An Investigation of Variables Affecting Self Modification Techniques

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AN INVESTIGATION OF VARIABLES
AFFECTING SELF MODIFICATION TECHNIQUES

by

Patricia Ann Hartlep

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Faculty of The Graduate College
in partial fulfillment
of the
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Western Michigan University
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Patricia Ann Hartlep
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Recent studies have evaluated the effects of contingent teacher attention on such student behaviors as instruction following (Shute and Hopkins, 1970), attending (Broden, Bruce, Mitchell, and Carter, 1971), talking out (Hall, Fox, Willard, and Goldsmith, 1971), and disruptive behavior (Thomas, Becker, and Armstrong, 1968). These studies demonstrate that contingent teacher attention, especially in the form of verbal approval, is an effective and inexpensive way of modifying student behavior.

A number of studies have examined procedures for modifying teachers' verbal behavior. Cooper, Thompson, and Baer (1968) increased the praise rates of two teachers by arranging for an observer to give feedback and praise every ten minutes during a daily two hour session. Cossairt and Hopkins (1973) increased the praise rates of two teachers by giving them feedback and praise during conferences that followed two, daily, fifteen minute observation sessions. While both procedures were effective, both had the disadvantage of requiring a considerable investment in terms of staff time. Self modification procedures (such as self recording) promise to make more efficient use of staff time and, in addition, can sometimes be taught quickly, while appearing to be less disruptive to on-going classroom activities than the presence of an outside observer.

Self recording techniques have been used to increase time spent studying (Broden, Hall, and Mitts, 1974; Mahoney,
and Moore, 1973), increase participation in classroom discussions (Gottman and Mcfall, 1972), decrease smoking (Mcfall, 1970), and increase the time a claustrophobic client spent in an enclosed space (Leitenburg, Agras, Tompason, Laurence, and Wright, 1968).

However, in a number of cases in which self recording has proven to be effective, the self recording itself has been confounded with other variables. (1) Social reinforcement—Broden (Broden, et al, 1971) found that self recording increased a student's time studying, but the process also brought the student into contact with a school counselor who praised the student when her records showed increased time spent studying; (2) Instructions—Mcfall and Hammen (1971) reported a decrease in smoking for four groups who used different methods of self recording, however, explicit instructions to each group to stop smoking make the specific effects of self recording unclear; (3) Implicit suggestion (demand characteristics)—in his review of self modification studies, Kazdin suggests that implicit suggestion may exist in most experiments to change behavior in a direction congruent with normative expectations (Kazdin, 1974).

Also, in a number of studies, self recording alone has failed to produce any change in the behavior recorded (Hall, 1972; Mahoney, Moura, and Wade, 1973; Stollak, 1967).

In other studies, self modification effects attenuated over time (Mahoney, 1973; Fixsen, Phillips, and Wolf, 1972).
Stuart (1971) found that weight loss associated with self recording was greatest in the first week.

Another problem associated with self modification is the necessity of determining the reliability of the reported data. Fixen, Phillips, and Wolf (1972) found that asking subjects to record room cleaning behavior produced no effect on actual cleaning behavior, but that subjects reported high levels of room cleaning behavior. Thus, another means of assessing behavior change must be developed, preferably one that, unlike the introduction of an outside observer, does not introduce the possibility of additional reactive effects (behavior change due to the awareness of being assessed).

This study was an attempt to compare the effectiveness of two kinds of self modification procedure on teacher praise frequency. Risley (1969) stressed the importance of analyzing effective techniques to discover which aspects are functional, and which aspects are irrelevant in terms of behavior change. Self recording and graphing have often been components of self modification procedures (Stuart, 1967). Graphing takes more time and effort than merely recording behavior by using a counter; if recording alone were equally effective, the savings would be considerable. It is thus important to assess whether self recording plus graphing produces greater changes in behavior than self recording alone.

The experimental design also allowed for the control of such variables as implicit demand, instructions, and
social reinforcement. Generalization of effects to another time period were also assessed.

