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self-management

CAN THE USE OF SELF-MANAGEMENT TECHNIQUES BE
EFFECTIVE IN REDUCING THE OFF-TASK BEHAVIORS
OF MULTIPLY HANDICAPPED STUDENTS?

by

Lori M. Rosenthal

A Thesis

Submitted in partial fulfillment of the requirements of the
Masters of Arts Degree in the Graduate Division
of Rowan College in May, 1996

Approved by

Date Approved 4/29/96

ABSTRACT

Lori M. Rosenthal

Can The Use of Self-Management Techniques
Be Effective in Reducing the Off-Task Behaviors
of Multiply Handicapped Students?

Spring 1996

Dr. Jay Kuder

Graduate Studies in Special Education

Can the use of self-management techniques be effective in reducing the off-task behaviors of multiply handicapped students? For the purposes of this study, multiply handicapped students were defined as mentally retarded and the method of self-management used was self-recording. Three students out of a class of ten were chosen based on a teacher rating scale. The lowest averaged scores determined which students were off-task the most. In addition, a multiple baseline design measured the occurrence and non-occurrence of nine target behaviors, three per student.

The results showed self-recording to be an effective intervention in eight out of the nine targeted behaviors(89%).

Despite the students low levels of cognitive functioning, all of the students learned to self-record specific behaviors

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with an accuracy rating ranging from 72-95%. Therefore, self-
recording may be a viable option to reduce the off-task behaviors
of mentally retarded students.

MINI-ABSTRACT

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CHAPTER 1:
Statement of Hypothesis

INTRODUCTION TO THE PROBLEM

What is the single most important goal of every classroom teacher? The primary reason that millions of children attend schools each year is to gain invaluable knowledge or simply stated, to learn. How do professional educators insure that his or her students will benefit from learning? A good teacher provides motivation so that he or she will want to learn.

An effective teacher will have a clearly-defined set of rules for the students to follow. While the purpose of rules is to provide an environment conducive for learning, what happens when students demonstrate difficulty adhering to such rules? Successful teachers will have behavior modification systems in place to handle disruptions of noncompliant students.

Although such management systems will vary widely from classroom to classroom, what they each have in common are clearly-defined goals. Ultimately, effective behavioral management systems should teach students about the outcomes of cause-and-effect. They need to understand that their actions, both positive and negative, will result in some form of consequence. Accordingly, students should learn to take responsibility for making their own choices and understanding their impending outcomes.

What is the best way to accomplish this? While most research on behavior management has focused on behavior modification, numerous studies are emerging on the effectiveness

of self-management interventions with special education self-management students. (Ager & Cole, 1990; Carr & Evans, 1991; DiGangi & Maag, 1992; Nelson, Smith, & Young, 1991; and Reid, 1993).

Students of special education often prove to have a unique set of needs. The primary goal of high school age multiply handicapped students is to prepare them to be as self-sufficient as possible when they exit the public school system. Part of this preparation is for students to learn the skills they need to gain employment. This goal cannot be realistically achieved for students who are unable to manage their own behavior. Students who can learn self-management techniques successfully, will be better equipped at entering the world of work and keeping a job. They can pride themselves for becoming productive members of society.

PURPOSE OF THE STUDY

The purpose of this study is to investigate the effectiveness of self-management interventions with multiply handicapped students. The primary question that will be examined in this study is: Can students who are moderately mentally retarded be taught to use self-management methods with success? An additional question that will be examined is whether one method is more effective than another.

RESEARCH QUESTIONS

The research questions under investigation are:

1. Can the use of self-management techniques be effective

self-management
in reducing the off-task behaviors of multiply handicapped
students?

2. With the use of a multiple baseline design, will students be able to continue to self-manage their own behavior when reinforcement is withdrawn?

DEFINITION OF TERMS

For the purposes of this study, the following terms will be defined as follows:

1. Antecedents: events that precede a behavior. (Hall, 1975, p.44).
2. Baseline: measurement of a behavior to establish its frequency. (Hall & Houten, 1983, p.43).
3. Behavior Management: "those actions used with students to increase the probability that they will develop effective behaviors which are productive and socially acceptable; goal is self-discipline." (Walker & Shea, 1988, p.5).
4. Cognitive-Behavioral Modification (CBM/also known as self-management or self-monitoring interventions): procedures designed to teach students how to manage their own academic and social behaviors. (Nelson, Smith, et.al., 1991, p.169).
5. Extinction: process of removing or withdrawing reinforcement until behavior returns to low levels. (Hall, 1975, p.33).
6. Multiple Baseline: "the period prior to intervention in single-subject research, during which the natural frequencies of several different behaviors are recorded." (Crowl, 1993,

p.412).

7. Multiply Handicapped(MH): students with various handicapping conditions placed in the same classroom. In this case, MH means students who have been classified as Trainable Mentally Retarded (TMR), Educable Mentally Retarded(EMR), and/or Communication Handicapped(CH).

8. Reinforcement: any event that increases the strength of the behavior it follows; reinforcement should be immediate and contingent upon the desired behavior.(Hall, 1975, p.2-3).

9.Self-Management Interventions: designed to increase a student's awareness of his/her behaviors and his/her ability to function independently.

The four types are:

- a. self-monitoring/self-recording
- b. self-assessment/self-evaluation
- c. self-instruction
- d. self-reinforcement(Nelson, Smith, et.al., 1991, p.169).

ASSUMPTIONS

The assumptions made in conducting this research are:

1. Students selected for this study have done so with his or her consent.

2. Students have had no prior exposure to self-management techniques. However, students have been exposed to behavior modification techniques.

3. All staff members involved in this research are committed to the success of all students.

4. Students who are successful at learning self-management techniques are more likely to have increased self-esteem with the ability to be more responsible for their own behavior.

LIMITATIONS OF STUDY

The limitations of this study are:

1. Since a small number of students will be used, the results cannot be generalized to larger populations.
2. Because the students involved in this study are classified as Trainable or Educable Mentally Retarded, it may not be feasible to generalize results to other categories of exceptionality.

IMPORTANCE OF FINDINGS

Since the implementation of self-management strategies have not been widely used with the moderately mentally retarded, its implications for classroom use cannot be underrated. Every child is unique. Behavioral interventions that work with one child may not be successful with another. What is important is to experiment and find out what works.

This being the case, existing literature will be thoroughly reviewed in Chapter 2. Have other educators been successful with implementing self-management strategies? What steps were used to teach this method to students?

In Chapter 3, the choice of a research design will be discussed. What makes one design more practical than another in monitoring self-management strategies?

In Chapter 4, I will be focusing on the analysis of data.

Were the results expected or surprising? Could such results ^{self-management} be replicated with a larger sample?

In Chapter 5, I will be interpreting the results of the study. Will the results support the hypothesis? If not, what factors should be taken into consideration for future research?

CHAPTER 2:
Literature Review

REVIEW OF LITERATURE

The education of students today continues to be an increasingly difficult task. Not only are students harder to manage, but even as educators increase their use of behavior management techniques the dropout rate in American high schools and levels of juvenile delinquency continues to rise (Ager & Cole, 1991). Numerous researchers (Bowman, 1992; Carr & Evans, 1991; Carter, 1993; DiGangi & Maag, 1992; Nelson, Smith, Young, & Dodd, 1991; Reid, 1993; Smith, Young, Nelson, & West, 1992) attribute this failure to the fact that traditional behavior management systems focus on external behavior control or teacher-directed measures. Such methods make it more difficult for students to transfer knowledge of behavior control to other settings.

What is Self-Management?

