The effects of mediation essays on assignment completion and inappropriate talking of five mildly retarded high school students were examined. The teacher kept records of percent of assignments completed and occurrence of three talking out behaviors (talking to one's neighbor, making noise in class, and talking to one's self). Students were first treated verbally and asked R. Blackwood's four question format: What did you do that was wrong? What unpleasant things happen when you do it? What should you have done? What nice things happen when you do what you should? Then Ss were presented with a standard essay to copy (samples are appended). Results indicated increased consistency of student performance supported the usefulness of the essay mediation technique in reducing talking out behavior. In addition, the teacher found the procedures easy, positive in nature, and time efficient and felt that the approach produced a quieter classroom. (CL)
THE ESSAY AS A MEDIATION INSTRUMENT
IN THE SPECIAL CLASSROOM

BY

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Many techniques have been used to control or modify the behavior of school children. Verbal praise, special treats, token economies, and a variety of punishment procedures have been utilized with success. While immediate successes have been evidenced, teachers have questioned the long term effects of these behavior modification techniques. The ideal technique would be simple, fast working, lasting, and generalize across settings. Although this ideal has not been met, several approximations have received study.

Self-control procedures have been intensively investigated during the past several years (Watson and Tharp, 1972). Individuals have controlled their behavior using standard behavior modification procedures such as contingent reinforcement, (the presentation of a reward) response cost (the removal of reward), and punishment, (the presentation of a punisher). The most important aspect of self-control is that the individual specifies and controls his own reinforcement (Watson and Tharp, 1972). Self-control of reinforcement is at least as effective as externally managed reinforcement (Bandura and Perloff, 1967). Other studies have suggested that self-reinforcement behavior may be more resistant to extinction than behaviors which are externally reinforced (Johnson, 1970; Johnson and Martin, 1972). Self-evaluation prior to self-reinforcement has been studied by Johnson and Martin (1972). They found that self-evaluation can become a valuable secondary reinforcer when it is an immediate contingency.

Blackwood, (1970, 1971) has studied covert verbal mediation of specific behaviors. He assumes that when a child is tempted to misbehave he thinks before,
during and after acting. When this happens, verbal thoughts mediate between the temptation and the response or between the response and a delayed reinforcement. It is possible to change the way a child thinks during the temptation-response-reinforcement chain (Blackwood, 1972). This change in cognitive mediation (thinking) defines Blackwood's notion of self-control. The child learns to think about the consequences of his acts and these thoughts mediate between temptation and response or response and reinforcement.

A mediation chain is established by environmental interactions. These interactions teach the children to think, covertly, about the consequences of their behavior. Blackwood uses the following four question format to establish the mediation chain (1970, 1977):

1. What did you do that was wrong?
2. What unpleasant things happen when you do it?
3. What should you have done?
4. What nice things happen when you do what you should?

Blackwood has also studied two ways of presenting the four questions. He suggests that a direct questioning technique may be best for use with individual students or small groups. The repetition of the question and appropriate verbal response procedure teaches the student to think or mediate, before acting. For groups of students he suggests the use of written essays which answer the four questions as a more time efficient technique.

The present study was an application of the techniques developed by Blackwood in a class of High School mildly retarded boys. Specifically, the effects of mediation essays on assignment completion and inappropriate talking were studied.
Methods

Subjects

The subjects were five boys enrolled in a self-contained class for the mildly retarded. The class was a part of the school district special education program. There were twelve boys enrolled in the program whose ages ranged from sixteen to twenty years. Academic deficiencies ranged from 6.8 through 10.0 years in reading and math. Baseline data collection initiated by the classroom teacher identified three students with high frequency talk out behaviors and two students who failed to complete assignments regularly. These five pupils became the subjects of the study.

Procedure

The experimental design was established so that the classroom teacher could carry out data collection during a normal instructional day. The estimated amount of time involved in implementing the program was 15 minutes/day. Two general types of behavior were identified by the teacher; assignment completion and talking out. Assignment completion was defined as having all problems in an assigned task completed when called for by the teacher, usually fifteen minutes after school began the following day. The number of assignments due per day ranged from one to four. Total difficulty or length was similar each day. Percent of assignment completion was computed by dividing the number of assignments completed by the total number of assignments due and multiplying by 100.

