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**THE EFFECT OF A SELF-MONITORING PROGRAM ON
PERCEPTUALLY IMPAIRED STUDENTS'
COMPLIANCE TO CLASS RULES**

**by
Michael A. Scully**

A THESIS

Submitted in partial fulfillment of the requirement of the
Master of Arts Degree in the Graduate Division
of Rowan College of New Jersey
1995

Approved by _____
Advisor

Date Approved 5/10/95

ABSTRACT

Scully, Michael A.

The Effect of a Self-Monitoring Program on Perceptually Impaired Students' Compliance to Class Rules, 1995.

Advisor: Dr. Jay Kuder
Special Education

The objective of this study was to examine the effects of a self-monitoring procedure that was designed to increase compliance to classroom rules in a middle school setting. Four male seventh grade students classified as Perceptually Impaired with histories of discipline and academic difficulties served as subjects for this investigation. After a baseline period in which a rating scale was used to evaluate their behavior, the subjects were taught to use the same scale and were required to rate their compliance to a predetermined set of rules. Points to be used for participation in a

reinforcement activity could be earned if their ratings corresponded with the teacher's. The results of the intervention indicated that the self-monitoring program improved the ability of all the subjects to follow the prescribed rules of the class. Data showed that the positive results continued during a subsequent maintenance period.

MINI-ABSTRACT

Scully, Michael A.

The Effect of a Self-Monitoring Program on Perceptually Impaired Students' Compliance to Class Rules, 1995.
Advisor: Dr. Jay Kuder
Special Education

This study investigated the effect that a self-monitoring program had on four classified students to improve compliance to class rules. A rating scale was used by the teacher and subjects to evaluate performance. Data indicated positive results to the self-management procedure during the intervention and maintenance periods of the project.

ACKNOWLEDGMENTS

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CHAPTER I

THE RESEARCH PROBLEM

Rationale

One of the foremost concerns of teachers of classified special education middle school students is the management of classroom behavior. Historically, special educators have searched for programs and systems that would control or eliminate the negative behaviors that could compromise the educational goals and objectives of the class. Unfortunately, many teachers report they spend as much or more of their time on implementing and administering classroom management strategies as they do on instruction. Obviously, this time could be more effectively used to meet the educational, social, and emotional needs of the students. Often, behavior modification or management programs (i.e. token economies, etc.) yield results that are short lived, costly, and do not transfer or generalize to other settings.

The need to find effective ways to positively influence the behavior of behaviorally disordered students is of great importance

today. More and more classified students are expected to be included in the mainstream of the school environment. Teachers of regular education classes are not able to design and maintain many of the traditional behavior shaping programs. Lacking efficient methods to control inappropriate actions, special education students could lose an opportunity for valuable educational and social experiences.

A possible solution to this situation is to have students use a self-management procedure to influence behavior changes. This concept offers a number of advantages to educators. First, self-monitoring makes students more conscious of their behavior. When individuals become aware of the frequency of negative actions, they may begin to understand the importance of the need for change. Also, they may realize the possibility of long term benefits such as more positive relationships with peers and improved academic performance. Another aspect of self-management is that it can be used in a variety of settings such as in school, at home, or in other environments where change of behavior is needed. Furthermore, self-management may be especially effective with adolescents since it provides them with an opportunity to control their lives and

gives them a sense of power and gratification. Finally, self-monitoring of behavior is a time efficient intervention. Since students are given the responsibility for managing their behavior, teachers have more time for instruction and other duties.

Statement of the Problem

The purpose of this research is to determine if self-monitoring of behavior will prove to be an effective technique to improve students' ability to follow classroom rules. The study will involve four seventh grade students classified as Perceptually Impaired with a background of discipline and behavior problems. The investigation will take place during the students' study skills class which is held in a typical middle school classroom. Baseline data will be collected daily for a one week period, followed by two weeks of intervention during which students will use a rating scale to evaluate their compliance to class rules. A one week post intervention period will be used to assess students ability to maintain the positive effects of the study.

Statement of Hypothesis

It is felt that the use of self-monitoring techniques will increase compliance to class rules with seventh grade behaviorally disordered students within the context of a study skills class. The author expects to find that, given the opportunity to be actively involved in modifying their own behavior, the students will respond in a positive manner. Also, by being able to observe their progress, students will be motivated to continue to improve.

Significance

The results of this study may prove to be valuable in a number of areas. Special Education teachers would be very interested in a behavior modification intervention that is easy to implement, does not require a great deal of time and effort to maintain, and does not seriously limit the amount of time available for instruction.

Teachers of regular education classes would welcome a behavior altering technique that would not require special training on their part and would not have an adverse effect on their academic program. This would encourage increased cooperation between these teachers and their counterparts in Special Education. Regular

education teachers would view the inclusion of handicapped students with a more positive attitude if they knew these students could monitor and control their behavior. Successful self-monitoring would provide students with additional opportunities to interact with their peers in the mainstream of the educational community which would be beneficial in developing a positive self-concept and self-esteem.

CHAPTER II

REVIEW OF THE LITERATURE

The concept of self-monitoring was developed in the early 1970's and was originally used as a data collection technique to allow psychologists to gather information regarding feelings, behaviors and to assess the effectiveness of interventions. A short time later, its use was expanded to help behaviorally disordered students manage social and academic behaviors in schools. This process is also referred to as self-evaluation, self assessment, self-recording, and self-observation (Webber, Scheuermann, McCall, & Coleman, 1993).

Self-monitoring requires an individual to record or rate his/her own behavior. Over the years, two types of self-monitoring have been initiated. In one type, students assess a behavior and count the number of times it occurs. The other requires the individuals to make an evaluation of their behavior and rate it in accordance to predetermined standards (Snider, 1987).

Self-monitoring techniques have been used in a broad range of settings in elementary schools, junior high schools, and high schools. Most of the students who have participated in these programs are classified as learning disabled, emotionally disturbed, or mentally retarded. The most frequently targeted goals of this intervention are increased attention to task, positive classroom behaviors, better social skills, and improved academic performance (Webber et al., 1993).

Carr and Punzo (1993) investigated the effects of self monitoring of academic accuracy and productivity on behaviorally disordered and emotionally disturbed students. The participants in this study were three adolescent males (ages 13 to 15) with IQ scores in the low average range. All students had failed at least one academic grade, had low achievement test scores, and teachers reported the students' academic performance was inconsistent. The study took place in a self-contained classroom where the teacher had implemented a point system in which the students earned points to be exchanged for reinforcers at the conclusion of a nine week period.