Educational research has provided overwhelming support for cognitive behavior modification or self-management techniques. While there is no universal definition for self-management, numerous researchers agree that its effectiveness is due in part to the student's active participation in bringing about positive behavior change (Ager & Cole, 1991; Bowman, 1992; Carr & Punzo, 1993; Carter, 1993; DiGangi & Maag, 1992; Nelson et.al., 1991; Smith et.al., 1992). Self-management is also favored because as students learn to take more control over their own behavior, the teacher can devote more time to teaching and less time to correcting off-task behavior.

self-management

(DiGangi & Maag, 1992; Reid, 1993; Smith et.al.,1992).

Methods of Self-Management

Another focus of researchers is which method or methods of self-management are the most effective. Experts in the field identify the four types as:1)self-monitoring or self-recording; 2)self-assessment or self-evaluation; 3)self-instruction & 4)self-reinforcement. However, more often than not, investigators have concentrated on the effectiveness of self-monitoring. In the study by DiGangi & Maag(1992), the interactive effects of self-monitoring, self-evaluation, and self-instruction were closely examined with three elementary behaviorally disordered youth. The results showed that the combination of the three components and the combination of self-monitoring & self-instruction were the most effective. When used in isolation, self-instruction was the most effective. While self-management strategies have been used with some measure of success, the results are inconclusive as to which method is the best for all students.

Similarly, many studies have investigated the relationship between self-monitoring of attention(SMA) and self-monitoring of performance/productivity(SMP). Carr & Punzo(1993) not only studied the relationship between both variables, but extended their research with emotionally disturbed adolescents across three academic areas. Previous research investigated the relationship of SMA and SMP across one academic area.(Hallahan

self-management & Sapona, 1983; Harris, 1986; Reid & Harris, 1993). The study by Carr & Punzo(1993) supports the use of self-monitoring procedures with the emotionally disturbed population. The students' academic accuracy and productivity increased. Students were also motivated by their daily scores recorded on weekly subject area charts. The charts made students aware of their progress. A similar effect was noted when other studies had students record scores on graphs to highlight improved performance.(DiGangi & Maag, 1992; Harris, 1986; Harris et.al. 1994).

In the studies by Harris(1986), Harris et.al.(1994), and Reid & Harris(1993), SMA & SMP were taught to learning disabled students. While all three studies showed that self-monitoring strategies increased students levels of on-task behavior, it was unclear whether SMA or SMP was more effective. For example, in the study by Reid & Harris(1993), SMA and SMP were compared with the Spelling Study Procedure(SSP). The results revealed that on-task behavior was significantly higher for both the SMA and SMP than for the SSP. However, spelling achievement and spelling maintenance were significantly lower for SMA than for SMP.(It appeared that SMA slowed down the students' progress).

Effectiveness of Self-Management With Exceptional Children

while self-management has a proven success rate, which students can benefit most from these interventions? A review of the literature reveals that a majority of studies utilized

self-management techniques with the behaviorally disordered or emotionally disturbed population (DiGangi & Maag, 1992; Osborne, Kosiewicz, Crumley, & Lee, 1987; Carr & Punzo, 1993; McDougall & Brady, 1995; Rhode, Morgan, & Young, 1983). In the study by Carr & Punzo(1993) three emotionally disturbed students self-monitored both accuracy and productivity in the academic areas of reading, spelling, and math. Each student's mean increases in academic accuracy were considerable . (reading:increases of 29-40%; mathematics: increases of 27-63%; spelling: increases of 16-35%. The increases in productivity ranged from 0-20% for individual students during intervention). Such results show just how effective an intervention self-monitoring can be. Since students with behavior disorders are more often characterized as lacking self-control and possessing off-task behaviors which are highly disruptive, it stands to reason that these students would benefit most from self-monitoring.

Furthermore, many studies advocated the use of self-management to teach self-control to the learning disabled. Children with learning disabilities often exhibit impulsive behaviors, difficulty paying attention, and are frequently off-task during academic activities(Harris, 1986; Harris, Graham, Reid, McElroy, & Hamby, 1994; Reid & Harris, 1993). The research done by Harris(1986) & Harris & Reid(1993) show promising results for learning disabled children. In Harris' study the subjects not only showed significant increases in

on-task behavior as compared to baseline, but the subjects also ^{self-management} began initiating goal-setting as a direct result of the intervention. While the study by Harris & Reid(1993) also produced meaningful increases in on-task behavior over baseline conditions, conclusions still cannot be drawn as to whether self-monitoring of productivity or self-monitoring of attention is more effective for this population.

Another benefit of self-management is as the learning disabled child begins to experience success, both academically and behaviorally, he or she will have the power to overcome learned helplessness. With knowledge of self-control comes the power to succeed.

While studies on self-management have addressed the needs of the behavior disordered and learning disabled populations, research on self-management and the mentally retarded has been limited(Hughes, Korinek, & Gorman, 1991; Hughes & Paterson, 1989; McCarl, Svobodny, & Beare, 1991; Moore, Agran, & Fodor-Davis, 1989; Salend, Ellis, & Reynolds, 1989). At the time of the study by McCarl et.al.(1991) only two studies had been conducted which used self-recording with the mild to moderately mentally retarded. In addition, both of these studies were done with secondary level school students. In contrast, McCarl et.al.(1991) selected elementary level students with mild to moderate mental retardation as the subjects for their research. The intervention model employed by these researchers consisted of five phases:1)explanation; 2)demonstration;

3)differentiation; 4)role playing & 5)final assessment. The self-management training sessions were conducted in short intervals of twenty to thirty minutes daily. The success achieved by McCarl & colleagues(1991) is certainly due in part to breaking down the intervention phases into small concrete steps and the utilization of short training periods. These researchers increased their subjects' opportunities for succeeding through the use of these methods.

Even the article by Hughes and colleagues(1991) which reviewed 19 studies of self-management and the mentally retarded, found many limitations with the research they examined. The authors caution against generalizing the results to older mentally retarded students when the number of senior high school studies done with this population is so small. Another limitation noted was the lack of inconsistency in detail and amount of student training time. Patterns could not be established because of insufficient information. While some of these studies described training procedures in very little detail, others described such procedures with considerable detail, and some even included verbatim instructions given to students. Such a wide range of training descriptions certainly doesn't make comparisons an easy task.

Although the mentally retarded student faces even greater educational challenges because of his or her cognitive deficits, it would seem that this population would have the greatest need for self-regulation. Osborne et.al.(1987) included three

educable mentally retarded students as part of his study to ^{self-management} reduce distractibility through the use of self-monitoring. In this case, first students were given concrete definitions of paying attention and not paying attention. Next, the teacher role-played examples of both while the students rated the teacher's behavior. Afterwards, the students were introduced to the audio-taped cues. They were instructed to ask themselves whether or not they were paying attention when they heard the tone from the tape recorder and to mark the appropriate box "yes" or "no." This study investigated the relationship between self-monitoring and attention to task and self-monitoring and academic productivity. The results showed that this treatment, without the use of back-up reinforcers, was successful in improving the performance of four out of the five subjects under study. (The other two subjects were emotionally disturbed).

The mentally retarded need the skills of self-regulation in order to be as self-sufficient as possible when they leave the public school system. Even the severely retarded can learn to be more productive workers in a sheltered workshop setting with self-management strategies. Past research supports this finding (Hughes & Peterson, 1989; Moore et.al., 1989; Salend et.al., 1989). For example, the studies by Moore et.al. (1989) & Salend et.al. (1989) used self-management strategies with severely retarded adults in a workshop setting. In both cases, the self-management interventions increased their production rates and decreased their rates of error. More specifically,

self-management
in the study by Moore et.al.(1989), the researchers used the following self-management components:1)self-instructions; 2)goal setting; & 3)self-reinforcement. This study is noteworthy not only because of the increased production rates produced as a direct result of the self-management interventions, but also because the subjects in this study were able to maintain their improved production rates for up to three months. Such results show how self-management techniques can be powerful procedures to enhance the work performance of the severely retarded.

