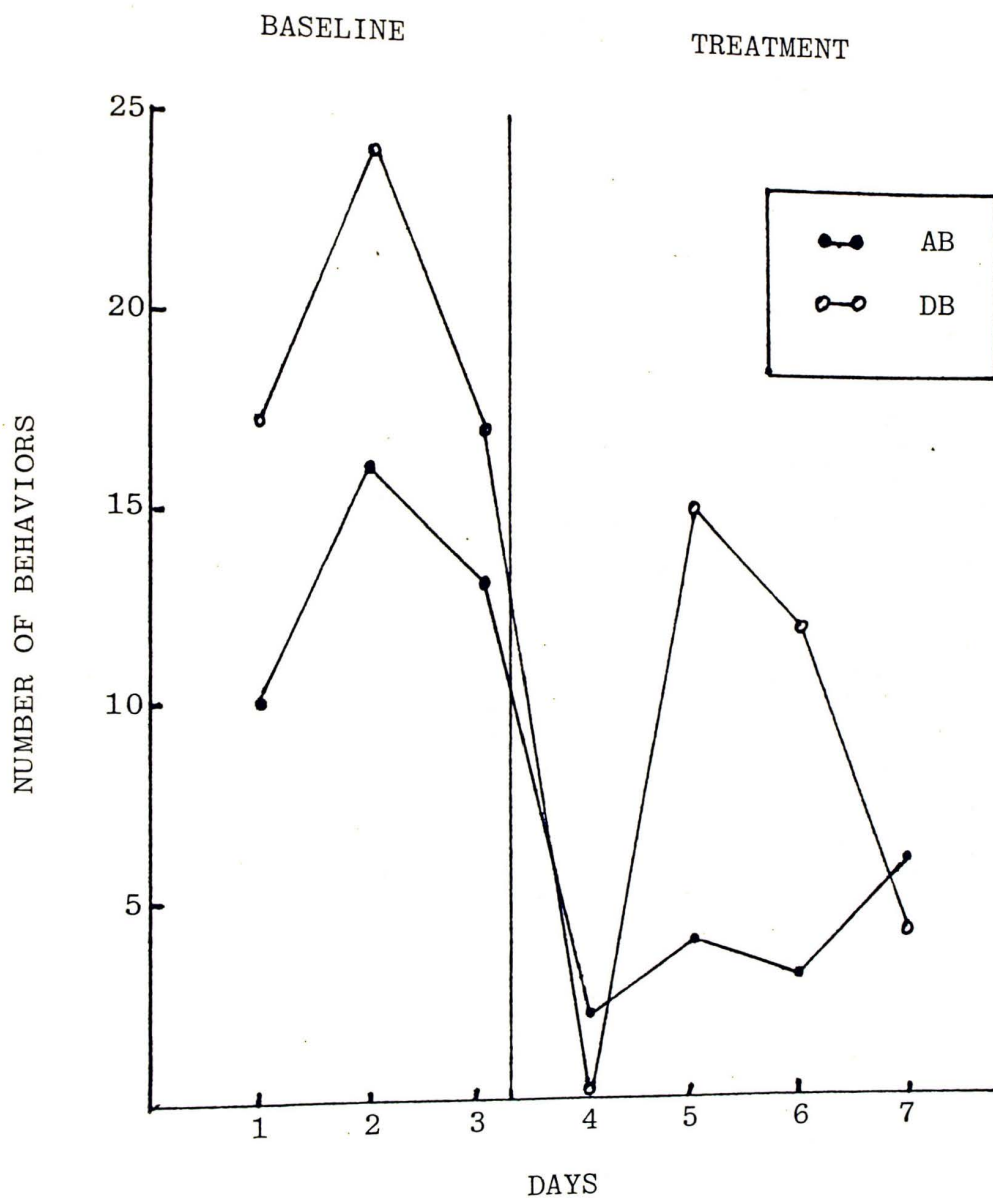


Figure 2. Number of Acceptable Behaviors (AB) and Disruptive Behaviors (DB) During Baseline and Treatment Periods: Subject 2.