Three specific behaviors comprised talking out. These were: talking to your neighbor, making noise in class, and talking to yourself. Talking to your neighbor was defined as verbalization aimed at another student in the class and
not directly related to the task at hand. If the student had his math assignment out, talk to other class members had to be about the math assignment. Talking to yourself included reading out loud and other verbalizations which were not directed at another class member. Making noise in class was defined as any verbalization loud enough to be heard by the teacher, but which was not understandable speech. A tally of the occurrence of each of these behaviors was maintained by the classroom teacher. Behavior counts were made only during the first hour of academic work of the school day, roughly from 9:00 to 10:00 a.m. This time was spent completing assignments, correcting the ones that were due, and in remedial work as individually needed by students.

Design

The experimental design consisted of four phases; baseline, treatment 1, reversal, and treatment 2.

Baseline phase. Assignment completion baseline lasted eighteen days and talk-outs were tallied for eight days. During this phase of the study, behavior counts were obtained and computed as stated above. No behavior change was attempted during collection of baseline data.

Treatment Phase 1. This phase lasted twelve days. During the first seven days occurrences of the inappropriate behaviors were handled as follows. The first two occurrences of the behavior, for each student, were treated verbally; the four basic questions were asked and the student was prompted to give appropriate answers. Each subsequent occurrence resulted in the presentation of an essay. The essay was placed on the student's desk with instructions on how the student was to complete it.

The student was instructed to copy an essay the first three times he was
given one. Blackwood used a second step that involved paraphrasing the written essay. This paraphrasing activity proved to be too difficult for the students and was omitted from the study. All essays were copied by the student when they were received. All essay copies were due at 9:00 on the morning of the following day. During the remaining five days of this phase, the above procedure remained in effect. The students were required to remain after school to copy all essays received that day. Transportation difficulties resulted in this procedure being carried out for only two days with two students.

Reversal Phase. This phase of the study lasted five days only due to the lack of further time in the school year. During this phase, no essays were given. Behaviors were counted as usual, but conditions were returned to those in force during the baseline phase. Students were told at the beginning of this phase that no more essays would be given.

Treatment Phase 2. At the beginning of the five days during which this phase was in effect, students were told that essays would again be given for each occurrence of the target behavior. Conditions were the same as in treatment phase 1. All essays were copied in school and were due the next morning.

The essays given were written specifically for one of the four target behaviors. They were limited to one page or less. All were type written and were composed to answer the four basic questions used by Blackwood. Examples of the four essays can be found in the appendix.

Results

Reliability

Due to conflicting schedules between the experimenter and the reliability observers, reliability data was collected only once during the study. At this
time, interobserver reliability exceeded the 90% level. Due to low frequency of the behaviors under study, reliability data was collected as a comparison of occurrences of talk out behaviors each ten minutes. Percent of agreement was computed by dividing the number of agreements for each ten minute period by the total number of agreements plus disagreements; and multiplying by 100. Since the dependent measure for assignment completion was defined as attempting all problems assigned, no reliability procedure seemed to be necessary.

Statistical Procedures

The Shewart Technique, a time series procedure (Gottman, 1974, Litzenberger, 1977), was used to define significant change in student behavior. This design combines the benefits of single subject design with those of statistical procedures so that a level of significant change can be identified for each student.

Talk out behavior. Significant change at the .05 level was accomplished for all three students. The graphic display of these data for students A, B, and C appears in figures 1, 2, and 3. Goals established by the Shewart Technique are identified by the dotted horizontal line on the graphs. Four days below the line defines significance for student A. Two days proved significant for student B and student C needed to remain below the goal for six consecutive days for significant change to be identified.

Assignment completion behaviors. Results were mixed for this aspect of the study. Student D showed significant increase in percent of assignment completion by exceeding the required level for four consecutive days. The results for student E
showed no significant difference between baseline and treatment phases.

Insert Figures 4 & 5 About Here

Mean, standard deviation, and range. Figure 6 reports the mean, standard deviation, and range for each phase of the study for each student. The means for subjects A, B, and C were below the .05 level established. Means for students D and E did not meet the goals set in either case although significance was reached by student D. The standard deviation was included to show the decrease in variability from baseline to intervention. The decrease in range also points to more consistent performance by target students.

Insert Figure 6 About Here

Discussion

The changes identified by the design and statistical procedures were also deemed educationally significant by the classroom teacher. He felt that the technique produced a quieter classroom and found the procedures for issuing essays easy, positive in nature, and time efficient.