The Promise of Audio-Cued Self-Monitoring

Although some of the benefits of self-monitoring have already been discussed, the results achieved are even more remarkable for audio-cued self-monitoring. In a study by Blick & Test(1987), three separate classes of mildly handicapped high school students were taught to self-monitor when given audible cues. However, for purposes of data collection, only four students from each resource room class were observed. Selection of observed students was based on length of time in special education and the number of disciplinary incidents from the previous year. Students were instructed to self-record when they heard audible cues(emitted from a tape recorder), during four different phases of intervention: 1)self-record every five minutes; 2)self-record every ten minutes; 3)partially faded cues/self-record with audible cues given only 50% of the time; & 4)self-record with no audible cues given. The results showed a functional relationship between self-monitoring and

self-management recording and increased on-task behavior. Even when audible cues were not given, the subjects maintained high levels of on-task behavior.

Moreover, impressive results were also achieved by Hallahan & Sapona(1983). In their study, two different methods of self-monitoring were used. In the first case, a elementary learning disabled student was taught to self-monitor whether or not he was paying attention when he heard an audible cue. This procedure was used during seatwork for math and handwriting. The results showed a dramatic increase in the student's on-task behavior for both academic areas. A one-month followup of his math seatwork revealed that a high level of attention continued to be maintained.

In the second case, three elementary learning disabled children were taught to self-monitor during small group reading instruction. Also, instead of a recording sheet, students were instructed to press a button on their wristcounter if they were on-task when they heard the audible cue. Once again, the self-monitoring procedure led to increases in attention. Maintenance of high attention levels was also noted during a six week followup. Hallahan & Sapona attribute the success of self-monitoring to the child's active participation in the treatment process. This method also stresses self-initiative by having the child monitor whether or not he or she is on or off-task.

Finally, McDougall & Brady(1995) provide the most recent research on self-monitoring. In their study, three elementary

self-management students with behavior disorders were taught to use self-monitoring to increase time on task and improve spelling acquisition. The results revealed that two of the three students more than doubled their time on task. Also, oral spelling accuracy increased dramatically for one, minimally for another, and only with cuing modifications for the third. The difference in academic achievement could be attributed to the skill area. In this study, the researchers have focused on spelling acquisition. Hallahan & Sapona(1983), advocated the use of self-monitoring with spelling maintenance. It is believed by the latter set of researchers for self-monitoring to be more effective with already existing skills, rather than the learning of new skills.

Can Generalization & Maintenance of Self-Monitoring Be Achieved?

Other researchers have directed their attention as to whether the results of self-monitoring can be maintained and/or generalized to other settings.(Ager & Cole, 1991; Nelson et.al., 1991; Rhode et.al., 1983; Smith et.al., 1992). Ager & Cole(1991) critically reviewed twenty studies which employed the use of self-management strategies to improve social skills. Their findings were:1)The amount of time spent training is a critical factor in producing meaningful behavior change.(Studies which utilized longer training periods produced significant positive results).

2)Most studies listed treatments used, but not the specific

self-management
methods or procedures. Such information is needed to attempt
to replicate results in future studies.

3) Only two of the twenty studies showed positive results for both maintenance and generalization.

While self-management continues to produce promising results, the ability of students to generalize this knowledge to other settings isn't as clear-cut.

The inability to generalize treatment effects of self-management was also evident by other researchers. In the study by Nelson et.al.(1991), a large number of studies were also critically examined. The results showed that self-management interventions were effective in stabilizing the social and academic behaviors of the behavior disordered. A similar case was found in the research by Smith et.al.(1992). While the results also failed to generalize, the treatment was highly effective in reducing the disruptive behaviors of high school males who were classified as either behavior or learning disabled.

Consequently, it was only the study by Rhode et.al.(1983) where generalization and maintenance of treatment gains occurred from the resource room to the regular classroom. Perhaps the success lies in the fact that the students were not trained to use self-management in the regular classroom until they demonstrated that they could accurately self-evaluate their own work and behavior in the resource setting.

Other Uses for Self-Monitoring

While the studies reviewed have a common focus on how to reduce disruptive behaviors through the use of self-management, Maggiore(1983) looked at self-control in another way. Using the Matching Familiar Figures Test(MFFT), students are identified as having either a reflective or impulsive style of thinking. With this knowledge, the impulsive student can be taught self-control techniques to help overcome his or her learning deficits. As Maggiore points out:"Impulsive children are described by a lack of self-control together with high task error rates. That is, impulsive children respond quickly to problem-solving tasks without considering all alternatives and are frequently incorrect in their response."(Maggiore, p.38). Clearly, training is warranted here to prevent the impulsive child from continually experiencing failure. Three methods of self-control which showed promise were: 1)self-verbalizations or self-talk; 2)scanning strategies(help the impulsive child to slow down, stop, and think); & 3)differentiation training(helped to reduce impulsive behaviors and errors in responding).

Nonetheless, Shores, Gunter, & Jack(1993) suggest a use for self-monitoring which is very different from other researchers. In this study, the subject is the teacher, not the student. It was found that in order for teachers to keep control over their students, many will engage in coercive or negative statements far more often than praise. The authors

self-management advocate that teachers use a three to one ratio, (three positive statements to every one negative statement). In order to accomplish this goal, it is suggested that teachers self-monitor to track their own behavior when responding to students. While this sounds like a viable solution to implement, the authors also found that in many classrooms students are reprimanded far more often than they are praised.

How to Teach Self-Management

Although a majority of the studies reviewed point to the success of self-management as an effective treatment in reducing off-task behaviors, it wouldn't be a very effective intervention without knowing how to implement this method in the classroom. Bowman(1992) advocates the use of self-monitoring in place of daily point sheets. This author prefers self-monitoring because it asks both the teacher and student to pay attention to the student's behavior. The student is also rewarded for discussing why a point was or was not earned. The program encourages the student to regularly monitor his or her own behavior. Furthermore, such a program encourages communication between the teacher and student and discourages tantrums over lost points.

Another important component when teaching self-monitoring to students is to identify the target behavior(behavior you wish to change), and an appropriate replacement behavior(behavior you want the student to engage in);(Braswell, 1993; Carter, 1993). Students not only need to know what inappropriate behavior looks and sounds like, but also what appropriate

behavior looks and sounds like. Telling a student, "Please self-management behave yourself," doesn't really explain what behaviors you are trying to elicit from the student. Teachers should be clear about what their expectations for students are.

Reid(1993) also concurs:"When choosing a target variable, there are four factors that should be considered:1)specificity 2)observability, 3)appropriateness, & 4)personal match."(Reid, p.46-47). Reid also clearly states what the sequence of steps are to implement self-monitoring in the classroom. An additional factor that must be considered is securing the student's willing and active participation. If the student you select has no interest in learning self-monitoring, then the intervention has lost its foundation for success. The student becomes ultimately responsible for eliciting change in his or her behavior. The student also earns the credit when self-monitoring has been a successful method for producing positive behavior change.

Conclusion

The job of teaching students continues to be a task of ever-increasing complexities. Students who have not mastered self-control will be at-risk for experiencing school failure. When students display disruptive behaviors, they not only interfere with their own learning process, but with the learning process of others. Also, real learning cannot occur if off-task behaviors cannot be brought under control. Teacher-directed or externally controlled methods to modify behavior have been

self-management shown to be ineffective over time. Also, the students are not able to generalize this control to other settings. The teacher holds the sole responsibility of managing the behavior of his or her students.

Self-management, on the other hand, puts the power of managing behavior into the hands of both the teacher and the student. After an initial investment of time, the student monitors and self-records whether or not he or she is on-task. The teacher spends less time correcting behavior and more time actually teaching.