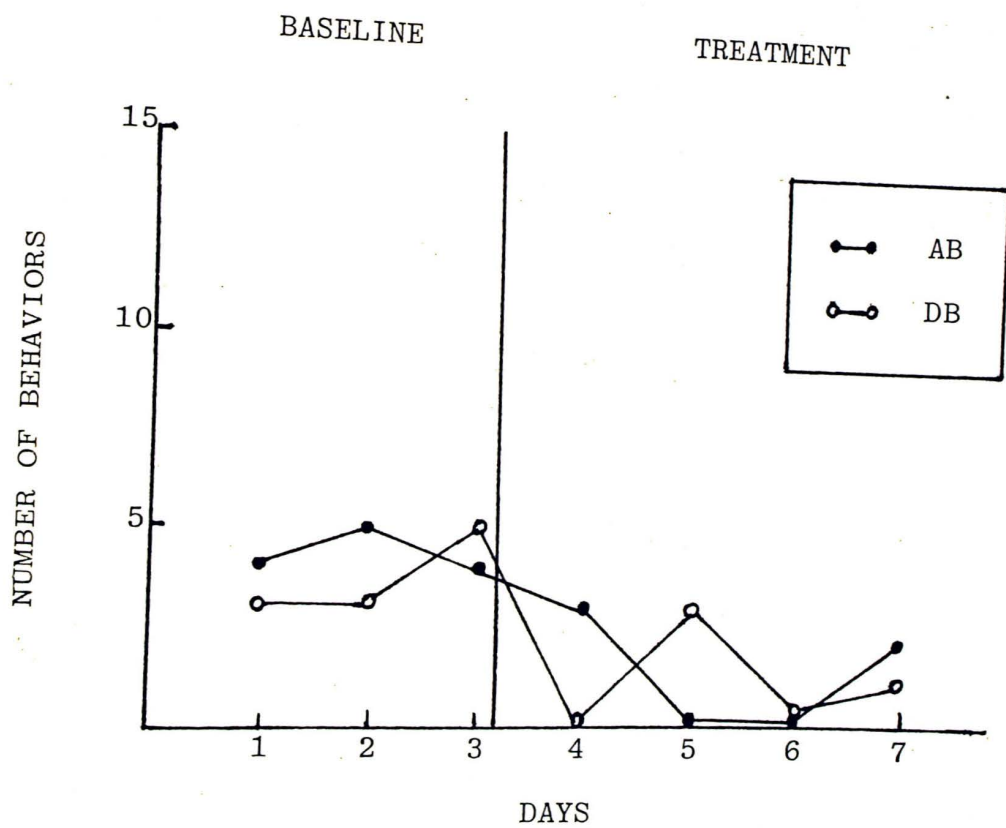


Figure 3. Number of Acceptable Behaviors (AB) and Disruptive Behaviors (DB) During Baseline and Treatment Periods: Subject 3.

