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CONTROL OF DISRUPTIVE BEHAVIOR IN AN ELEMENTARY CLASSROOM: TWO CASE STUDIES

ABSTRACT: Two case studies are presented to illustrate a novel approach to the development of appropriate in-class behavior in two primary-grade boys who were characterized as problem cases (hyperactive, uncooperative) by school personnel. A signalling device and counter were used by which the experimenter was able to provide immediate reinforcement for appropriate behavior. This resulted in a marked decrease in the rate of inappropriate behavior and an increase in the amount of on-task time over the period of investigation.

A desirable side effect accompanying this increased task control was a change of social behavior. It was observed that both boys tended to interact more with their classmates and teachers in an appropriate fashion.

The results suggested the apparatus could be a useful addition to the repertoire of school personnel for the modification of inappropriate classroom behavior.

INTRODUCTION

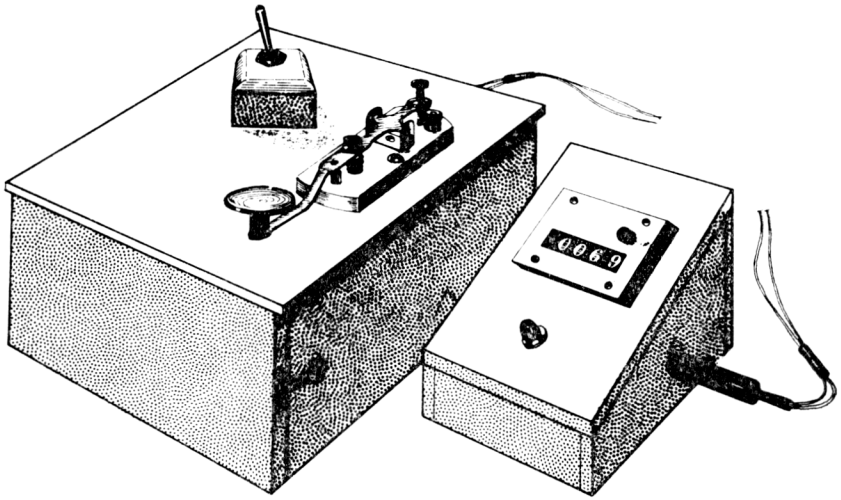
Two case studies are presented to illustrate a novel approach to the development of appropriate in-class behavior in two primary-grade boys who were characterized as "problem cases" by the school principal, the counsellor, and the teachers. Hyperactive, short attention span, aggressive, uncooperative, negativistic, were terms frequently used to describe these boys.

The procedures employed in this study involved the use of a "Work Box," a device first described by Patterson (1965) where it was used to control the behavior of a hyperactive 9-year-old. Further and more detailed descriptions of the Box and its use may be found in Patterson, Ebner, and Shaw (1969), and Ray, Shaw, and Cobb (1970).

The Work Box is merely a signalling device which contains a counter. It permits the experimenter to provide immediate reinforcement to instances of appropriate behavior. The number of reinforced responses is recorded on the counter and may be translated into points which the subject may exchange for such back-up reinforcers as the teacher or experimenter decides to make available: candy (for himself and others), extra play time, special activities, or privileges could serve. The use of educationally relevant back-up events have been found to be effective in similar settings (McLaughlin & Malaby, 1972).

The use of the Work Box in an attempt to bring disruptive behavior under appropriate stimulus control is based on several empirically derived learning principles. Having carefully defined his target

FIGURE 1 — The Work Box.



behavior, the experimenter is able to administer his reinforcing consequences on a contingent basis, that is, the counter is activated only when the desired response is emitted. The nature of the machine enables the experimenter to reinforce small increments of appropriate behavior and to do so immediately. The value of these procedures has been well established in the modification of deviant behavior (Ulrich, Stachnik, & Mabry, 1970). The present version of the Work Box differs slightly from the Patterson model. It is a small wooden box approximately 14 centimeters by 9 centimeters by 8 centimeters. The box contains a 12-volt D.C. counter (Simpson Electric Company) with the face open to the observation of the subject, and also a small red light which, when turned on, indicates to the subject that the machine has been activated and that a session has begun. The Work Box was placed on a subject's desk and operated by the experimenter who sat several feet away. A simple toggle switch was used for the indicator light, and a telegraph key for the counter. These controls were mounted on another wooden box 10 centimeters by 11 centimeters by 17 centimeters which also contained the power unit (8 dry cells, size D). On those occasions when the subject was to be reinforced, the device was activated and made a clearly audible click as the counter recorded the event. The sound made it unnecessary for the subject to check visually to confirm that the Box was in operation. It did not appear to be aversive to other class members.