Another advantage of self-management interventions is once started, students can keep track of their own progress through the use of charts or graphs. The chart or graph itself becomes a motivator for the students to improve upon. When students learn to manage their own behavior, they are increasing their chances of experiencing success instead of failure. Such is the case with the mentally retarded. This population, because of the severity of cognitive deficits, have experienced more instances of failure in schools than most of us have experienced throughout our lifetime. Through the use of self-management, perhaps even the mentally retarded child can learn self-control and work and live successfully in his or her own community. Having control is having the power to change for the better.

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CHAPTER 3:
Research Design

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For the purposes of this study, it is hypothesized that multiply handicapped students who are taught self-management techniques will substantially increase their time on task. It is also hypothesized that these same students will reduce the number of disruptive behaviors displayed in the classroom.

Moreover, for the purposes of this study, multiply handicapped students are operationally defined as Educable Mentally Retarded(EMR) and Trainable Mentally Retarded(TMR). In accordance with the N.J. State Code, students with the above named classifications have levels of cognitive development and adaptive behavior that ranges from moderately to severely below age expectations. Additionally, performance on standardized tests of intelligence have produced scores which fell within a range of two to three standard deviations below the mean for EMR subjects and scores which fell three standard deviations or more below the mean for TMR subjects. Thus, the range of IQ scores from 29-56 adheres to the aforementioned standards.

Method

Subjects

Three multiply handicapped students between the ages of 12-19 yrs. were chosen as participants for this study. The students attend school in a special services district and are in a departmentalized secondary program with an emphasis on transitional and prevocational skills. Subject #1 was a 13 year old Caucasian female. Data on her IQ revealed a score of 35 and she is classified as Multiply Handicapped(MH). She is

self-management
from a lower class rural area and lives with other handicapped
siblings. Subject #2 was an 11-year-8-month old Caucasian male.
His IQ score was reported as 56 and his present classification
is Communication Handicapped/Educable Mentally Retarded(CH/EMR)
or MH. He is from a middle class rural area and has two normal
functioning siblings. Subject #3 was a 19-year-7-month old
Caucasian male. Educational records showed his IQ score to
be at 42 and he is also presently classified as Multiply
Handicapped(MH). He is from a middle class rural area and
has one normal functioning sibling. All subjects attend the
same homeroom and travel as part of one unit to four different
subject area teachers.

Materials

Since the students under study are rotated for instruction
in specific content areas to a number of teachers, a self-made
rating scale was used. This scale was developed in order to
identify those students who had the most difficulty staying
on task. Individual teachers were asked to rate each student's
behavior based on the listed criteria. The teachers were then
to circle the three students out of a class of ten, with the
lowest scores. These scores were averaged and the lowest scoring
students were those, who by teacher consensus, could most benefit
from self-monitoring(see Appendix A).

For the purposes of instruction, students will be taught
self-monitoring techniques through the use of a commercially
produced package called, Listen, Look, and Think(Impact

self-management Publications, Inc). Included in this kit is a tape of intermittent audio-cued tones and a self-recording form.(see Appendix B). The students will mark the sheet, whether or not they were paying attention upon hearing the audible cue. An empty box will indicate that they were not on task or failed to mark the sheet when the audible cue was given.

Procedure

Once the students who will be participating in the study had been identified, specific target behaviors and appropriate replacement behaviors were chosen. For the purposes of this study, a target behavior can be operationally defined as the behavior you want the student to change. A replacement behavior can be operationally defined as the behavior you want the student to engage in(Braswell, 1993; Carter, 1993).

Next, baselines were established for each individual subject. During this period, the experimenter listened to the audio-cued tones with a set of headphones to minimize the level of disruptions in the classroom. Upon hearing the audible cue, the experimenter marked whether or not the subject was on or off-task on a rotating basis.(ie. first tone=Subject 1; second tone=Subject 2...fourth tone=Subject 1, etc). Once a stable baseline for each student has been established, the intervention phase will begin.

To control for confounding effects, the self-monitoring procedure will be taught to the three subjects through the use of modeling and practice sessions. The experimenter will

continue to record the occurrences and nonoccurrences of the ^{self-management} subjects' off-task behavior throughout all phases of the study. These sheets will be crossmatched with the subjects' recording sheets on a regular basis to assess the accuracy of the students' self-recording.

The research design that was used was the multiple baseline design. With this design more than one student is selected for study and a minimum of three behaviors are studied per student. The experimenter initially records baseline data for all target behaviors. Once stable levels have been reached for at least one of each subject's target behaviors, the intervention phase is introduced for the first target behavior, while baseline data collection continues for the remaining target behaviors. The intervention is systematically introduced for each target behavior at three separate intervals. The goal here is to show that the intervention in and of itself was effective in bringing about positive changes in behavior. If the intervention was introduced for all target behaviors at one time, it would be unclear as to whether any improvements in behavior were a direct result of the intervention or a case of reactivity.

In addition, self-monitoring will be the independent variable and the variable of primary interest. The level of off-task behavior and productivity will be the dependent variables under study. Due to the subjects' low levels of cognitive functioning, booster sessions in self-monitoring

instruction will be utilized as needed, if at any time the self-management occurrences of off-task behavior should increase or exceed baseline levels.

Data Analysis

The students' self-recording sheets will be collected on a daily basis. Percent accuracy will be calculated and measured during the Intervention phases for each individual student. Based on these findings, it will be determined whether a relationship exists between student accuracy and the success rate with self-recording of specific target behaviors.

CHAPTER 4:
Results

self-management

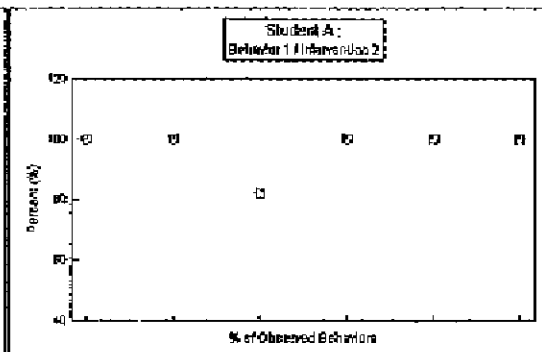
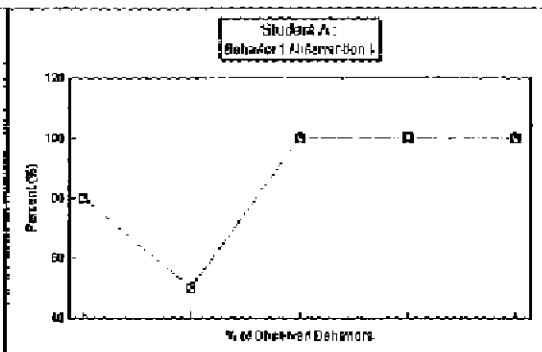
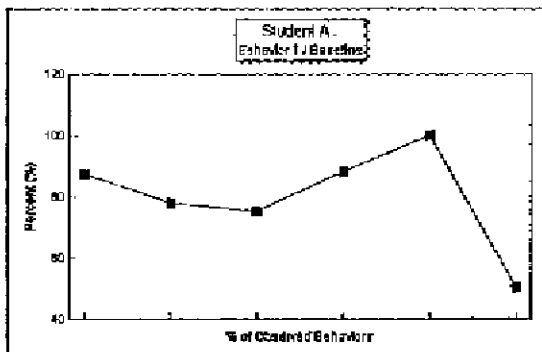
The purpose of this study was to examine the effectiveness of self-management techniques with multiply handicapped students. In this instance, multiply handicapped students were defined as Trainable or Educable Mentally Retarded adolescents. While all the subjects had specific target behaviors which were more closely analyzed, in most cases significant improvements were noted when compared with baseline levels. Since a multiple baseline design was utilized in this study, the data collected was for three subjects, three behaviors per each, or a total of nine target behaviors.