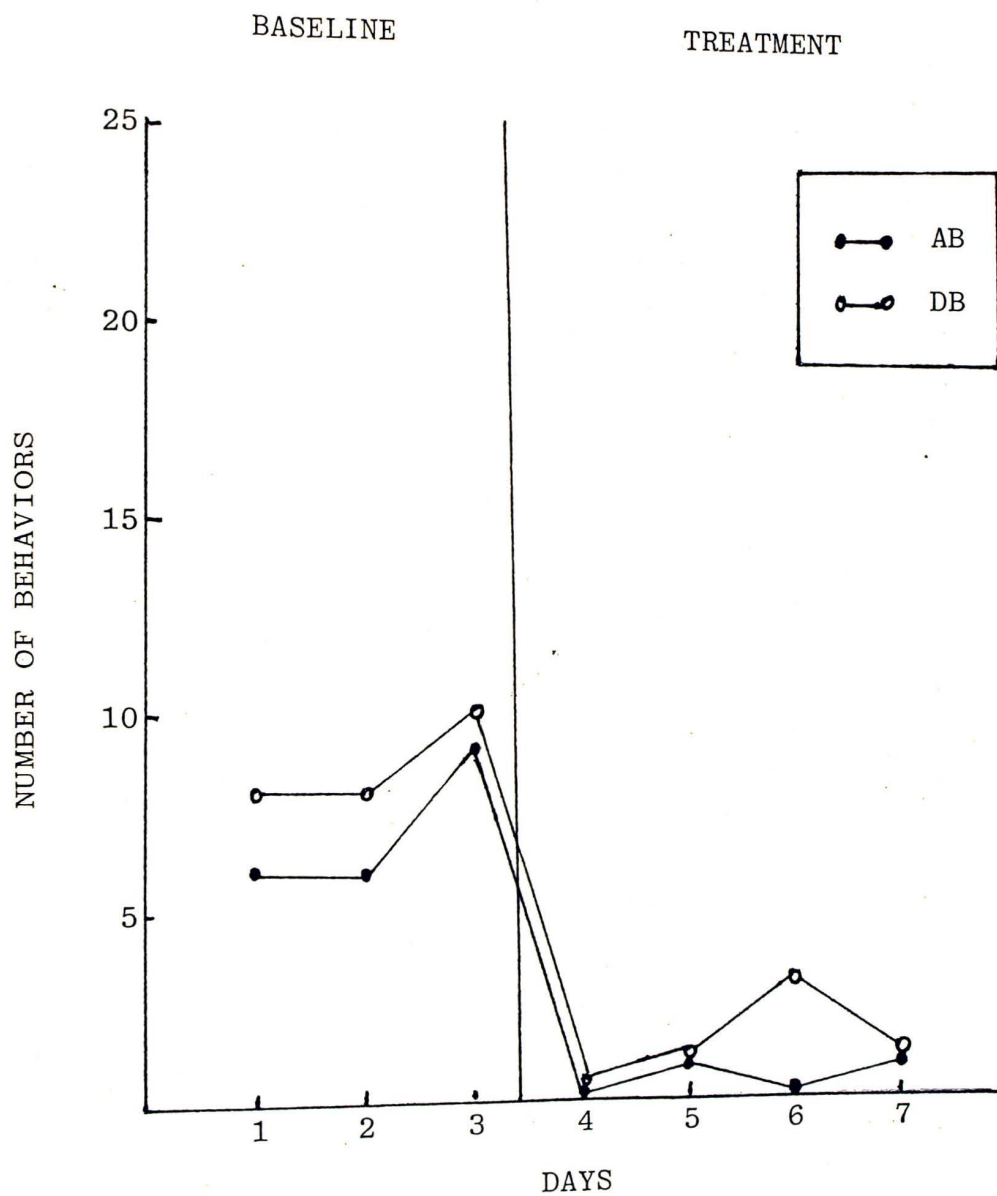


Figure 4. Number of Acceptable Behaviors (AB) and Disruptive Behaviors (DB) During Baseline and Treatment Periods: Subject 4.