Prior to the intervention program, the procedures were explained to the teachers involved. Copies of *Modifying classroom behavior* by Buckley and Walker were made available to the teachers, as was the paper by Ray, Shaw, and Cobb entitled "The work box: An innovation

in teaching attentional behavior (1970)." Techniques for reinforcement and extinction were discussed and demonstrated.

CASE I: ALEX

The subject, Alex, was an eight-year, eight-month-old boy at the time of the study, described by the teaching staff as a real problem — disruptive, non-worker, hyperactive, aggressive.

All sessions were held in the subject's regular classroom. This was a split grade-2/grade-3 class of 23 pupils. The class was managed by a single teacher with the assistance, on infrequent occasions, of a volunteer aide. The first 7 sessions were held in the afternoon, from approximately 2 to 3 p.m. The remaining sessions were held during the morning from about 10:45 until noon. The change in time was made for the convenience of the teacher who felt that the experimental procedures would benefit the subject more during the study of the more academic subjects, arithmetic and language arts, that were scheduled in the morning. The teachers all reported that they could not discriminate between morning and afternoon insofar as the subject's inappropriate behavior was concerned.

The following behaviors were systematically observed:

Talking: task-irrelevant verbal behavior that was audible to the observer or resulting in an over reaction from someone else, pupil or teacher.

Non-Attending: breaking eye contact with the task at hand; with teacher, fellow pupil, or task on desk.

Out-of-seat: task-irrelevant movement out of the pupil's assigned seat. Only gross movements were considered, i.e. buttocks clear of the chair or seat.

Baseline data were collected prior to intervention using regular ten-second interval sampling procedures (Hall, 1970). Observer reliability was determined by calculating the percentage of agreement between two independent observers (Cooper, Thomson, & Baer, 1970).

Alex was introduced to the Work Box and the procedures to be employed were outlined to him. The operation of the counter and the light were demonstrated. He was quite willing to try to see if he would be able to "work better." During this time Alex sat in a relatively isolated position in the room adjacent to the teacher's desk and 10 to 12 feet from the nearest classmate.

The class was then introduced to the plan by the experimenter. They were told that Alex would be using the Work Box to help him work better in school. The operation of the counter was demonstrated. It was then pointed out that Alex needed all the help he could get in achieving his goal (initially 50 points on the counter). It was stated that they should not bother Alex nor respond to him in any way if he initiated conversation, or otherwise became disruptive. If Alex was able to earn his points "within the next few days," the whole class would share in a special movie to be procured by the experimenter. The point was clearly made that it was certainly to their advantage to see that Alex worked well each day.

The teacher then handed out work sheets for all members of the class. The Work Box was positioned on a corner of Alex's desk, the light was turned on, and observations began. In the initial ten minutes Alex was reinforced by advancing the counter one unit for every five seconds of on-task behavior. During this period Alex worked on a word recognition exercise. In the second trial, in which he colored a picture, and the third trial, in which he worked at another language-arts exercise, Alex was reinforced for every ten seconds of on-task behavior. The number of points in the initial day were equal to the counter reading for the five-second interval trial, and double the counter reading for the ten-second trials. This was selected as a relatively rich point schedule which would possibly make the initial accomplishment highly reinforcing because of the large number of points involved. One thousand points was set as the target of the Special Movie.

In addition to earning points for the class for his good work, Alex was selected by the teacher to hand out caramel candies to the class at the end of the silent reading period as their reward for helping him.

On Day 2 of the program Alex was permitted to select two classmates to use the Work Box. Making the choice appeared to be a difficult task. The two chosen used the Box for five minutes each on a fixed ten-second time schedule of reinforcement. A thermometer chart was used for the class as a whole to record their points, with the back-up reinforcement an unspecified "surprise." On Day 5 it was observed that Alex was, in effect, selling the privilege of using the Work Box to his classmates. The threat of losing the right to select users terminated this enterprise.