For instance, Student A, a 13-year old female at the beginning of this study showed significant improvements in her target behaviors of: 1)staying on task & 2)following staff instructions. Staying on task was measured on average during baseline at 79.75%, whereas at the conclusion of Intervention 2, this same behavior was measured on average at 96.97%. Improvements were also noted for following staff instructions. On average, baseline levels were at 87.75% as compared with 97.17% at the end of the second phase of Intervention. Student A showed no progress with the third target behavior: request help when needed. Further discussion of such results will be done in Chapter 5.(See Table I:Student A).

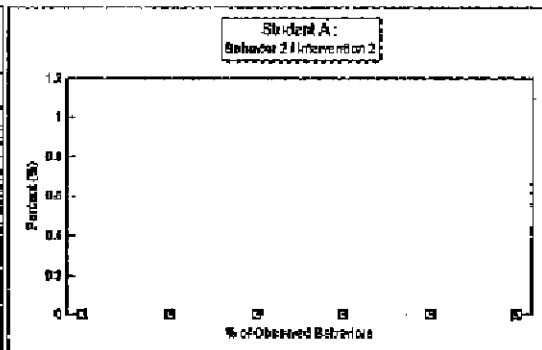
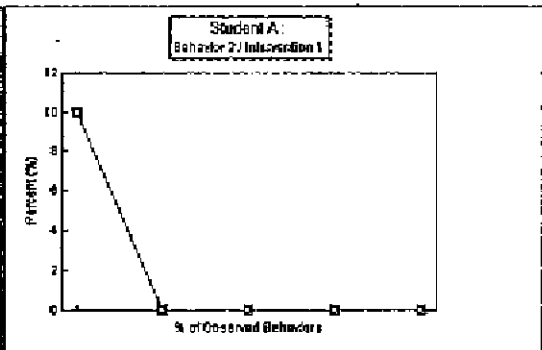
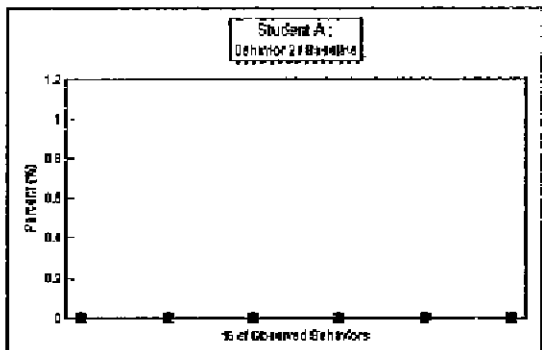
Perhaps the most noteworthy results were evident with Student B. Student B was a 11-year-8-month old male at the start of this study. His target behaviors were as follows: 1)staying on task; 2)laughing inappropriately; & 3)calling out.

		Percentages of Observed Behaviors Table I			
Student A		Baseline	Intervention 1	Intervention 2	
Behavior 1- Staying on task	Average	79.75	86	96.97	
Behavior 2- Request help when needed	Average	0	1.67	0	
Behavior 3- Follows staff instructions	Average	87.75	86.58	97.17	
		Percentages of Observed Behaviors Table II			
Student B		Baseline	Intervention 1	Intervention 2	
Behavior 1- Staying on task	Average	52.67	98.33	98.48	
Behavior 2- Laughing inappropriately	Average	9.67	12.40	5.78	
Behavior 3- Calling out	Average	29.00	19.72	5.82	
		Percentages of Observed Behavior Table III			
Student C		Baseline	Intervention 1	Intervention 2	
Behavior 1 - Staying on task	Average	70.92	96.67	100.00	
Behavior 2 - Wearing glasses	Average	58.67	98.33	83.33	
Behavior 3 - Follows staff instructions	Average	64.75	90.77	100.00	
		Percent of Accuracy of Student Self-Recording Table IV			
		Intervention 1	Intervention 2		
Student A	Average	71.43	72.55		
Student B	Average	95.00	91.83		
Student C	Average	83.75	81.97		

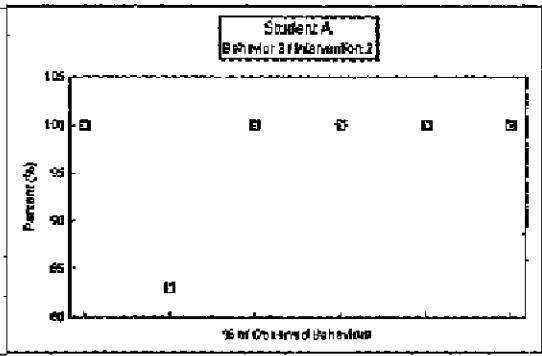
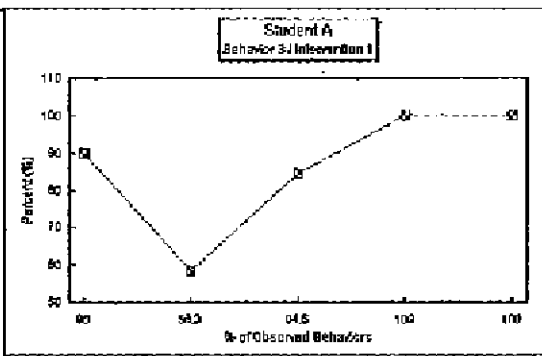
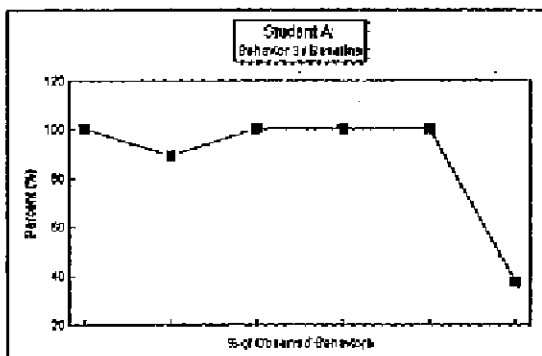
Behavior 1 - Staying on task



Behavior 2 - Request Help When Needed



Behavior 3 - Follows Staff Instructions



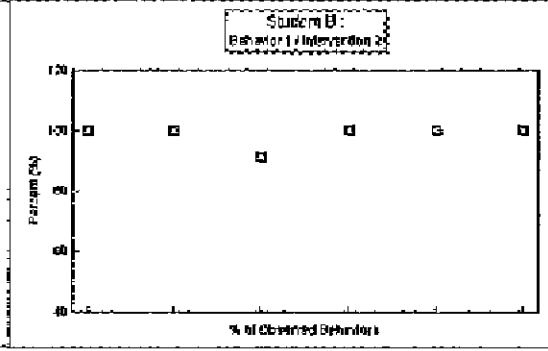
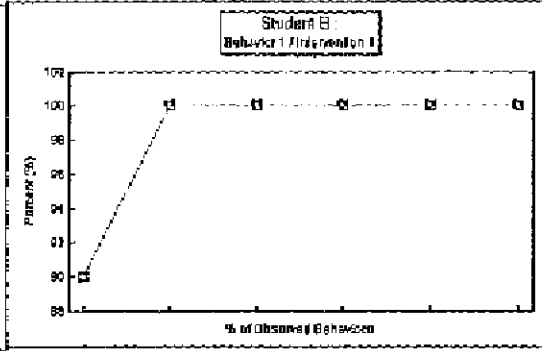
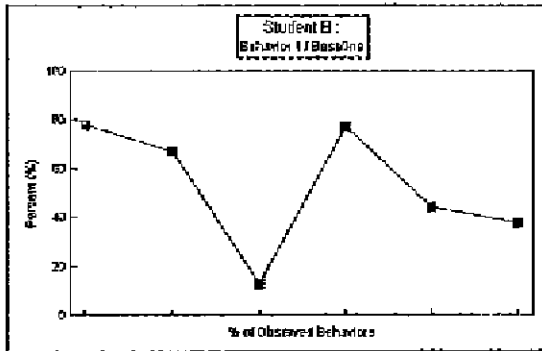
self-management
Staying on task was measured on average at 52.67% during baseline and at 98.48% at the close of Intervention 2. In contrast, the goal of the researcher with Behavior 2:laughing appropriately & Behavior 3:calling out, was to observe a reduction in these off-task behaviors. Such results were achieved. With laughing inappropriately, a baseline average was recorded at 9.67% as compared with a 5.78% average at the end of this study. More significant reductions were evident with calling out. The baseline average was 29%, whereas the average after intervention was 5.82%.(See Table II:Student B).