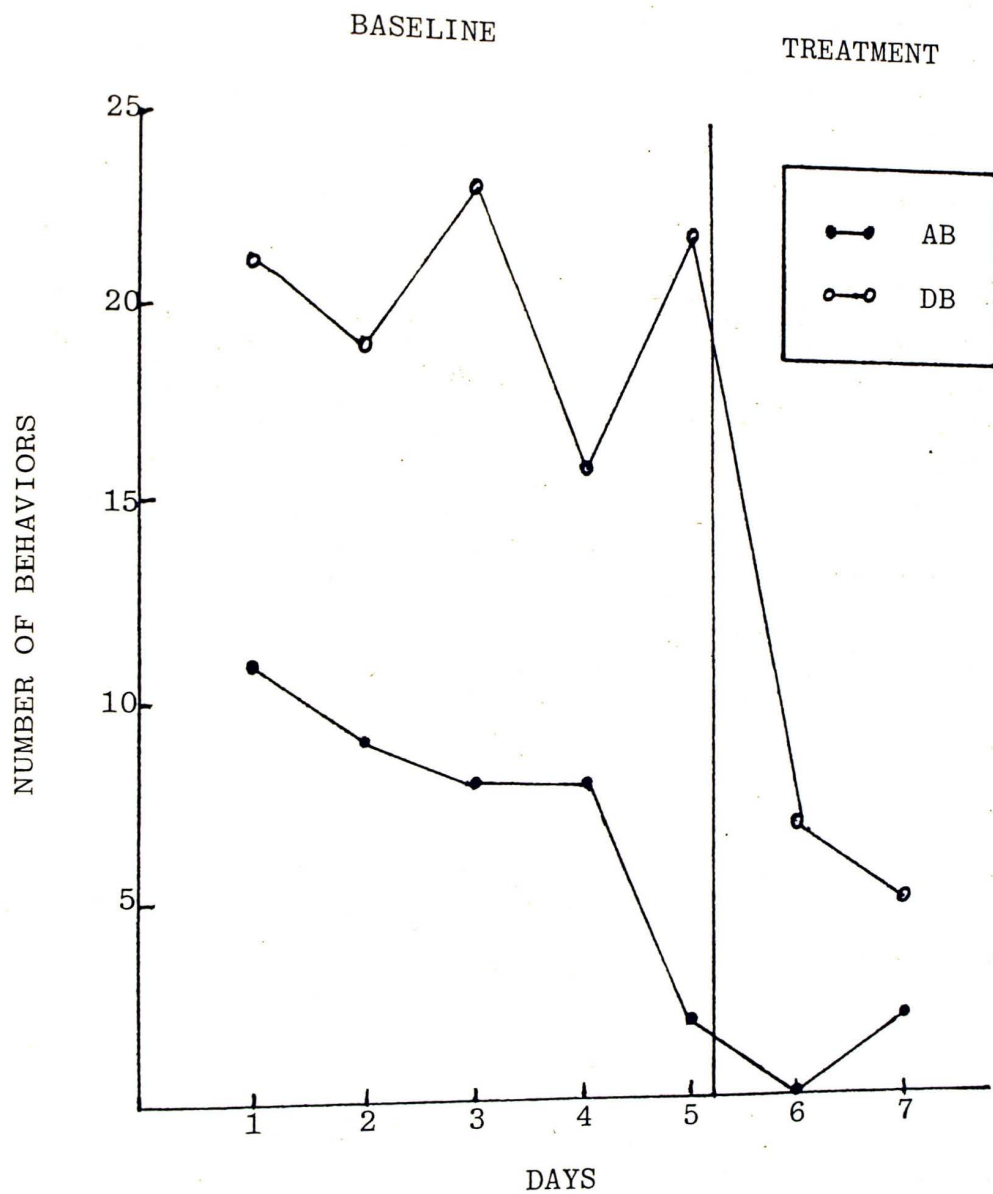


Figure 5. Number of Acceptable Behaviors (AB) and Disruptive Behaviors (DB) During Base-line and Treatment Periods: Subject 5.

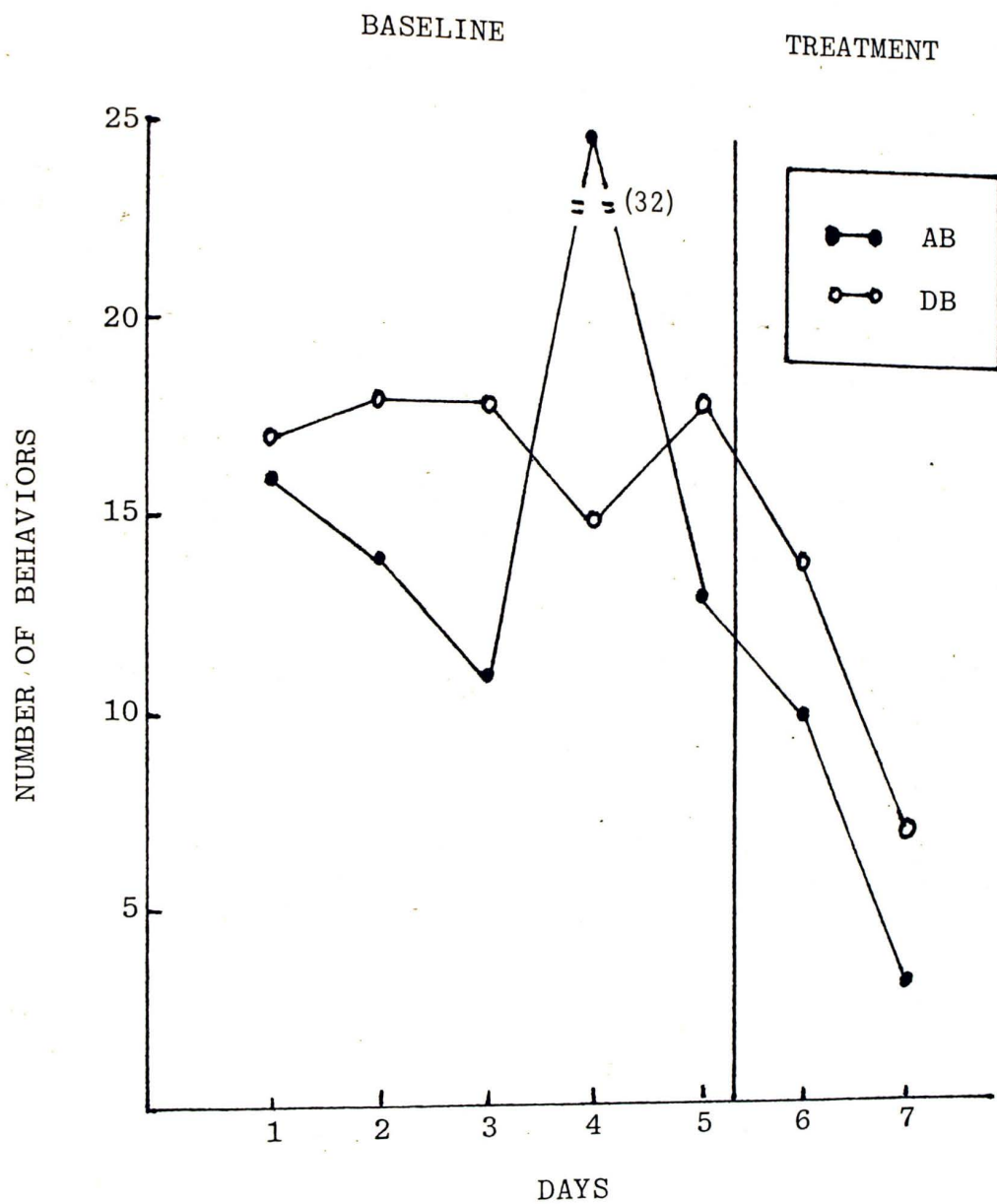


Figure 6. Number of Acceptable Behaviors (AB) and Disruptive Behaviors (DB) During Baseline and Treatment Periods: Subject 6.