During the first seven days of the program, Alex used the Work Box in the period from 2-3 p.m. The length of time in which he worked with the Box was extended from 10 minutes to 40 minutes. The rate of reinforcement was changed during this time from a fixed schedule of one point on the counter for each five seconds of on-task behavior to a variable schedule in which one point on the counter was attained for an average of 20 seconds on-task.

In the attempt to ensure that the Work Box did not lose its reinforcing value as the schedule was thinned, points earned on the counter were converted to reward points using the following formula:

$$\frac{\text{length of interval}}{10} \times \text{number of intervals}$$

Thus, while on a 10-second time schedule, counter points = reward points. On the 20-second schedule, when only half as many counter points were available each one was worth two reward points.

Reward points were entered on a large thermometer chart prominently displayed in the classroom. A special movie was to be available when the thermometer went "over the top."

On Day 8 the program was shifted to the morning in the period from about 10:45 to noon. At this time five ten-minute time samples of Alex's behavior without the Work Box were obtained. It was observed

at this time that Alex had moved his desk to the head of a row of students at one side of the classroom. He now had classmates in adjacent desks enhancing the possibility of social interaction. In this position in the classroom Alex was responsible for answering the door when necessary. The teacher reported that he made this move on his own initiative.

From Day 9 to Day 22 the period of observation was gradually extended to 60 minutes and the reinforcement scheduled was thinned to one point on the counter for every 60 seconds of on-task behavior.

After Alex had completed a second thermometer chart a new format for recording points was introduced. This was an elaborately decorated chart, much longer than previous charts, styled after a parcheesi board. It proved to be highly effective, with Alex completing two of these during the remaining experimental period.

On Day 23, fading procedures were initiated in an attempt to gradually withdraw the Work Box without reducing the on-task behavior Alex was emitting at this time. Since it was to be a short class period in order to screen the special movie he had earned, Alex was asked to see how well he could work just pretending the Box was on his desk.

On Day 24 Alex was required to work for the first 15 minutes of the period without the Box. He was to be rewarded on the basis of 10 points per minute on-task for up to 15 minutes on-task behavior. He thus earned the privilege of using the Work Box for the remaining part of the period.

On Day 25 another procedure was introduced to fade out the Work Box as a controlling stimulus. A card was fixed to the subject's desk and the regular observation period (10:45-noon) was divided into 15-minute modules. Alex was informed that his teacher would initial each period in which he had been working appropriately and that each period marked would be worth two squares on his chart (about 100 reward points).

Alex used the Box for the last time for a 30-minute period on Day 26. From Day 27 to the end of the program on Day 31, Alex received a reward point on the basis of the squares on the card that were initialed by his teacher. The management of the program was entirely in the teacher's hand at this time. Final observations of Alex's in-class behavior were made at this time by a research assistant. The experimenter was in the class only briefly at this time for the purpose of establishing the reliability of the observations.