Furthermore, the results achieved for Student C were also significant. Student C, a 19-year-7-month old male at the start of this study, was observed closely to record the number of occurrences and non-occurrences for the following target behaviors: 1)staying on task; 2)wearing his glasses; & 3)following staff instructions. In the case of staying on task, the baseline average was computed at 70.92% as compared with an average of 100% after intervention. Similiar results were noted for wearing his glasses. The baseline average was 58.67%, whereas the average after intervention was 83.33%. The third behavior, following staff instructions, yielded an average of 84.75% during baseline as compared with an average of 100% after intervention.(See Table III:Student C).

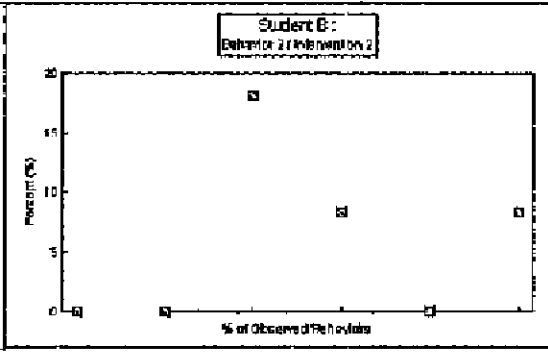
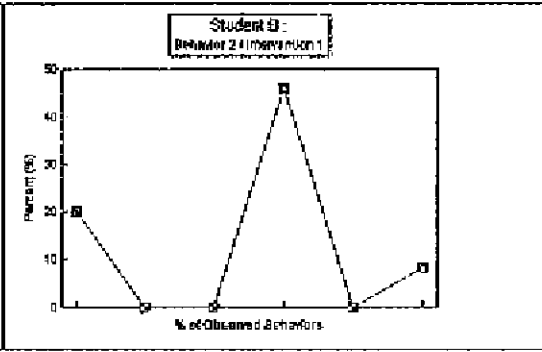
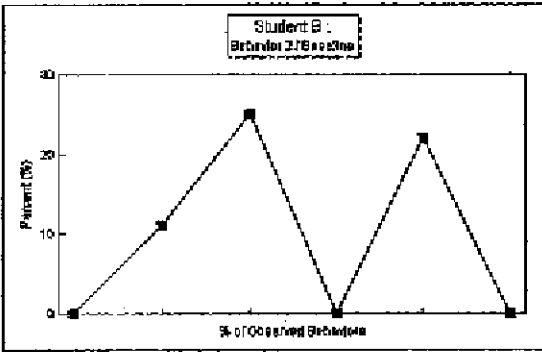
In addition, the percent of accuracy with each students' self-recordings were also measured. On average, Student A was 71.43% accurate with her self-recording during Intervention

SUBJECT

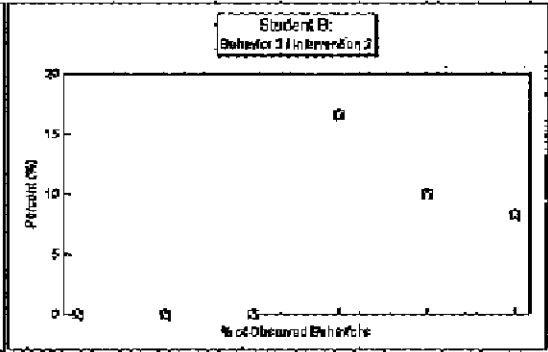
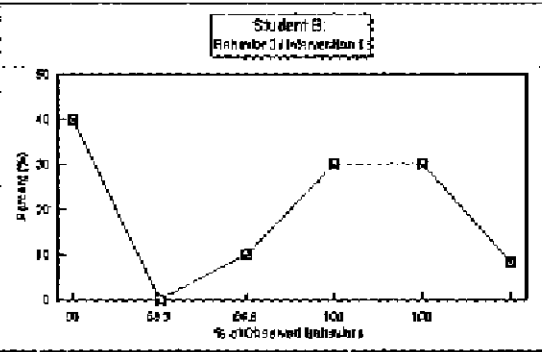
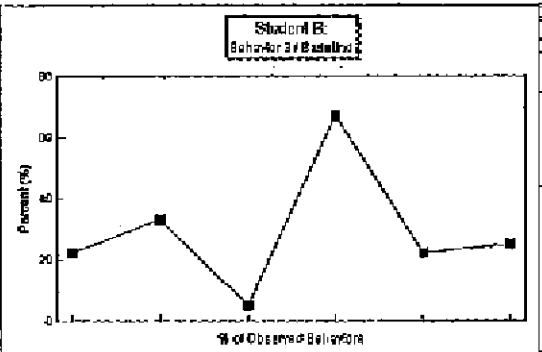
Behavior 1 - Staying on Task



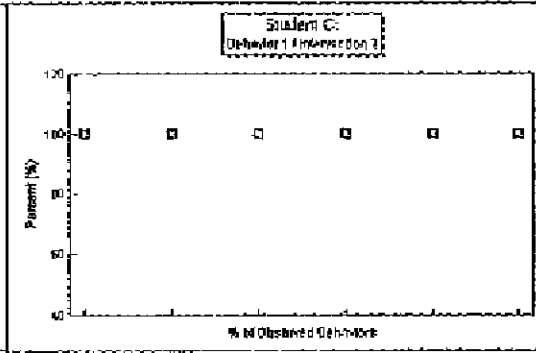
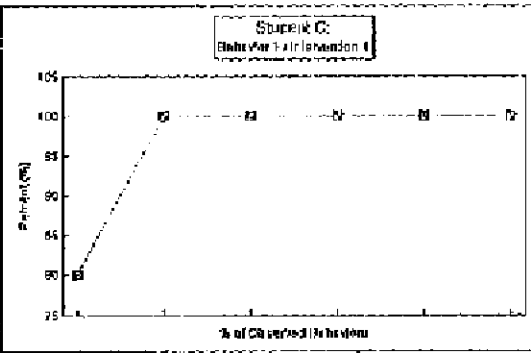
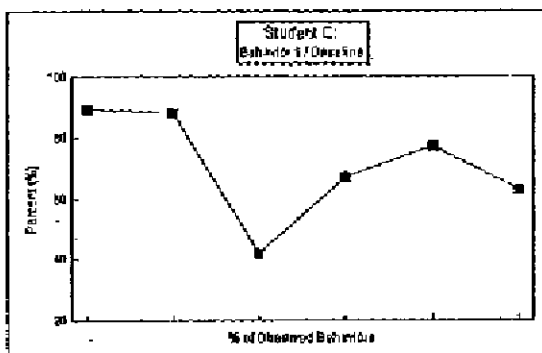
Behavior 2 - Laughing Inappropriately