The academic areas that were addressed during the investigation were reading, mathematics, and spelling. In reading, students met for a 12 minute period in which they would read a selection and work on comprehension, vocabulary, and grammar exercises. For math instruction, they were given a 20 minute period to complete a worksheet containing 20 to 50 computation problems. In spelling, the students were given a group of words each day and were asked to write them 10 times and use them in a sentence during a 20 minute period. The students were tested daily on their ability to spell the words correctly.

After the collection of baseline data, the teacher began to instruct the students on how to self-monitor. She used examples of students' previous work to illustrate the need for improvement of academic accuracy and productivity. In math and reading, she taught the students to count the number of items assigned, the number completed, and the number answered correctly and to write the numbers on a self-recording sheet. For spelling, she trained the students to count the number of words attempted, the number of words written correctly, and to write these numbers on the recording form. Before beginning intervention, the teacher modeled

the procedure and reminded the students of the importance of academic accuracy and productivity.

The authors of this study found that self-monitoring of accuracy and productivity resulted in improved academic performance for all the students in all subject areas. The mean increase in performance was 35% in reading, 46% in math, and 24% in spelling. It was reported that students were eager participants during intervention and seemed to use the results of self-monitoring as an incentive for continued improvement. The authors also stated that the process caused little disruption to the classroom routine and was easy for the students to learn and use.

The concept of using self-monitoring to adjust academic outcomes was also addressed by Dunlap and Dunlap (1989). This study looked into the effectiveness of using a self-monitoring program with three learning disabled students who had exhibited difficulty in solving subtraction problems involving regrouping in mathematics class. The students were in fifth or sixth grade and received instruction in math in a resource room. Their full scale IQ scores ranged from 77 to 94 as measured by the Wechsler Intelligence Scale for Children-Revised.

For this study, baseline data were gathered in two segments. During the first segment, the students were given verbal instructions on how to solve subtraction problems and were given worksheets made up of 10 to 20 problems which required regrouping. After completing the assignments, the teacher provided explanations for errors and verbal praise for correct answers. In the second segment of baseline, the structure of the procedure remained the same, but a point system was included to reinforce correct responses. The students earned points for correct answers and the points were exchanged at the end of the day for pencils, notebooks, and other items.

Prior to the implementation of the self-monitoring process, individualized checklists were developed based on analyzing the types of errors made by each student. Specific reminders pertaining to the most common types of errors that students made were included on the checklists. Students were told to refer to and check off these reminders after each problem. Examples of the reminders were, "I copied the problem correctly," "I regrouped when I needed to," and "I borrowed correctly."

During the intervention stage of the study, the students were required to monitor their performance on each problem by marking a plus or a minus for each reminder on their checklists. If a minus was recorded, indicating a student did not complete a step, the student had to go back and rework the problem. Upon completing the assignment, students were given one point for a correct answer and an extra point for each problem in which all the steps on the checklist were self-monitored correctly.

These researchers concluded that the self-monitoring program yielded immediate and significant gains for all of the students. The results indicated that this strategy was more effective in teaching the selected math skills than previously tried methods. Furthermore, when the use of the self-monitoring checklists were withdrawn, the students continued to perform more successfully than in the past.

Brown and Frank (1990) also studied the effect of self monitoring on academic performance in mathematics with learning disabled students. One significant difference between this study and Dunlap and Dunlap (1989) was these authors evaluated the use of "generic" rather than individualized checklists for the self-

monitoring process. If effective, this could reduce the amount of teacher preparation time. Also, each checklist used a mnemonic device to help the students remember the computation procedure.

This investigation was conducted in two phases, with Phase I focusing on instruction of subtraction problems and Phase II concentrating on addition. Both phases used three subjects, ages 10-11, who had IQ's ranging from 90 to 94. The students were placed in a low level math group in their regular class and were assigned to a resource room for supplemental instruction. The study took place in the resource room setting. In both phases, the students were given worksheets and tests containing the appropriate types of problems.

A multiple baseline design was used in this study. During the baseline sessions, the students were given a copy of a test and told to do the best they could. Scores were stated as the percentage of problems solved correctly. The scores were reported to the students, but no other feedback or reinforcers were used.

At the beginning of the intervention of Phase I, the teacher introduced the self-monitoring strategy for subtraction to the students. They were given worksheets that included four key words

and their definitions printed at the top of the page. These words were "Begin," "Bigger," "Borrow," and "Basic Facts." The four key words were also placed next to the problems in a checklist format so the students could self-monitor by marking each key word after completing that step. The teacher explained the procedure to the students and modeled the use of the strategy on the blackboard. The teacher checked each completed worksheet to determine whether all of the checklists had been marked. If students had failed to do so, they were reminded of the need to check every step of the procedure.

The design of Phase II of this study was the same as the previous except the mnemonic device used on the worksheets was changed to be compatible with the computation of addition problems. In this case, the word SASH was used to remind the students to "Start in the right column," "Add the numbers together," "Should I carry?," and "Have I carried the right number?".

The results of both Phase I and Phase II indicated that the use of the self-monitoring procedure improved the performance of all the participants. The most significant gains occurred in the addition segment of the experiment where the scores increased from averages of 27%, 30%, and 14% correct to 90%, 90%, and 98% correct

respectively. Also, the same self-monitoring checklists were used for all the students, suggesting that it may not be necessary to construct individualized instruments to realize positive results.

An area of concern and frustration to many teachers of learning disabled students is the completion of homework assignments. This is especially true with middle and secondary school students due to their tendency to resist adult assistance and to their need to be in control of the important facets of their lives, including issues pertaining to school (Carter, 1993). Also, social activities, sports, television, and time spent interacting with peers interfere with the completion of homework assignments.

Trammel, Schloss, and Alper (1994) conducted a study that explored the relationship the self-monitoring of homework assignments and the increase of assignments completed. In this research project, the participants were required to set individual performance goals and chart their progress.

The authors observed eight students with learning disabilities. The students attended grades 7 through 10 and were selected to participate in the study because of consistently poor performance in completing homework assignments. The students were

mainstreamed for all academic classes and received resource room instruction as part of their daily schedule.

For the purpose of gathering baseline data, an assignment sheet was designed to allow the students to self-record each homework assignment for the day. Also, the students were asked to circle a check mark if the assignment had been completed, an "X" if the assignment was incomplete, or an "O" if no assignment had been given. The students were instructed on how to use the sheets and were asked to record the assignments in the proper spaces. During this period, the subject area teachers provided the resource teacher with information regarding the frequency of completed assignments. The students were not aware of the communication between staff members.

In the intervention stage of the program, the students were required to write their assignments for each class on the sheets using the same procedure as in baseline. Each day the sheets were taken to the resource teacher where they were checked and if the sheets were completed correctly, the students were given verbal praise and rewarded with a piece of bubble gum.