RESULTS

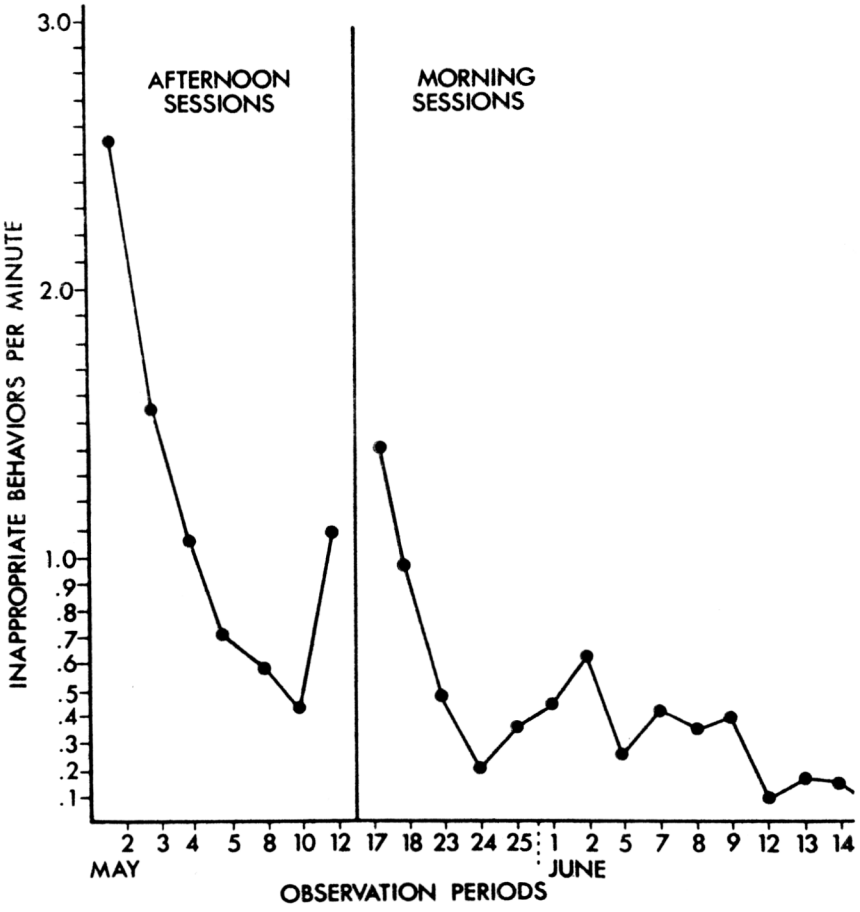
Reliability

Reliability between the experimenter and a second observer was measured over three periods for the operation of the Work Box. The two were seated where they could independently observe the subject but not see one another, nor hear the operation of the counters. Each observer was equipped with a standard tally counter and a stop watch. Ten minutes constituted an observation period and the number

of times the subject emitted appropriate on-task behavior for 30 consecutive seconds was recorded. A percentage of agreement was obtained by dividing the smaller recorded frequency by the larger and multiplying by 100. For each of the three sessions, the percentage of agreement was respectively 94 percent, 72 percent, and 100 percent.

The reliability between independent observers was measured by comparing interval-by-interval observations over the three target behaviors, non-attending, talking, and out-of-seat. All possible pairings of the observers used in the baseline observation period were included. Average percentage of agreement for non-attending was 94.5 percent, with a range from 83 percent to 100 percent; for talking, the average

FIGURE 2 — Changes in the Rate of Off-task Behavior with the Work Box: Alex.



was 94.4 percent with a range from 90 percent to 100 percent; for out-of-seat behavior, the average was 97.6 percent with a range from 93 percent to 100 percent.

During the final observation period, three comparisons were made between the experimenter and the research assistant responsible for observing at that time. For non-attending behavior the percentages of agreement were 93 percent, 95 percent, 93 percent; for talking, 100 percent, 100 percent, 93 percent; for out-of-seat behavior 100 percent, 100 percent, 95 percent.

There was no opportunity to determine the reliability of observations made on Day 8, as all research assistants were engaged in practice teaching at that time and were out of the city. These data must therefore be considered as tentative only.

Work Box

For each period of operation of the Work Box the subject's rate of inappropriate behavior per minute was determined by dividing the points on the counter that were missed in an observation period by the number of minutes of observation. The change in this rate over the period of use of the Work Box may be seen in Figure 2.

It is important to bear in mind in examining these results that over the time of the program, the observation period increased from 10 minutes to 60 minutes and the schedule of reinforcement changed from 1 counter point per 5 seconds to 1 counter point per 60 seconds of on-task behavior.

Target Behaviors

Ten-second interval sampling procedures were undertaken with 10-minute modules for observation during baseline, at the time at

Table 1

Relative Frequency of Non-attending, and Talking Behavior Emitted by Alex During Three Phases of the Study

Phase of Study	No. of 10-min. Observations	Mean Percent of Non-Attending	10-Second Talking	Intervals Marked: Out-of-Seat
Baseline	9	40	19.00	11.00
Change*	5	28	2.00	3.00
End of Program (Morning)	9	12	0.67	1.33
End of Program (Afternoon)	2	14	6.50	12.00

*Change refers to the change of program from afternoon to morning period. There are no reliability checks for these observations.

which the program was switched from the afternoon to the morning period, and at the end of the program. Results are summarized in Table 1.