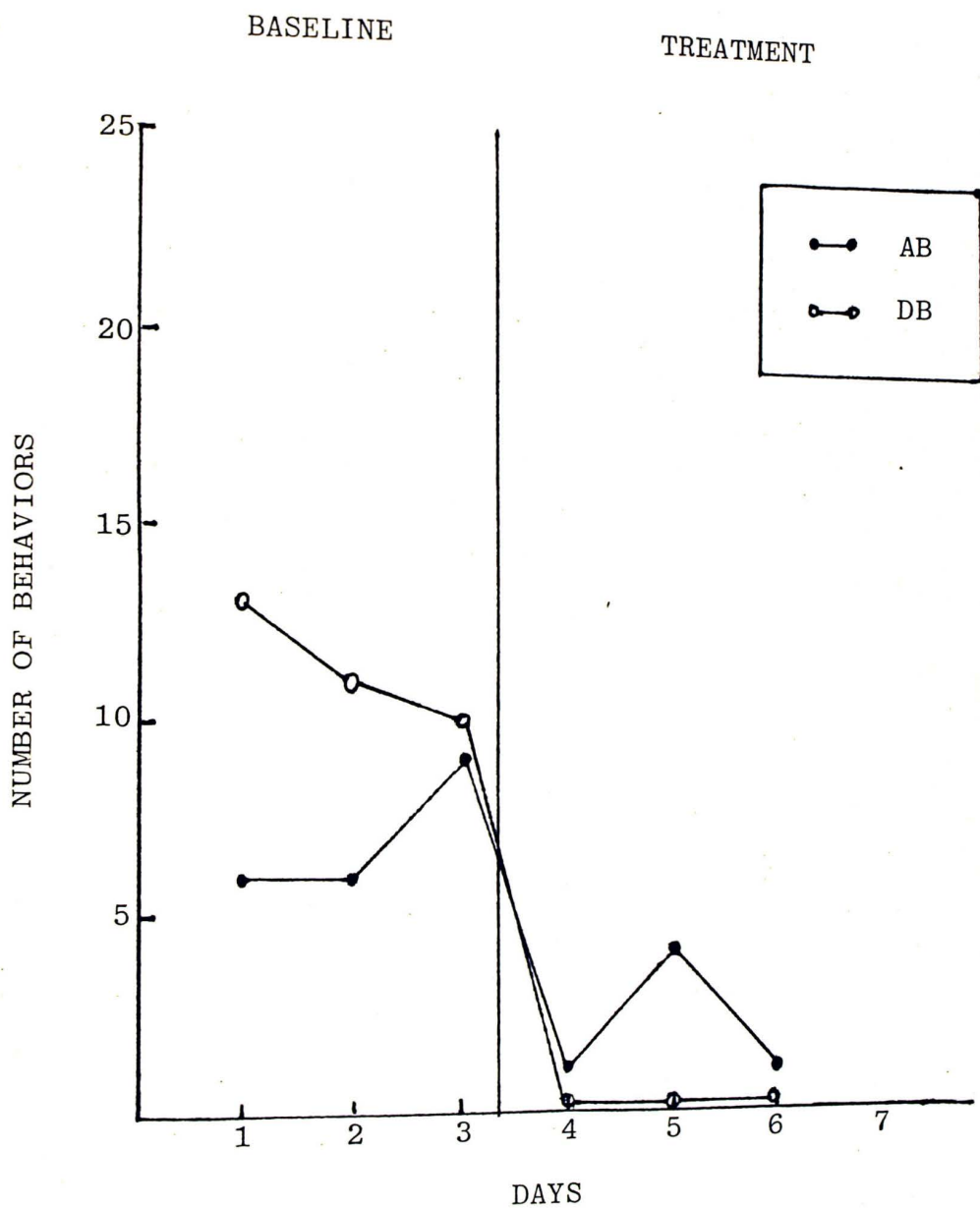


Figure 7. Number of Acceptable Behaviors (AB) and Disruptive Behaviors (DB) During Baseline and Treatment Periods; Subject 7.