The increased consistency of student performance supports the usefulness of the essay mediation technique in the reduction of talk out behavior. The decrease in variability of performance as indicated by decreases in standard deviation and range for each of these three students underscores its effectiveness. These decreases were not obtained with the two students whose goal was to increase their level of assignment completion. Although student D achieved a significant increase in percent of assignments completed, the variability on this measure actually increased. The variability of performance for student E re-
maintained unchanged from baseline to the one treatment phase in which he participated.

The data for students A, B, and C during reversal seems to indicate another characteristic of mediation training. Blackwood's stated goal for mediation training was the development of self-control (Blackwood, 1970, 1971). The maintenance of reduced levels of talk out behavior throughout the reversal phase of the study would seem to support this contention. A longer reversal phase would be necessary in order to be able to make any positive statements about self-control. The longer reversal phase could also be used to establish the durability of the treatment effect.

The performance of student D did show a significant increase in percent of total assignments completed. The subject showed a delayed change of behavior which held the mean percentage down for treatment phase 1. After having to copy several essays, the student stated that he felt completing assignments was easier than copying the long essay about assignment completion. At that point his performance improved markedly.

As can be seen on the graph of the data for student D, he completed all his assignments for four consecutive days, meeting requirements for significance. Then he dropped to 67% followed by four more days of one hundred percent assignment completion. The 67% performance was a result of confusion concerning the assignment. By the procedural definition of assignment completion, this assignment had to be considered incomplete. It was the intent of the subject to complete the assignment, however. This confusion was the fault of the teacher. It interrupted a series of nine days of 100% performance by the subject. Consistent performance between the reversal phase and treatment phase 2, for student D, can...
also be noted from the graph of his performance. This consistency may indicate the achievement of self-control by the subject. Conclusive proof of this point would require a longer and better designed reversal phase.

The results for student E show that the mediation technique had no significant effect. In fact, a study of the means on the chart show that the treatment seems to indicate a depression of the percentage of assignment completion. The facts associated with this case further support the negative influence of the behavior modification technique studied. Student E found the essay technique extremely aversive. Comments made to the teacher and to other students support this. In fact, the student found the tightened contingencies so aversive he stopped attending school on a regular basis.

Changes from Blackwood's (1971) technique were undertaken in this study. Most involve simplification of the procedural requirements. These changes were made because of the differences between the two student populations. The subjects in the present study were mildly retarded high school boys, a sample that differs in several ways from a 'normal' population.

The results of this study must be approached with care due to the limitations mentioned above. It is felt by the experimenter, however, that this modification of Blackwood's (1971) essay mediation technique is an effective and time conserving method to change behaviors of secondary students in special education classrooms. Further research in this area is encouraged. It is felt that the outcome of such work would provide data to broaden the known effectiveness of the mediation technique.
References


Baseline | Essays Given | Reversal | Essays Given

Figure 1
STUDENT "B" TALK-OUTS

Figure 2
Figure 3

STUDENT "C" TALK-OUTS

Baseline | Essays Given | Reversal | Essays Given

Range: 0 to 20

Data points for each phase are plotted on the graph.

Figure 3
Figure 4

Baseline

Essays Given

Reversal

Essays Given

Figure 4
Figure 5
<table>
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<th></th>
<th>Baseline</th>
<th>Treatment 1</th>
<th>Reversal</th>
<th>Treatment 2</th>
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<td>$\bar{X}$</td>
<td>S.D.</td>
<td>Ra.</td>
<td>$\bar{X}$</td>
</tr>
<tr>
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<td>10.8</td>
<td>3.7</td>
<td>6 to 19</td>
<td>1.4</td>
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<tr>
<td>STUDENT B</td>
<td>12.9</td>
<td>4.7</td>
<td>6 to 19</td>
<td>1.8</td>
</tr>
<tr>
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<td>2.8</td>
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<td>9</td>
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<tr>
<td>STUDENT D</td>
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<td>30.7%</td>
<td>0 to 100</td>
<td>61.4%</td>
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<tr>
<td>STUDENT E</td>
<td>37%</td>
<td>38%</td>
<td>0 to 100</td>
<td>22.5%</td>
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Figure 6
ASSIGNMENT COMPLETION

This essay has been given to you because you did not turn in a complete assignment on time. Your assignment was not done when it was called for by the teacher. There were at least two answers not done on time. This is enough to cause the whole assignment to be not done.

When you do not turn in a complete assignment on time, many bad things happen. Most of all, you lose a lot of points for this. Your teacher takes away fifty points for each page that has two or more answers not done. Your teacher also gets angry and is hard to get along with when you do not turn in an assignment. This makes you and all the people in class unhappy. Your classmates get mad at you for making the teacher mad at them. When you do not do your work, you are also wasting the time of yourself, your teacher, and your parents. Your parents work to get the money to pay for schools. It is all a waste when your work is not done. You are not using your chance at all.