A decline in the number of intervals marked for inappropriate behavior can be seen over the program period in all three behaviors examined. To test the effect of the program on the subject's behavior during the afternoon period, two observations were made which, when compared with the baseline, show a marked decline in non-attending and talking behavior. Out-of-seat behavior remained relatively unaffected by the contingencies.

Since it was not practicable to keep time intervals over extended periods uniform, data were not analyzed as in time-series designs. Instead, the repeated observations were analyzed as in repeated-measures designs. In other words the various points in time were treated as constituting a qualitative variable.*

Statistical analyses summarized in Table 2 provide evidence that the change in behavior from the baseline to the end of the program was significant.

Table 2

Summary of *F*-tests for Means of Target Variables for Alex between Baseline and End of Program (Morning)

Variable	*F*	*p* less than
Non-attending	11.4178	0.0042
Out-of-seat	17.3664	0.0009
Talking	23.2063	0.0003

DISCUSSION

After regular and rather rapid gains in control during the first 6 days, marked acceleration in inappropriate behavior in period 7 is noteworthy. This occurred in an art lesson on a Friday afternoon. Anecdotal records of Alex's behavior during this observation period revealed that he worked well on an art project during the first part of the period. The class was instructed to engage in free reading when they completed their project. This had not proven to be a highly reinforcing activity for Alex on previous occasions and again did not exert adequate control on his behavior.

A further acceleration in inappropriate behaviors may be seen in period 8. This is the first observation period after the program was switched from the afternoon to the morning. Possibly the con-

*This analysis was suggested and carried forward by Dr. S. S. Lee, Faculty of Education, The University of British Columbia.

tingencies established were not sufficiently powerful in the new setting (the class activities were more academic). Anecdotal records reveal that Alex had brought a toy to class with him and that he was engaged in playing with this through most of the observation period.

The reduction in effectiveness of the Work Box proved to be only temporary, however, and Alex's behavior came increasingly under its control.

The two sources of information available, changes in rate of inappropriate behavior measured on the Work Box and changes in behavior noted by direct observation, both indicate these changes in behavior were clearly not attributable to chance.

Although initially rather definitely under the control of the apparatus the change in reinforcement schedules from a 5-second time to a 60-second time schedule suggests increasing control of Alex's behavior by the assigned task. This shift in control is confirmed by the gradual elimination of the Work Box from the environment without a change in behavior being noted during observation period.

CASE II: LLOYD

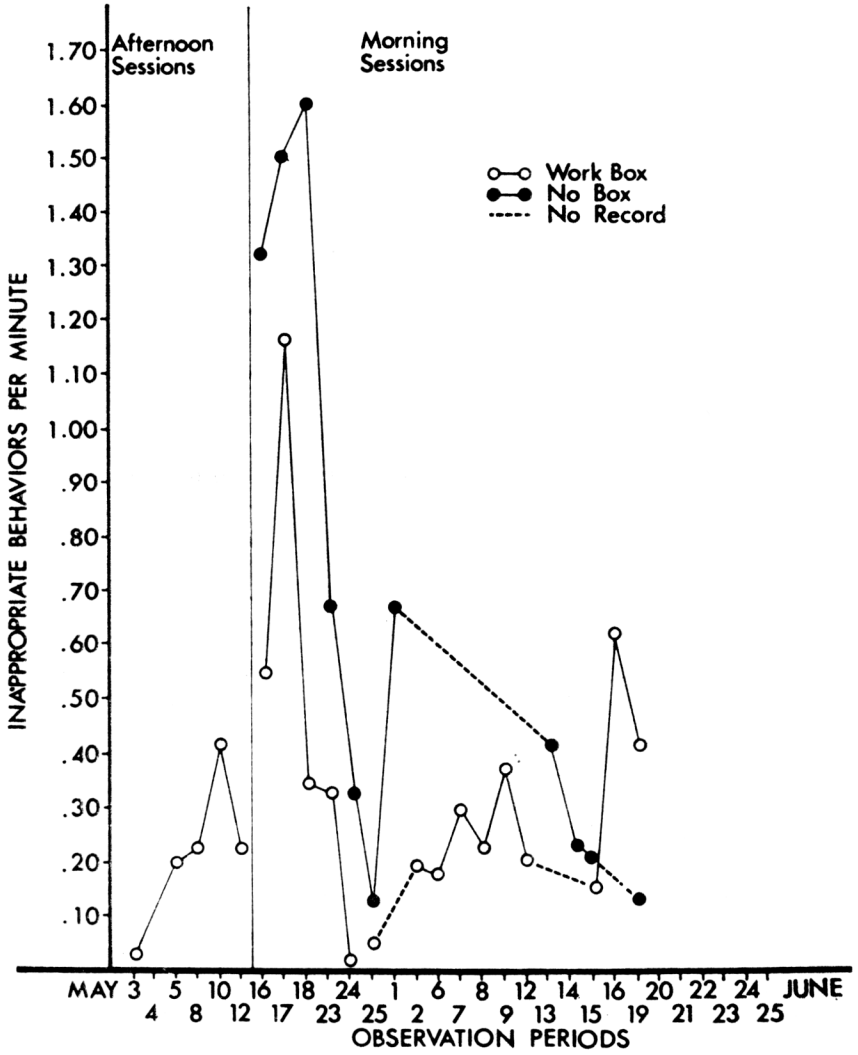
Lloyd was 9 years old at the time of the study. He was described by school personnel as being hyperactive, aggressive, and non-attentive. The class was a split grade-3/grade-4 group of 30 pupils. All sessions were held in Lloyd's regular classroom. The same target behaviors — non-attending, talking, out-of-seat — were observed using interval sampling procedures described earlier. Observations of Lloyd's behavior were made prior to the introduction of the Work Box, after the shift to the morning, and at the end of the program.