The researchers felt that the inclusion of goal setting and self-graphing would enhance the effect of the self-monitoring program. The students were shown how to record their homework completion data on individual graphs displayed in the resource room. The graphs showed the students' performance for three day periods and based on the data, the students were asked to set goals for assignment completion for the next three day period.

Analysis of the data gained from this investigation indicated that all students showed an improvement in completing homework assignments. While using the self-monitoring procedure, the students completed between 66% to 100% of the assignments per day. Follow-up probes showed a continued high rate of homework completion. Anecdotal reports by regular class teachers support these findings. Teachers stated the self-monitoring procedures "were responsible for enhancing students' enjoyment of schoolwork" and resulted in "an improvement in attitude relating to homework" (p.79).

Another study that used self-graphing in coordination with a self-monitoring procedure was DiGangi, Maag, and Rutherford (1991). This investigation not only applied self-monitoring and

graphing techniques to improve academic performance, but addressed the issue of on-task behavior at the same time.

The authors observed two female subjects, ages 10 and 11 who attended a regular education mathematics class and received remedial math instruction in a resource room setting. Both students were described by the resource teacher as having significant academic and attentional difficulties. All aspects of the study took place in the regular classroom.

In this research problem, on-task behavior was defined as "any time a student had her eyes focused on the material or self-monitoring card or was writing answers, checking problems, or receiving assistance from the teacher" (p.223). Academic performance was determined by finding the number of problems solved correctly and the number of problems completed.

The baseline segment of the investigation lasted for five days during which the students' on-task behavior and academic performance were recorded. For the first five days of the intervention period of the study, a tape recorder, which emitted a tone at randomly spaced intervals, was used to cue the students to ask themselves, "Was I paying attention?". The subjects were taught

to record a mark in a space on a self-monitoring card labeled "on-task" if they were working, or "off-task" if they were not. During the next five day period, the students continued to use the same procedure to self-monitor and they were instructed to plot their results on continuous graphs.

The results of this study showed that both subjects improved in the areas of on-task behavior and academic performance. The authors stated the most significant gains were made when self-graphing was added to the self-monitoring intervention. They noted that students learned to graph data very quickly and little effort was needed to self-graph their behavior.

Prater, Joy, Chilman, Temple, and Miller (1991) used a similar self-monitoring technique with five adolescents with learning disabilities. In their study, the students ranged in age 12 years, 11 months to 17 years, 2 months. The subjects were observed in different settings which included a self-contained special education classroom, a resource room for math, a study hall for social studies, and a resource room for government and English. A difference between this research project and DiGangi et al. (1991) was instead of training students to simply ask themselves if they were paying

attention, Prater et al. (1991) used a visual prompt placed in the front of the room to remind the students to self record. Also, reinforcers were used with self-monitoring for some of the subjects. The students assisted in selecting the reinforcers which included permission to go to lunch early and receiving sports pictures.

The results of this study indicated that this intervention was effective in promoting on-task behavior with learning disabled adolescents. All students showed dramatic improvement soon after the program was implemented. The authors felt these results were especially significant for secondary students because of the increased work load and the need for students to work more independently at this level.

Blick and Test (1987) also examined the use of self-management strategies to improve on-task behavior with secondary students. In this study, the authors attempted to determine the effectiveness of the intervention without using audible cues to prompt the students to self-monitor and self-record.

The subjects of this investigation were chosen because they had demonstrated a variety of off-task behaviors which were

disruptive to the teacher and other members of the class. Nine of the students were classified as learning disabled, two as educable mentally retarded, and one as emotionally handicapped. The ages of the subjects ranged from 15 to 18 years. The setting of the study was a resource room where the students received instruction in a variety of subject areas.

The study was conducted in six stages which included baseline, training, and four intervention periods. During the training session, the students were shown examples of on-task behavior and taught to use recording forms. They were told that increased on-task behavior could lead to better grades, fewer problems with teachers, and improve their chances of getting into regular classes. The teacher recorded on-task behavior using the Placheck Recording System to check the accuracy of student data. This represents a change in procedure when compared to previously mentioned studies (e.g., DiGangi et al. 1991; Prater et al. 1991) where recording systems were prepared by the authors. In baseline and in the first intervention phase, an audible cue was used at five minute intervals to have the students record. In the second and third intervention phases, the intervals between the cue were increased and during the

final intervention period, the cue was not used at all.

The researchers found that the use of self-monitoring and self-recording increased the students' on-task behavior from an average of 39% during baseline to over 90% in the fourth intervention period when the use of the cue had been eliminated. It was also noted, that the students seemed to enjoy using the self-management procedures. Some of the students commented that their grades were improving and classes were more enjoyable when the teacher was not complaining about getting work done. After the completion of the study, several students asked if they could continue to self-monitor.

Another experimental procedure that studied the implementation of self-monitoring techniques to improve time on-task in a academic setting was Reid and Harris (1993). These authors reported that the majority of the previous work in this area studied a limited number of subjects. In response to this issue, they selected 28 students identified as learning disabled to use in their study. The students were 9 to 12 years of age, of average IQ, and were described by their teachers as having difficulty staying on task.

The investigation took place in nine separate classrooms where the subjects were working on weekly spelling assignments. The students were taught to use a spelling study procedure which required them to look at a word, say the word, cover the word, write the word three times, and check to see if they spelled it correctly. The same self-monitoring procedure discussed in DiGangi et al. (1991) was used in this study. In this case, on-task behavior was defined as pronouncing, writing, or checking words, eyes focused on the work, or working on any of the steps of the study procedure.

Reid and Harris (1993) reported the results of this study supported the findings of researchers using fewer subjects in that on-task behavior of learning disabled students increased significantly. A few of the students who participated in the program stated they disliked the interruption caused by self-monitoring, but most felt it helped them to learn spelling words and that they would like to keep using the procedure.

Smith, Young, West, Morgan, and Rhode (1988) assessed the effectiveness of self-management interventions to control disruptive behavior of junior high school students. Four students ranging in age from 13 to 15 years participated in this study. Three

of the students were classified as behaviorally disordered and one as being learning disabled. They had frequently exhibited disruptive behaviors such as talking and being out of their seats without permission, throwing objects, and interrupting the teacher. The study took place in a resource room where the students were assigned for half of the school day. Also, an abbreviated form of the self-evaluation procedure was used in the students' regular classes to obtain information on the generalization of this intervention.