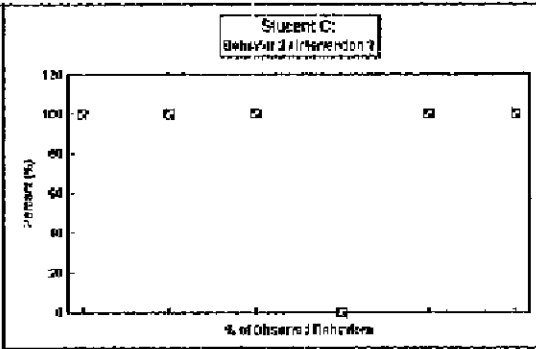
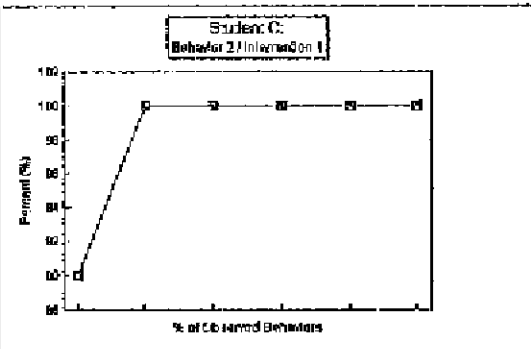
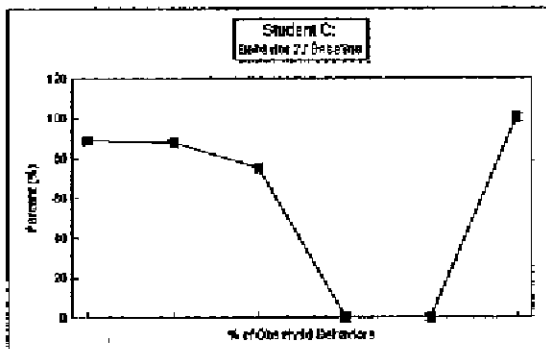
Behavior 3 - Calling Out



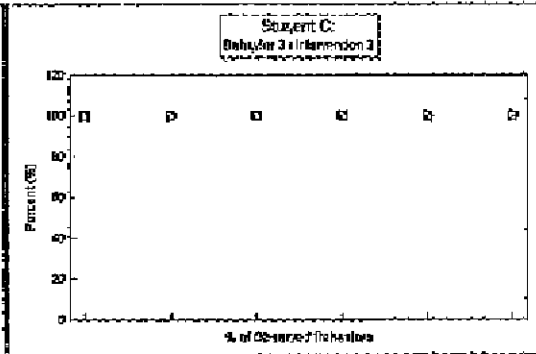
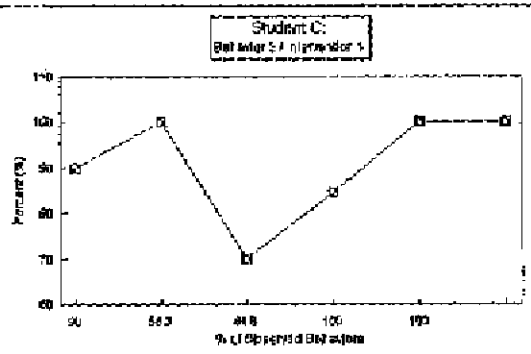
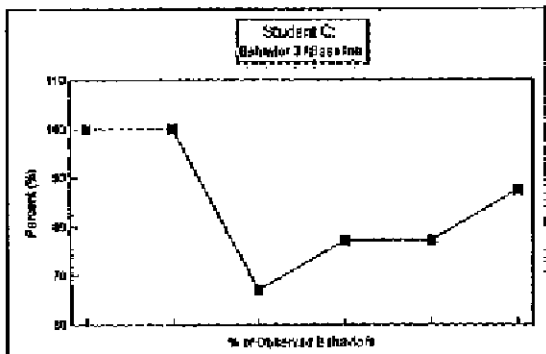
Behavior 1 - Staying on Task



Behavior 2 - Wearing Glasses



Behavior 3 - Follows Staff Instructions

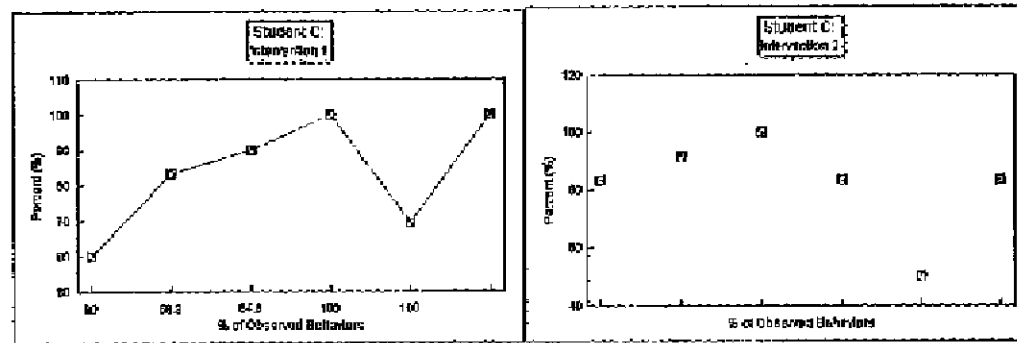
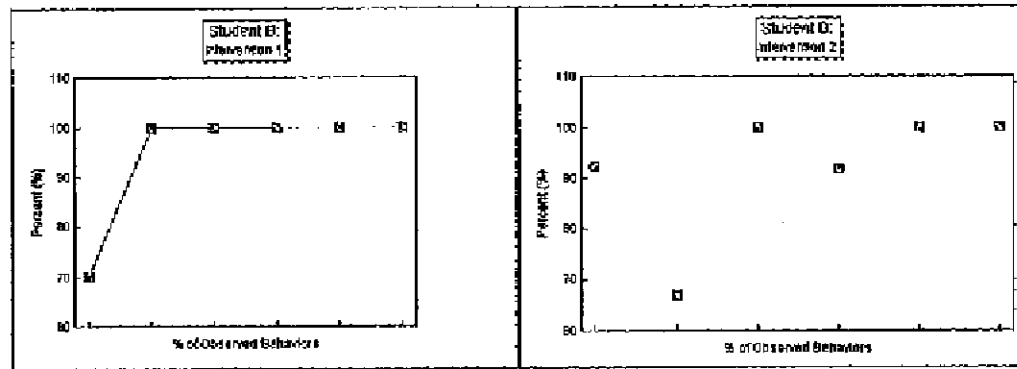
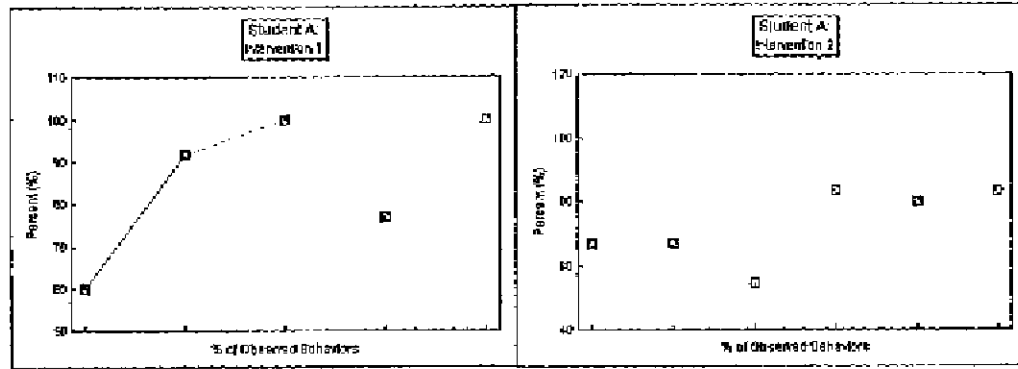


self-management
1 and 72.55% accurate during Intervention 2. In contrast,
Student B achieved 95% accuracy for his self-recording during
Intervention 1 and 91.83% accuracy during Intervention 2. Next,
Student C received an accuracy rating for his self-recording
of 83.75% during Intervention 1 and 81.97% during Intervention
2. The relationship between student accuracy and the success
rate with self-recording will be discussed in Chapter 5. (See
Table IV).