Procedures in general parallel those described for Alex in Case I. The specific differences on the program such as changes in the reinforcement schedule and the fading of the Work Box were governed by Lloyd's behavior. One major difference in the procedures used in Case II was the introduction of frequent probes or measures of Lloyd's on-task behavior without the Work Box. A stop watch and hand counter were used for these sessions and in general the same time schedule was used in both situations. This feature provided an opportunity to observe the effects of the Work Box over an extended period of time and also yielded some evidence of the extent to which the effects of the Work Box were generalized.

For the first five intervention periods Lloyd used the Work Box during the afternoon periods from 1 to 2 p.m. The operation then shifted to the morning period and Lloyd was seen in the first period of the day from 9 to 10:30. The reinforcement time schedule changed over a period of study from one in which the counter was advanced for every 10 seconds Lloyd was on task, to a "variable interval" of 60 seconds. The time spent on the Work Box increased from an initial period of 25 minutes to a maximum of 60 minutes. The Work Box was then phased out of the program by requiring Lloyd to work to the satisfaction of the teacher for the first 30 minutes of each day before

he was permitted to use the Work Box. The experimenter was not present at this time. A card similar to that employed with Alex was available for the teacher to check intervals of 15 minutes of satisfactory behavior, and thus he could continue to receive points. Lloyd used the Work Box for the last time on Day 23 (June 19) of the program. The management of his behavior was entirely in the hands of the teacher at this time. Following this, final time samples were obtained by a

FIGURE 3 — Changes in the Rate of Off-task Behavior: Lloyd.



trained observer, with the experimenter being in the classroom for a short period of time only, for purposes of establishing the reliability of observation.

RESULTS

Work Box

There were no probes made during the time the Work Box was used in the afternoon. The rate of inappropriate behavior, as presented in Figure 3, is relatively low. There is, however, a noticeable acceleration in the rate with the change in the period of observation to the morning activities.

The behavior appeared to come rather rapidly under the control of the Work Box. Data could not be obtained on consecutive days, nor observations be made both with and without the Work Box every day, since the regular routines of the school tended to be interrupted with year-end activities which did not lend themselves to systematic observations of on-task behavior. The missed periods are noted by breaks in the graph of Figure 2.

One should observe the covariation between the behavior with and without the Work Box. The probes occurred in periods both before and after the Work Box had been used, in no particular pattern. The results appeared relatively consistent. In every pair of observations but one (the last day) the use of the Work Box yielded a lower rate of inappropriate behavior than was the case when the Box was not in use.

Target Behaviors

The change in the emission of the target behaviors, non-attending, out-of-seat, and talking may be observed in Table 3.