During the baseline portion of the study, the teacher attempted to use conventional strategies for classroom control such as reprimanding the students or having them temporarily removed from the class. In the initial step of the intervention, a set of class rules was presented and explained to the students. They were told that they would be rating their behavior using a 0 to 5 point scale, with 5 representing total compliance to the rules and 0 representing unacceptable behavior. They were given examples of behaviors that corresponded to each level on the scale and they were informed that their ratings would be converted to points which could be exchanged for snacks or school supplies. They were instructed that the teacher would also be evaluating their behavior and they would be asked to

match their rating with the teacher's. If they matched the teacher's score, they would earn a bonus point.

Each day the students were given a self-evaluation card to mark their ratings. The frequency of the self-evaluation and matching procedure in the first segment of intervention was every 10 minutes and this was increased to 15 minutes in the second segment. In the final segment of intervention, the students were required to rate and match their behavior only one time, at the end of the 30 minute class period.

The results show that the self-management program used in the study reduced disruptive and inappropriate behaviors in all four students. The rate of disruptive behavior was reduced from an average of 67% during baseline to an average of 19% after implementation of the self-rating procedure. The authors stated the progress made in the resource room did not generalize to the regular classes. Reasons given for the lack of success in these settings were the teachers did not rate the students on a consistent basis stating that they forgot to do it or they were too busy.

The loss of instructional time due to lateness to class is a problem that concerns many teachers of special education students.

Minner (1990) addressed this situation by investigating the use of a self-monitoring procedure designed to decrease the amount of time it took three behaviorally disordered students to walk from their resource room to their regular education classrooms.

The strategy required the students to press a switch that activated a stopwatch as they exited the resource room and press another switch that stopped the stopwatch when they arrived at the other classroom. The students were given a recording sheet and instructed to mark a "+" if they completed the trip within a specified period of time and to record a "-" if they did not. In order to check for student accuracy, the teachers would also time the students.

The findings of the study indicated that all three students decreased the number of times they arrived late for their regular education class. During baseline, the students were late over 80% of the time, but after intervention the incidents of lateness dropped to less than 20%. The author commented that the use the electronic equipment discussed in the study may not be practical for widespread use of the procedure, however similar results could be obtained by having students use less technical equipment such as

hand-held stopwatches.

Shapiro, Albright, and Ager (1986) examined the use of a self-monitoring technique that would reduce the frequency of inappropriate verbalizations in a educational setting. The subject of this investigation was a 14 year old girl who was not aware that she was responsible for a high rate of distracting and inappropriate behavior. The negative actions included the frequent use of sarcasm, calling out obscenities, and using a rude tone of voice. The procedure was designed to have the subject monitor positive verbalizations, which were defined as "any response to directions, consequences, or conversation in which positive words, tone of voice, and appropriate facial expressions were used" (p.110).

Following the gathering of baseline data, the descriptions of positive and negative behaviors were reviewed with the subject. She was then given a recording sheet and instructed to mark each time she had a contact with a teacher or peer that required a response and to record if her response was appropriate. Concurrently, the teacher also recorded the number of appropriate verbalizations. The student was rewarded at the end of the day by being permitted to leave school 5 minutes early if her number of

appropriate responses equalled at least 95% of the teacher's tally.

Data collected during the study showed that by developing the ability to accurately record her behavior, the student dramatically improved her rate of appropriate verbalizations. The author stated "the simple procedure of asking the student to record and try to match the teacher's ratings again proved to be a powerful tool in achieving sustained behavior change" (p.115).

Self-management strategies have proven to be successful interventions with varied populations. They have been used across many settings to influence a number of behaviors. Positive results have been realized with regular education students as well as those who exhibit a wide range of exceptionalities including mental retardation, emotional disturbances, and learning disabilities. Research in this area has taken place in typical classrooms, resource rooms, institutions, and in the home. The behaviors most often addressed by these programs are attention to task, academic performance, and social and school related behaviors.

The vast majority of the studies in this area have yielded positive results, however some researchers have reported gains that were less favorable. In most of these cases, the investigators

stated that the problems took place when attempting to transfer the self-monitoring procedures to other settings, such as from a resource room to a regular classroom. The authors felt the negative outcomes were usually due to inconsistent performance or lack of cooperation by teachers involved in the programs rather than the ineffectiveness of the self-management strategies.

While a consensus of the literature indicates the merits of self-monitoring, it should not be assumed that this procedure is the answer for affecting change for all behavior problems with all students. A more practical view would be to consider self-management programs as a valuable tool to be used in conjunction with other interventions to provide a comprehensive program allowing special education students the opportunity to participate in a full array of educational and social experiences.

CHAPTER III

RESEARCH DESIGN

Setting

The study was conducted at the Samuel Ridgway Middle School in Edgewater Park, New Jersey. Approximately 500 students in grades five to eight attended the school. The ethnic population of the school was 65% Caucasian, 30% African-American, and 5% Hispanic and Asian.

This research project took place during the subjects' daily study skills class. The purpose of this class was to monitor the academic progress of the students and to provide tutorial and remedial assistance as needed. The classroom that was assigned for this class is used for mathematics instruction at all other times of the day. The seating arrangement in the room consisted of rows of student desks and activity tables in the back of the room.

At the time of the investigation, the subjects were assigned independent seat work designed to improve their writing skills. The

classes were taught by the author and were 30 minutes in length.

Subjects

The participants in this study were four male seventh grade students (three African-Americans and one Caucasian). The decision to place these students in the study skills class was jointly made by the Child Study Team, members of the teaching staff, and the students' parents during the development of the students' schedules. All of the individuals had experienced significant behavioral difficulties during their years in school as reflected by their disciplinary records.

James was 13-10 years of age and moved to the district at the start of third grade. His permanent record file showed that he repeated second grade in his previous school. He lived with his grandmother and visited with his father on a regular basis. James was from a low socio-economic background.

He was referred to the Child Study Team in January of third grade for exhibiting academic and behavioral difficulties and was classified as Perceptually Impaired later that year. A review of his disciplinary records indicated he had received numerous detentions

and demerits and had been suspended four times in the last year for fighting and for incidents of harassing other students.

John was 13-4 years of age and transferred into the district during second grade. He resided with both his parents and an older brother in a low to middle class socio-economic environment.

He was referred for Child Study Team evaluation in fifth grade and was subsequently classified as Perceptually Impaired. John had an extensive history of underachievement, impulsivity, and periodic occurrences of behavioral excess. These outbursts had been a concern with the staff and the administration since third grade. He had been suspended on five occasions in the past two years for being insolent and insubordinate to teachers, as well as for fighting and stealing.

Brian was 13-3 years old and entered the school in fifth grade after moving from New York City. Upon relocating to Edgewater Park, he lived with his mother and grandmother while his father remained in New York. He was retained in second grade by the New York City Public School District and was dismissed from a private school for poor academic performance and behavioral difficulties.