Upon close examination of the data collected during the
three phases of this study, the results show that multiply
handicapped students can be taught to successfully self-manage
their own behavior. Implications for future research and
recommendations for other professionals will be fully discussed
in Chapter 5.

STUDENTS

Percent of Accuracy of Student Self-Recording



CHAPTER 5:
Discussion

REVIEW OF THE PROBLEM

Across the nation in every classroom, there are students who have more difficulty learning than their peers. Students who demonstrate difficulty staying on task exist in every classroom. Yet, when some of these same students are also identified as mentally retarded, then the job of keeping such students on task grows to be exceedingly difficult. When students cannot learn because of severe impairments in cognitive functioning levels, it becomes necessary to take a hard look at what you are trying to teach them in the first place. In such instances, traditional academics are replaced by functional life skills. College preparatory curriculum is replaced with prevocational or sheltered workshop skills. Instead of focusing on career-oriented goals, the spotlight must be turned towards independent functioning. In short, the mentally retarded student must be taught how to survive. With limited abilities and less opportunities for gainful employment, a student who cannot manage his or her own behavior has very poor prospects for the future.

The question addressed in this study was: **Can the use of self-management techniques be effective in reducing the off-task behaviors of multiply handicapped students?** It was hypothesized that the results of this study support the use of self-management techniques are an effective intervention for the reduction of off-task behaviors. Consequently, this also can mean that if you are effective in reducing off-task behaviors, then you are

self-management also increasing on-task behaviors. Thus, the mentally retarded can improve their odds of achieving success.

While all the subjects in this study were taught how to self-record the occurrence or non-occurrence of specific behavior, their degree of success varied. In the case of Student A, when taught to self-record whether or not she was staying on task during Intervention 1, there was an increase of 8.25% during this period and an additional increase of 10.97% during Intervention 2. For the behavior of following staff instructions, there was a 1% decrease in this behavior during Intervention 1, but a 9.4% increase during Intervention 2. During Intervention 2, following staff instructions was the behavior the student was self-recording. Since she was not self-recording this behavior during Intervention 1, this could help to explain why there was a slight decrease in that targeted behavior during that phase of the study.

Although Student A increased her rates of time on task and following staff instructions, performance did not improve for requesting help when needed. Possible explanations for such results include:

- 1) Student does not initiate communication with staff on a regular basis. This student is shy a great deal of the time and does not initiate conversation without prompts.
- 2) To request help when needed is a complex behavior. For this student breaking down the desired behavior into small steps with the teacher modeling each in succession would aid the

self-management
student in learning this specific behavior.

3) Previous research has suggested the use of self-management with skills or behaviors that the student can already do, rather than for the acquisition of new skills (Hallahan & Sapona, 1983).

Moreover, mixed results can also be seen for Student B. During Intervention 1, the behavior the student was self-recording was staying on task. While staying on task showed a substantial increase of 45.66%, the behavior of laughing inappropriately also increased by 2.73%. Whatever behavior the students themselves were self-recording, was the behavior that initially increased the most.

In the case of Student B, two of his target behaviors were off-task behaviors: laughing inappropriately & calling out. While laughing inappropriately initially increased during Intervention 1, both off-task behaviors occurred at rates of less than 6% during Intervention 2. Although calling out was the behavior the student was self-recording during Intervention 2, both behaviors decreased to relatively low levels.

In addition, results were also encouraging for Student C. When the student was self-recording the behavior, staying on task during Intervention 1, this behavior showed an increase of 25.75% during this phase and reached consistent levels of 100% during Intervention 2. When the student was instructed to self-record the behavior of following staff instructions during Intervention 2, this behavior also reached levels of 100%. When the student was not self-recording this behavior

self-management during Intervention 1, an increase of 6% was still evident. While the student's third target behavior, wearing glasses, was never self-recorded by the student, this behavior also increased during both Intervention phases. During Intervention 2 the student was consistently wearing his glasses independently except for one observation period. On this day, the student arrived at school and immediately apologized for leaving his glasses at home. During baseline, such information would not have been volunteered.

Even though progress was evident in eight of the nine behaviors which were targeted by the researcher, other problems occurred which were not anticipated. For example, Students A & C had some difficulty with the process itself of self-recording. In the case of Student A, she could not successfully self-record without some verbal prompts. As a result, she achieved the lowest accuracy ratings for her self-recording(72%).

For Student C, he experienced difficulty with self-recording because of his poor fine motor skills. He was unsuccessful in the task of marking a check in a blank box. To remediate this problem, the student was given a self-inking stamp. When he heard the audio-cued tone emitted from the tape recorder, he was to stamp one empty box. Using the stamp instead of marking a check made self-recording a task he could achieve. As a result, his accuracy rating for his self-recording ranged from 81-83%.

self-management
Only Student B learned to self-record with relative ease and with high rates of accuracy. His accuracy ratings ranged from 91-95%. Like Student C, he also showed improvement with all three of his target behaviors. Thus, all students experienced some degree of success with self-recording.

While previous studies have shown the success of self-management in increasing the levels of attention sustained by mildly handicapped students, the research is more limited for self-management used with the severely handicapped population. At first, many researchers felt that the mentally retarded did not have the levels of cognitive functioning needed to perform self-management tasks (Salend, Ellis, & Reynolds, 1989). The mentally retarded need to acquire the skills of self-regulation more than any other population. Because of their deficits, the mentally retarded must learn to be as self-sufficient as possible when they exit the public school system. With longer periods of vocational training and the implementation of self-management strategies into sheltered workshop settings, the mentally retarded will have more opportunities for experiencing success. Success is a virtue that should be experienced by everyone, and the mentally retarded are no exception.

Despite the students low levels of cognitive functioning, all of the students learned to self-record specific behaviors with an accuracy rating ranging from 72-95%. The implications for future research include:

- 1) the use of self-recording to increase productivity rates in

vocational workshop settings.

2)the use of self-recording to decrease rates of error produced in these same settings.

3)the success of self-recording may produce an increased sense of self-esteem in learning to control one's own behavior.

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self-management

APPENDIX

APPENDIX A

Does the student:	A	B	C	D	E	F	G	H	I	J
1. follow staff instructions?										
2. exhibit behaviors appropriate for the class?										
3. interact appropriately with adults?										
4. stays on task during whole class instruction?										
5. follow classroom rules?										
6. ask for help when needed?										
7. stays on task during group instruction?										
8. accept correction appropriately?										
9. Complete assignments within the allotted time?										
10. stays on task when working individually?										
TOTAL										
Rating Scale 1= Demonstrates Behavior infrequently or non-compliant. 2= Demonstrates Behavior about 50% of the time. 3= Demonstrates Behavior about 75% of the time. 4= Demonstrates Behavior Consistently.										

SELF RECORDING CHART - STUDENT FORM

NAME: _____

DATE: _____



=

PAYING ATTENTION

SELF RECORDING CHART - STUDENT FORM

NAME: _____

DATE: _____



= FOLLOW STAFF INSTRUCTIONS ?

APPENDIX: B-4
SELF RECORDING CHART - STUDENT FORM

NAME: _____ **DATE:** _____



= DID I RAISE MY HAND?

SELF RECORDING CHART - STUDENT FORM

NAME: _____

DATE: _____



= **PAYING ATTENTION**