Table 3

Relative Frequency of Non-attending, Talking, and Out-of-seat Behavior Emitted by Lloyd During Three Phases of the Study

Phase of Study	No. of 10-min. Observations	Mean Percent of Non-Attending	10-second Talking	Intervals Marked: Out-of-Seat
Baseline	7	63	28	32
Change to Morning Period*	2	40	13	10
End of Program	6	15	5	12

*There are no reliability checks for these observations.

The decline in incidence of all three behaviors is evident, particularly from the measures obtained in the baseline period to those obtained at the end of the program. These were, however, afternoon and morning

observations respectively, and thus other factors may be operating to affect rates. The change in target behaviors from the initial observations in the morning to the end of the program are less pronounced and, due to the limited time available for the initial observations, less convincing. There is a decline, however, in both talking and non-attending.

Statistical analyses of these data are summarized in Table 4. As may be noted, in spite of the magnitude of the change in these behaviors, they failed to reach significance.

Table 4

Summary of *F*-tests for Means of Target Variables for Lloyd Between Baseline and End of Program (Morning)

Variable	*F*	*p* less than
Non-attending	1.9698	0.1981
Out-of-seat	0.1379	0.7201
Talking	0.0503	0.8281

DISCUSSION

There is insufficient evidence to determine whether or not the rate of inappropriate behavior would continue to accelerate in the afternoon period. It is possible that the initial acceleration is the result of adaptation — the novelty effect wearing off — and that the behavior would stabilize at a relatively low level.

Lloyd's behavior appeared to be less controlled by the more demanding curricular task of the morning period. This behavior came rapidly under the control of the contingencies associated with the Work Box, however, and there appeared to be some generalization to other class work as indicated by Lloyd's behavior when the Work Box was not in use. It should be noted that the experimenter was in the room under both conditions and that he very likely had acquired reinforcing characteristics during the time the project was underway and could well be controlling behavior in the absence of the Work Box.

The point at which the Work Box apparently lost control of Lloyd's behavior (the last observation in Figure 2) can be explained when the circumstances he encountered during the class period are examined. Lloyd worked diligently on a worksheet related to his reading lessons during the period where observations were made without the Work Box. He finished this task about the time the Work Box was introduced. No specific task was assigned at the time except the general direction to the class to read when they finished the assignment. Reading did not appear on previous occasions to be particularly reinforcing to Lloyd. He used this time for cleaning his desk — an activity considered inappropriate since he had been directed to read. The period was well underway before he turned his attention to the assigned task. It should be noted that he was not behaving in a disrupting fashion

at this time, merely not on-task.

The failure of the changes in the target behaviors to achieve significance in the statistical analysis deserves further consideration, since their magnitude would likely impress a classroom teacher. Time and again during observations it was found that tasks assigned to subjects exerted differential control. This should not be surprising since there are a wide variety of tasks and activities available to youngsters in school, and also the subjects involved in these projects were attending school regularly, i.e., had not been suspended, and hence could be assumed to be under its control some of the time. Two such instances of apparent task control stood out in Lloyd's case, both acting in a way to increase the standard deviations of the distribution of observations and ultimately increasing the F-ratio obtained, yielding non-significance.

GENERAL DISCUSSION

The results of the two applications of the Work Box suggested that it could be a useful addition to the repertoire of school personnel to bring the behavior of deviant youngsters under control. Used as it was in the present study, where the intervention was handled by an agent external to the school, would make its operation relatively expensive and in all likelihood necessitate its use being restricted to particularly difficult cases.

There does not appear to be any reason why para-professionals in the school system, volunteer aides, or other students could not be trained in the use of the Work Box. Such a move would enhance the value of the technique by increasing its availability. An attempt is currently being made to design and test a program to provide this training.

A desirable side effect accompanying the increased task control of the boys' behavior was a change in social behavior. This was more pronounced in the case of Alex, who tended to be more solitary both in and out of class than did Lloyd. Anecdotal data only are available on these points. Alex was observed to move his desk from an isolated position at the rear of the classroom to a position at the front of one row of desks. He interacted with those around him in an acceptable manner and his behavior toward his teacher became more appropriate as well. Of particular note was his participation in classroom games. During early observation periods Alex had rarely participated in these, tended to remain at the back of the classroom. When he did enter into the activity it was to disrupt the ongoing game, generally producing pandemonium in class. In the latter stages of the program he was observed on several occasions engaged in both formal and informal play activities with his classmates. Lloyd's behavior in this respect changed to a generally less aggressive pattern in his interactions with his classmates and teacher.