Brian was referred to the Child Study Team in February, 1993, and classified as Perceptually Impaired in May, 1993. At that time,

it was thought that he could move toward emotionally disturbed behavior and possibly be transferred to the Burlington County Special School District. As of December 12, 1994, he had been placed on medication by his pediatrician in an attempt to reduce his inappropriate behavior. His disciplinary records indicated that since fifth grade he had been suspended nine times for various incidents such as fighting, continual classroom disruption, abusive and disrespectful attitude toward teachers, and for threatening a staff member.

Allen was 14-3 years of age and lived with his mother in a large apartment complex. He attended numerous schools during his educational experience. He had been classified as Emotionally Disturbed in second grade for not working up to his potential and was declassified in fourth grade. He entered the Edgewater Park School district in sixth grade and began to experience academic problems and exhibit unacceptable behavior in his classes. Allen also had trouble in dealing with authority figures.

He was referred to the Child Study Team in June, 1994, and was classified as Perceptually Impaired in August of that year. He was suspended five times for fighting, accumulating excessive

demerits for breaking school rules, and for disrespectful behavior toward teachers and staff.

Procedure

A baseline period was conducted for 5 consecutive class periods in which the teacher rated the students' ability to follow classroom rules using a 1-to-5 point scale. They were instructed to report to class with required materials (a pen or pencil and their assignment book), sit in an assigned seat, refrain from calling out during class, and avoid making rude comments. At this time, the students were not involved in any type of behavior modification program in the study skills class. Teacher directed methods (detentions, referrals to the disciplinarian, etc.) were used for the purpose of classroom management.

Upon completion of collecting baseline data, a new set of classroom rules were introduced and discussed in detail with the students. The students were told they were expected to:

- Bring required materials to class.
- Sit in assigned seat.
- Refrain from calling out.
- Refrain from making rude comments.

The students then were told that they would use the same 1-to-5 point scale that the teacher used to rate their behavior at the end of class on how well they followed the rules. The rating scales were explained to the students and they were instructed on how to fill them out.

The ratings were counted as points which the students could accumulate and be used to allow them to participate in pre-determined activities. These activities, which were selected by the students, included free time in the computer lab or time playing basketball in the gym. The students were instructed that they would have to accumulate at least 75% (180) of the total number of points (240) possible during the course of the project to qualify for participation in the activity. Also, they were told that the teacher would evaluate their behavior using the same rating scale. If they came within one point of matching the teacher's score, they received the number of points on their scale. If they matched the teacher's

rating, they earned their points plus a bonus point. However, if there was more than a one point difference in the scores, the student would not get any points for that area.

The students were given a rating sheet at the beginning of class for 10 days. They were instructed to complete the sheet at the end of each class and give it to the teacher before they left the room. The teacher tallied and recorded the scores on a daily basis. The students were permitted to check their totals at the beginning of any class.

The final segment of the study was a 5 day post intervention period used to assess the maintenance of the effects of the self-monitoring program. During this time, only the teacher continued to rate the students' compliance to class rules.

Instrument

A 1-to-5 point rating scale was used by the teacher and the students to evaluate the students' ability to adhere to class rules. The scale used in this project was developed by the researcher. The students were given detailed instructions regarding the use of the scale. The ratings and criteria were explained as the following:

- 5 = Excellent - The student complied to all rules and the teacher did not reprimand or warn the student during the class.
- 4 = Very Good - The student had one infraction of the rules during the class.
- 3 = Fair - The student had two infractions of the rules during the class.
- 2 = Poor - The student had more than two infractions of the rules during class.
- 1 = Serious - The student exhibited behavior that required that he be removed from the class activity.

Analysis

Data for this study was presented by using graphs showing the daily teacher ratings of each student for all behaviors assessed. These data were plotted and compared to data collected during the baseline phase of the project to show the effectiveness of the procedure. Also, the mean teacher scores for each behavior during each phase of the project were shown in a data table.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to determine whether the use of a self-monitoring procedure would increase compliance to class rules with a group of seventh grade Perceptually Impaired students in a middle school setting. The study required the subjects to use a daily rating sheet to self-evaluate their performance in bringing necessary materials to class, sitting in their assigned seats, refraining from calling out, and refraining from making rude comments. The teacher used the same instrument to assess student performance. Also, the students were required to attempt to match the teacher's evaluation of their behavior each day.

The data gathered during this research project indicated that the self-monitoring program was beneficial in improving student behavior in relation to classroom standards. All participants received higher ratings on the teacher rating scale during the intervention segment of the study as compared to baseline scores as reflected by the mean scores found in Table 1.

Figures 1, 2, 3, and 4 show the teacher ratings of the subjects for each phase of the project for all the behaviors being evaluated. Figure 1 indicates that James improved his mean score for being prepared for class by 1.2 points, 1.9 points for sitting in his assigned seat, 1.7 points for refraining from calling out, and 1.2 points for refraining from making rude comments. John's scores reflect a .6 point improvement for being prepared for class and gains of 1.5 points for sitting in his assigned seat, 1.3 points for refraining from calling out, and 1.3 points for refraining from making rude comments. Brian's results show an increase in his mean scores of 1.3 points for being prepared for class, 1.0 point for sitting in his assigned seat, 1.4 points for refraining from calling out, and 1.6 points for refraining from making rude comments. Allen's mean ratings improved .9 point for being prepared for class, 1.8 points for sitting in an assigned seat, 1.8 points for refraining from calling out, and 1.5 points for refraining from making rude comments. Data collected during the maintenance phase of the study indicate the mean scores of the students decreased slightly when compared to the intervention segment, but remained at a higher level than during the baseline period.

The data, pertaining to the subjects' ability to match the teacher's rating during the intervention phase of the investigation, indicated that James matched the teacher rating in 18 of 40 opportunities (45%), missed the teacher score by one point 20 times, and by more than one point twice. John duplicated the teacher score in 21 of 40 chances (53%), missed the teacher rating by one 16 times, and was off by more than one point three times. Brian matched the teacher 19 (48%) times, was off by one point 19 times, and missed the teacher score by more than one on two instances. Allen recorded the exact rating as the teacher 18 (45%) times, missed by one point on 20 opportunities, and failed to match the teacher by more than a point twice.

All subjects met the requirement of accumulating 75% or 180 of the 240 total possible points needed to participate in the reinforcement activity. James earned 191 points (80%), John received 186 (78%), Brian had 182 (76%), and Allen totaled 197 points (82%).