You should have done all of your assignment and had it ready to turn in when it was due. You should do each and every question and do them the best you can. Not only do you have to do all the answers, you have to have them all done on time. All assignments are due at nine o'clock in the morning. If you do all of each assignment, and have them all done by nine o'clock in the morning of the day they are due, you will be doing exactly what you have to do.

If you do what you are supposed to do, nice things will happen to
you. You will not lose any points. Better yet, you will get points when your assignments are all the way done on time. These points will add up fast and then you can buy privileges with them. You can have more free time, use the small room, and have other good things to do. Also, you will make the teacher happy. This will make you and your classmates happy because the teacher will be easier to get along with. You will have a better time with your classmates and will all be better friends because everybody is happier. You will also learn more and make good use of your school time. This will help you get along better when you are out of school.
TALKING TO NEIGHBOR

This essay has been given to you because you were talking to your neighbor when you were not supposed to do so. You were talking to your neighbor about something that did not have anything to do with the assignment you were working on at the time you talked. The talking you were doing was out loud so that you could be heard. Many bad things happen when you do this. You get in trouble with the teacher. He tells you not to do it in a loud voice and he takes away points. You also disturb your friend and he cannot get his work done. You disturb yourself, too. This means you do not get your work done and you lose more points. This all costs a waste of time and money for you, for your friends in your class, for your teacher and for your parents who have to work and pay for our schools.

What you should have done is talk to your neighbor during break time or ask the teacher to answer your questions about the assignment you are working on. No other questions need to be asked until break time. You should talk only when you really have to during study time. This talking should be done only to the teacher.

If you do stop talking to your neighbor and ask the teacher all your questions that should be asked, you will find that the teacher will be much happier and easier to get along with. You will get points for being quiet, for working and for getting your assignments done on time. All of your work will be done on time as you
will find that you have plenty of time to do it all. You, your friends, and your parents will all be happier and easier to get along with, too. You will have more time to visit as you will have time and will be able to buy more freetime privileges.
TALKING TO YOURSELF

This essay has been given to you because you were talking to yourself out loud, when you were supposed to be working without noise. You were saying words, but not to any one person in the class. The talking may not have been real loud, but it could be heard by everyone in the class. You were disturbing others in the class.

Many bad things happen when you do this. You get in trouble with the teacher. He tells you to be quiet in a loud voice and takes away points for being noisy. You disturb your classmates, too. This means they do not get their work done sometimes and they get in trouble, too. They lose points. Then they get mad at you because they feel you are the one that did it to them. It costs everyone, you, the teacher, your friends and your parents time and money because of wasted time and learning.

What you should have done is not talk to yourself or talk so low that nobody can hear you. Reading out loud may help you. If it does, you should do it, but do it in a low voice so that you will not bother others. Work that does not need reading is best done without talking of any kind.

If you stop talking to yourself and bothering others in the class, nice things will happen. You will find that the teacher is happier and easier to get along with. You will get points for being quiet. Your friends will not be bothered and they will get
along with you much better. The whole class, and you, will have more points to spend on privileges such as freetime or pop. This will mean that you all will have more time for yourselves and will be happier about school.
MAKING NOISES IN CLASS

This essay has been given to you because you were making noises during a quiet study time. These noises were not words. They were sounds that do not make sense to others. You might have been studying, but you were making noises loud enough for the rest of the class to hear. These noises were disturbing others in the class.

Many bad things happen when you do this. You get in trouble with the teacher. He tells you to be quiet in a loud voice and takes away points for being noisy. You disturb your classmates, too. This means they do not get their work done sometimes and they get in trouble. They lose points. It costs everyone, you, the teacher, your friends and your parents time and money when you make noises in class.

What you should do is not make noises while you are supposed to be studying. You must think about what you are doing so that you keep quiet. Quiet means that you do not make any noises during study time. So, in order to keep the rules, you must remember to listen to yourself in order to be sure you are not making noises that might disturb your classmates.

If you stop making noises and bothering others in the class, nice things will happen. You will find that the teacher is happier and easier to get along with. You will get points for being quiet. Your friends will not be bothered and they will get along.
with you better. The whole class and you will have more points to
spend as you will be better behaved. You will then be able to
buy more privileges such as freetime or pop. This will make
everyone much happier.