In part this change might be attributed to the fact that in earning points on the Work Box, the boys earned a special movie for their classmates as a whole. The class had a share in the control of the

boys' behaviors when they were asked not to interact with them when tasks had been assigned, nor to attend to them when they "acted up" in class. In general, Alex's class responded better to these requests than Lloyd's. In both classes there was coniderable interest in the progress each boy had made during the day. As they marked their progress on the charts, typically a crowd of classmates watched and frequently applauded or praised the boys when the charts were posted on the wall. In this way the boys' status increased in the eyes of the group — they acquired properties of value to the group, namely, at the beginning of the program at least, they became persons who could get special movies.

For Alex particularly, the social reactions of the class seemed to be a relatively powerful reinforcer, as his behavior toward his peers changed most radically.

At the same time, however, these desirable social and material consequences were related through the Work Box to the regular curricular assignments of the classroom. The points awarded at the end of an observation period were also paired with praise from the experimenter and the teacher, with the focus on the amount of work accomplished and the diligence of the boys' efforts. These effects all appeared to work in the direction of making the assignment of work in class discriminative of on-task behavior rather than the early patterns of inappropriate responding.

A factor of value to a classroom teacher was noted repeatedly in this study. Often the patterns of inappropriate behaviors appeared to be cued by tasks that were either too complex for these students or assignments whose directions were not understood. Not being able to respond appropriately led to behavior that in many instances had adverse consequences and often ended in a pupil-teacher confrontation. Individualized programs will eliminate the cause of this problem behavior, but if the structure of the school or class does not permit this, certainly more careful consideration of the individuals constituting the group would seem to be warranted.

It was also noted on a number of occasions that inappropriate behaviors tended to be emitted when the assignments were completed and no specific directions were given for follow-up activities. Often free reading was used in such instances and this appears commendable. Reading a book of one's choice is generally considered to be a desirable behavior to develop in youngsters. Left on their own, however, young children do not always select books they *can* read and when they err, the activity loses its reinforcing power and other, in this case inappropriate, behaviors are substituted. Guidance on the part of the teacher would greatly reduce the likelihood of unacceptable behavior being generated under these circumstances.

A more carefully programmed day at school might well be the answer to some of the problems, particularly in situations where a class is managed by a single teacher.

No formal follow-up data have been obtained on the boys at this time. Informal reports indicate that the effects of the program appear to have been maintained and that the boys are functioning to a greater

extent than before under task control. Teachers report social behavior on the part of the boys, particularly Alex, when they observe them in school activities. The principal, who reported seeing the boys three times per week during the eight months prior to the study, has not seen them in an official way this year, approximately seven months after the completion of the program.

It should be noted that the boys have a different teacher and have moved to a different room in the school. Although they had experienced such changes previously without marked positive effect, it is quite possible that the new environment is having a differential effect on Alex and Lloyd.

A conservative summary of the effects of the Work Box then, might be that it made the boys more receptive to the controlling stimuli in their new situation.

RESUME: On présente deux études de cas d'élèves de niveau primaire qui avaient été identifiés comme des cas-problèmes (hyperactifs et non-coopératifs) par le personnel de l'école. Ces cas sont présentés pour illustrer une nouvelle façon de développer des comportements appropriés dans la classe. En utilisant un signalisateur et un compteur, l'expérimentateur a pu procurer un renforcement immédiat aux comportements appropriés. Les résultats furent une nette diminution du taux des comportements inappropriés et une augmentation du temps passé à la tâche pendant la période d'expérimentation.

Une séquence souhaitable de cette augmentation de la maîtrise de la tâche fut le changement qu'on a noté dans le comportement social. On a en effet observé que les deux garçons étaient parvenus à interacter d'une façon plus appropriée avec leurs camarades et leurs professeurs.

Les résultats suggèrent que l'appareil pourrait être utilisé avantageusement par le personnel de l'école pour faciliter la modification des comportements inappropriés dans la classe.

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