Ratings

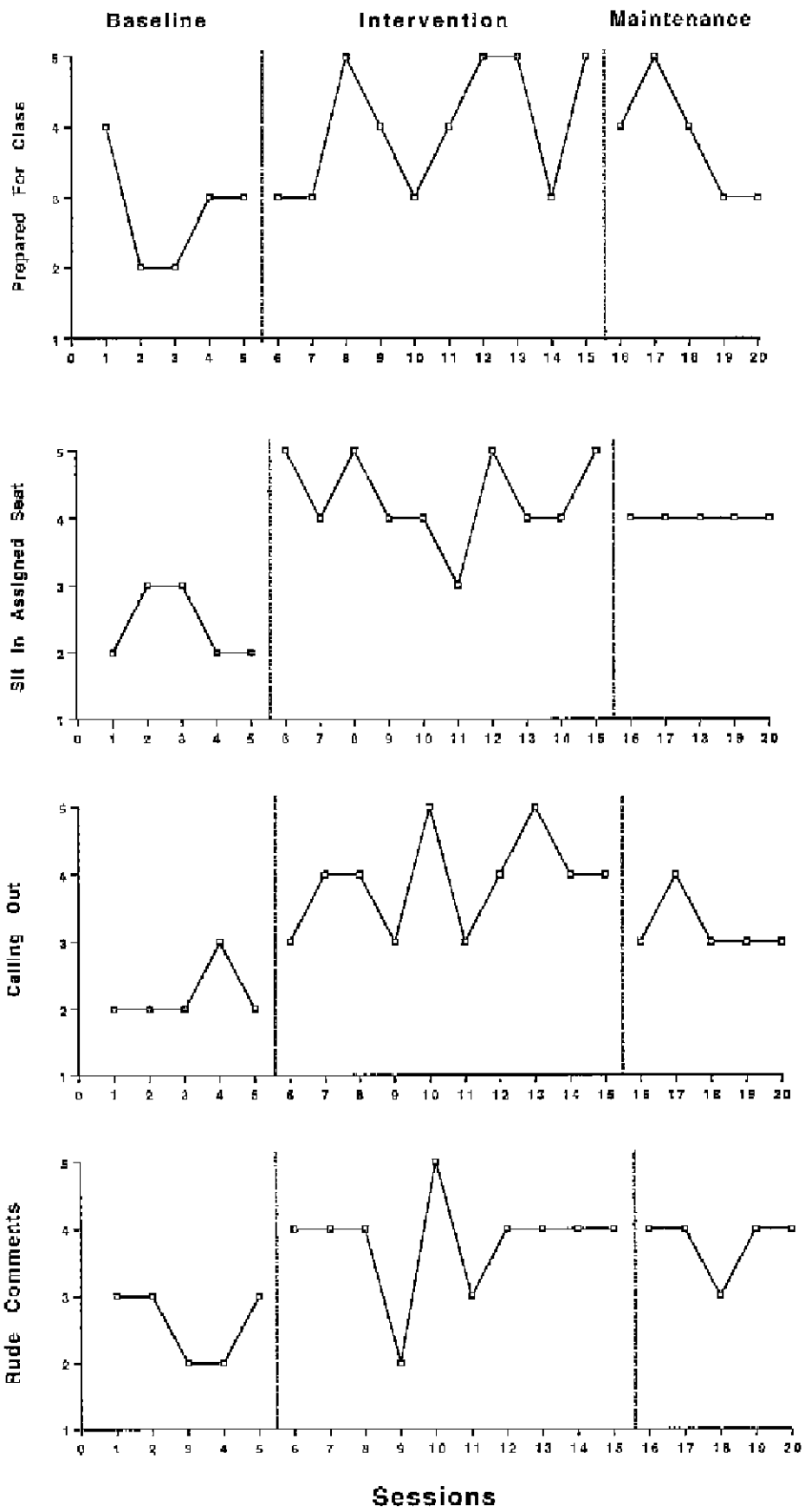


Figure 2: John's Results

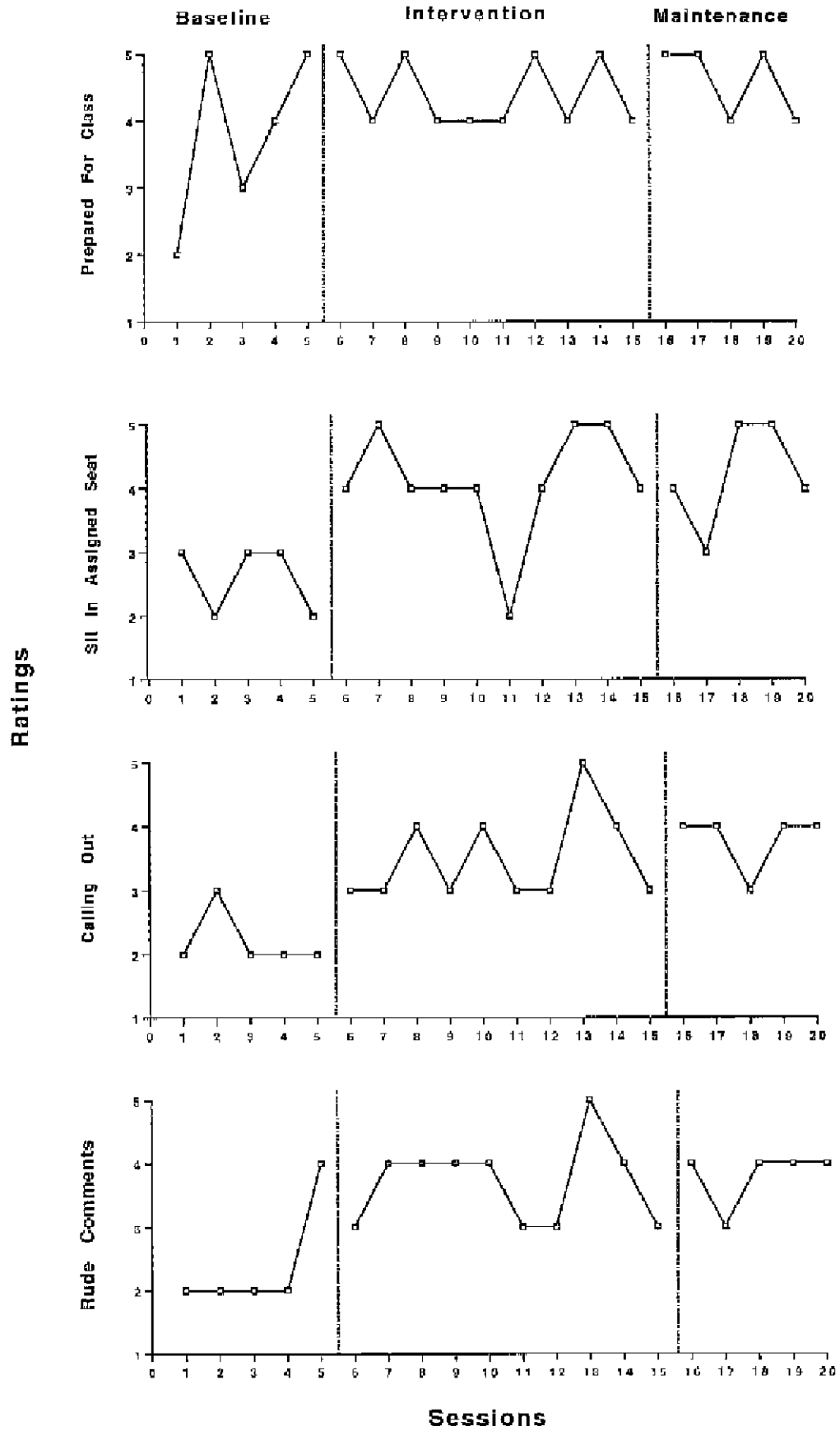


Figure 3: Brian's Results

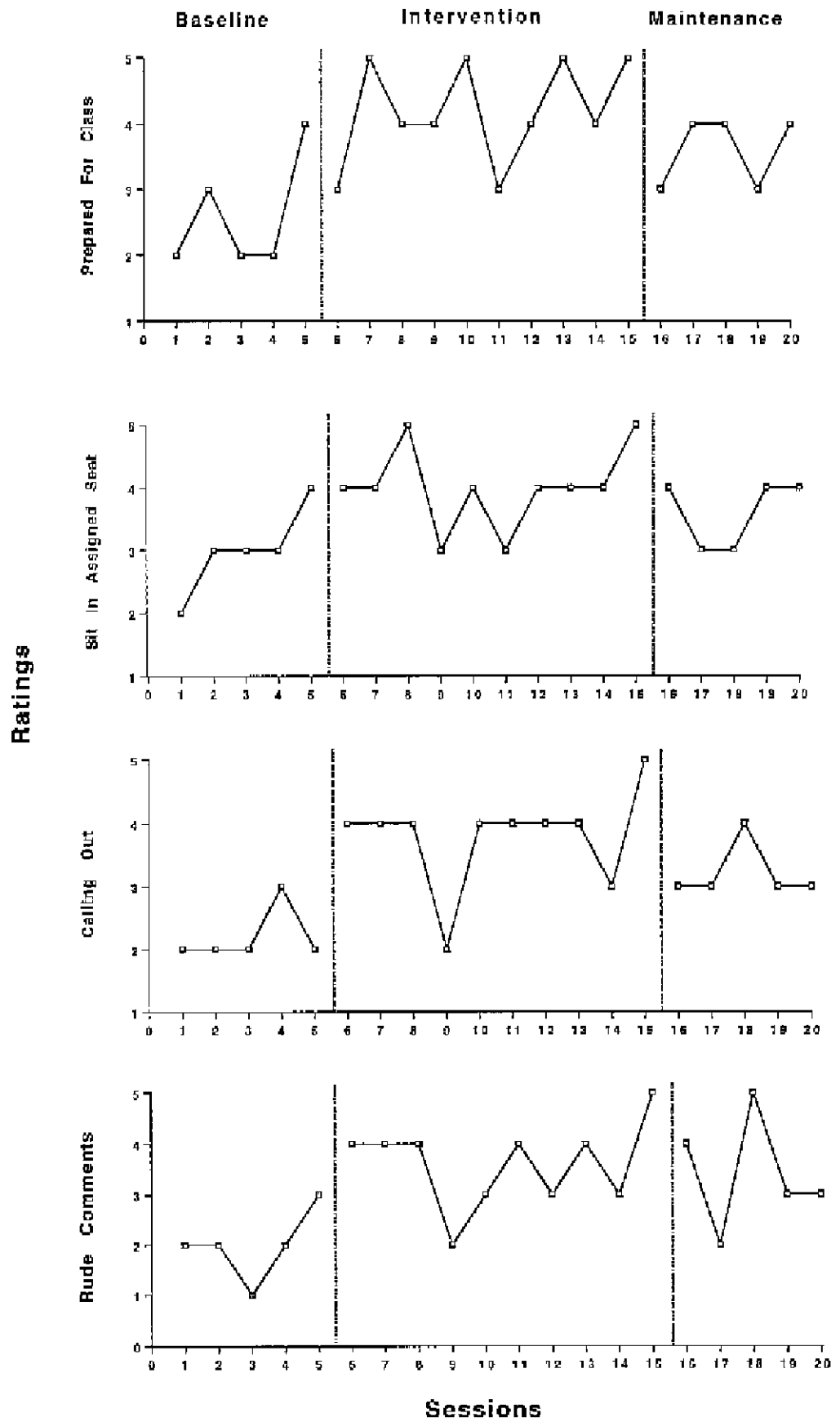


Figure 4: Allen's Results

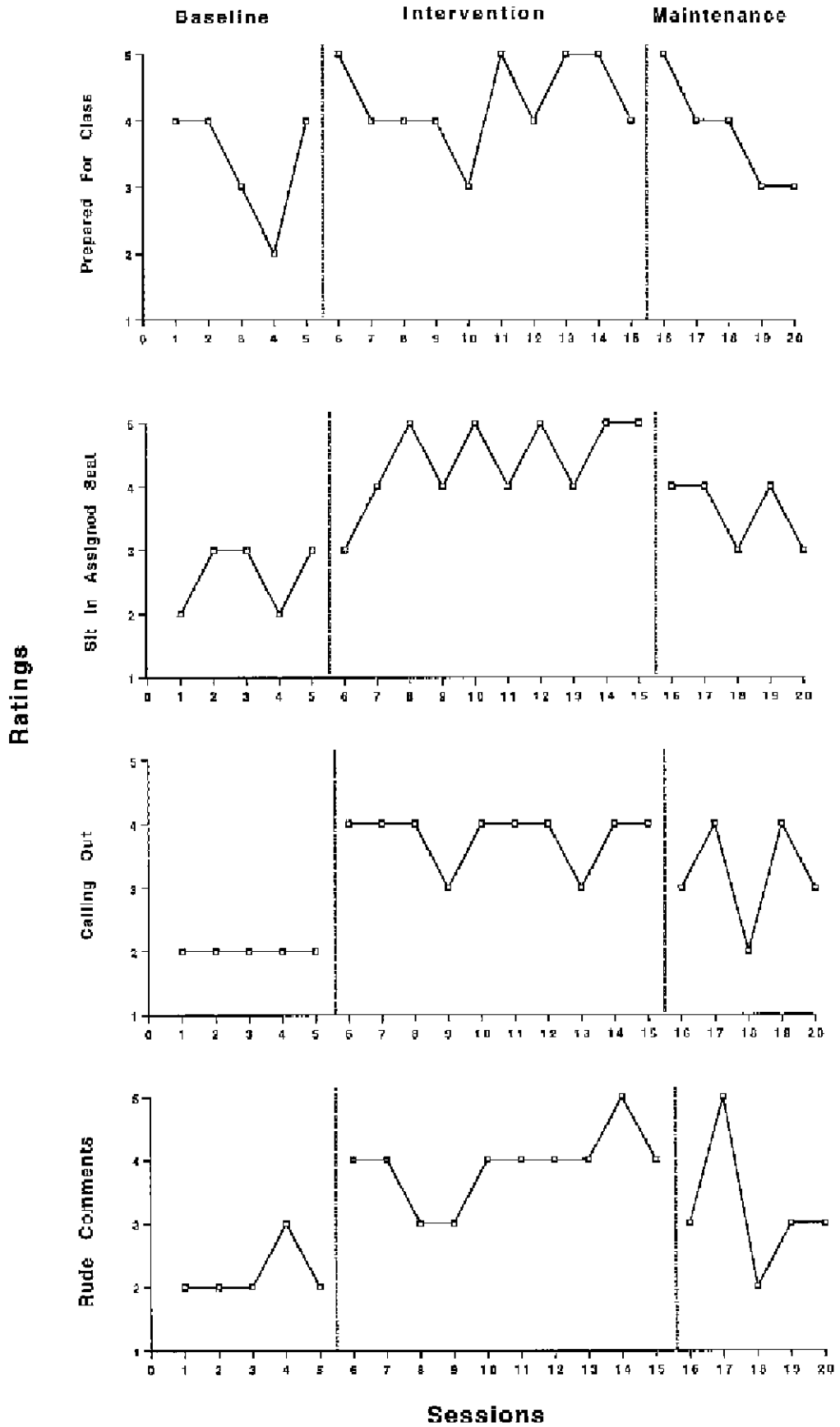


Table 1: Mean Scores Of Teacher Ratings

Behaviors	Baseline	Intervention	Maintenance
Prepared For Class	3.15	4.15	3.95
Sit in Assigned Seat	2.55	4.20	3.85
Calling Out	2.15	3.70	3.35
Rude Comments	2.30	3.75	3.55

CHAPTER V

DISCUSSION

An ongoing challenge faced by Special Education teachers is developing strategies to control and shape the behavior of their students. Traditional behavior modification programs are often difficult to implement, time consuming to manage, and give results that do not generalize to other areas. An alternative to these techniques is a program of self-management in which the students are given the responsibility of monitoring and evaluating their own behavior. This is especially important with the middle school population since this type of program allows adolescents to feel as though they have control of their situation and the success of the intervention depends on the individual and not on an external source.

This study was designed to examine whether the use of a self-monitoring program would improve the students' ability to bring required materials to class, sit in their assigned seats, refrain from calling out, and refrain from making rude comments. A rating scale was developed to evaluate the students' behavior in following the

classroom rules. The teacher used the same scale to assess their compliance to the rules and the students were required to attempt to match the teacher's ratings. If they were successful, the rating points could be accumulated to qualify for participation in a reinforcement activity.

The results of the investigation indicated that all four subjects demonstrated significant gains of the mean teacher ratings during the intervention stage of the study in all assessed behaviors. Although the scores dropped slightly during a follow-up phase, the results were considerably higher than during the pre-intervention period. These data support the author's hypothesis that a program of self-monitoring can be an effective instrument in promoting compliance to classroom procedures.

The majority of previous research in the area of self-management programs in educational settings have focused on improving academic performance (i.e., Brown and Frank, 1990; Carr and Punzo, 1993; Dunlap and Dunlap, 1989; Prater, 1992). and examined the amount of time that students attended to school related tasks (i.e., McLaughlin, Krappman, & Welsh, 1985; Osborne, Kosiewicz, Crumley, & Lee, 1987; Prater, Joy, Chilman, Temple, &

Miller, 1991). While the target goals and objectives of these projects varied from those of the present study, all yielded favorable results.

One study that looked at the effectiveness of a self-monitoring program to influence classroom behavior was Smith, Young, West, Morgan, & Rhode, (1988). These authors also used a rating scale to allow four middle school aged students to self-monitor their behavior. A teacher matching procedure was integrated in this study. Unlike the present study, this investigation utilized a multiple baseline design, was conducted in five phases to fade the matching technique, and was used for a significantly longer period of time. Both the Smith et al. (1988) study and the study presently discussed were effective in enhancing student behavior in classroom settings. This was true across all subjects and for all behaviors assessed in the projects.

An important consideration in realizing positive results in the study was the selection and use of a meaningful reinforcer. As previously stated, the students had input in choosing the activity and this seemed to motivate them to do well during the course of the project. At the conclusion of the study, some students asked if they

could continue to use the rating sheets in order to work for another reinforcer.

Even though the project yielded favorable results, it is felt that certain aspects could be altered for future research. First, only four subjects took part in the program. Experimentation with a larger group that more closely resembled a typical class could add to the integrity of the research project. Next, the intervention phase of the experiment lasted for ten sessions. It would be interesting to gather data pertaining to the durability of self-monitoring programs by extending the length of the study to span a longer period of time. Also, it was anticipated that the students would be more accurate in matching the teacher's ratings, especially in the final sessions of the intervention. This could be due to the students' desire to accumulate points quickly and therefore explain their tendency to use higher ratings since they could miss the teacher score by one and still get credit for their points. A possible solution to improve matching could be to require the students to match the teacher rating exactly in order to receive points.

The results of this study suggest that a program of self-monitoring utilizing a rating scale designed assist students to

evaluate their behavior and used in conjunction with a self-reinforcement procedure can be an effective intervention to improve compliance to class rules. This technique could prove to be a useful classroom management tool for Special Education teachers as well for their colleagues in regular education classes. Teachers should find self-monitoring procedures easy to develop, inexpensive to use, and time efficient to administer. Most importantly, they make the students aware of their behavior and places the responsibility of behavior management on the student and not the teacher.

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APPENDICES

APPENDIX A
DAILY RATING SHEET

NAME _____

DATE _____

INSTRUCTIONS: RATE EACH BEHAVIOR LISTED BELOW.

RATINGS:

5 = EXCELLENT

4 = VERY GOOD

3 = FAIR

2 = POOR

1 = SERIOUS

BEHAVIORS:

_____ BRING REQUIRED MATERIALS TO CLASS

_____ SIT IN ASSIGNED SEAT

_____ REFRAIN FROM CALLING OUT

_____ REFRAIN FROM MAKING RUDE COMMENTS

Points _____

Bonus _____

Total _____