METHOD

Subjects and Settings

A teacher from a middle school (referred to as teacher #1) and two teachers from an elementary school (referred to as teachers #2 and #3) were selected as subjects for this study. All were mainstream teachers. Subject #1 had been teaching for four years; subject #2 for one year, and subject #3 for two years. These teachers were all participating in a Performance Contracting Project, in which each teacher signed a contract stating that the teacher must complete a graduate level course in behavioral engineering techniques and use some of those techniques in the classroom. If achievement gains were made by target students in classrooms averaging twenty-five to thirty students, the teachers would receive a graduated cash bonus at the end of the school year. In addition, all project teachers received two hundred dollars for participation alone. All three of the teachers had completed the required graduate level course by the time this study began. All three became involved in a second course in behavioral techniques (two took the class for credit, one audited the course) during the time that the experiment was in progress.

As part of the performance contracting project, a Resource Person was assigned to each project teacher to help
plan and implement systematic changes in the classroom. Resource Persons observed and met with their assigned teachers several times each week.

As part of a study instigated at the beginning of the year by the project directors, a Project Data Collector had also been entering the classroom once a week (schedules permitting) to record the amount of teacher approval being given to students. Project Data Collectors recorded verbal approval on an interval basis using a data sheet and a tape recorder. Teachers were not told whose behavior was being recorded or which behavior was being recorded. However, teachers had read the Project description and most appeared to recognize that some teacher behavior, most probably teacher verbal approval, was being recorded. Materials for each behavior modification course emphasized the value of high rates of teacher praise, and project teachers were instructed in the course to maximize their use of verbal approval; however, this was only a small fraction of the total content of the course.

Procedure

A multiple baseline across three subjects constituted the experimental design (Baer, Wolf and Risley, 1968). Data were collected for all three subjects concurrently, but experimental conditions were implemented sequentially and for only one subject at a time. Two daily time periods, separated by a minimum of one hour were selected in which to
collect data. These were the intervention period (during which all manipulations were made) and the generalization period (during which manipulations were never directly made). Since variation in teacher and school schedules usually made it impossible to collect data on every weekday in both periods, an attempt was made to schedule at least three sessions during the intervention period and two sessions during the generalization period each week. Session times were 9:13 and 11:00 for teacher #1; 8:30 and 11:00 for teacher #2; and 8:15 and 10:30 for subject #3. The students and setting were the same during both the intervention and generalization periods for teachers #2 and #3. However subject matter varied between and within the periods. Teacher #1 taught language arts during the intervention period and current events during the generalization period. The students taught during the intervention period were not those taught during the generalization period, but the setting remained the same.

Rates of teacher verbal approval were measured in each room by the Resource Person assigned to that room, a person already making regular visits and observing class activities. Resource Persons were welcome to enter the classroom at any time they chose. However, since teachers could not be told that they were participating in a study, there was nothing to prevent a teacher from scheduling a movie, a party, or extra recess during either the intervention or generalization period.
To control for the possibility of behavior change due to teachers' awareness of the observation, each Resource Person recorded on a small, concealed data sheet without informing the teacher that such recording was being done. To prevent the subjects from associating the Resource Person (Observer) with this experiment, Project Data Collectors introduced all the manipulations to the teachers though exceptions eventually had to be made. Project Data Collectors made all the face to face contacts with the teachers, but if a Project Data Collector were not available, an Observer would place necessary materials and directions in a teacher's mailbox (when no teachers were in the vicinity). Project Data Collectors, who were seen by the teachers as representing the Project Director, entered the classroom once a week during the intervention period to collect data for a Project study and to make necessary manipulations for the present study. Observers entered the classroom during the intervention period on the other four week days. During the generalization period, Project Data Collectors were never present.

Data recorded were used to assess the effects of the Project Data Collector's manipulations during the intervention period. Since none of the intervention period data came from a situation in which the Project Data Collector was present, these data can be thought of as generalization data. Generalization period data were used to assess generalization
during a second time period and was, thus, even further removed from the data collectors' manipulations.

The order of conditions for teacher #1 was: Baseline, Feedback, and Self Recording plus Graphing. The order of conditions for teachers #2 and #3 was: Baseline, Feedback, Self Recording, and Self Recording plus Graphing.

Baseline. No experimental manipulations were made during this phase.

Feedback. To evaluate the effects of feedback separately from self recording, each subject received (1) a written statement that explained what sort of behavior Project Data Collectors had been recording, and that feedback on the number of teacher verbal approvals per session would be available once a week during the intervention period; and (2) a definition of praise which would later be used in self recording. During each week thereafter, the Project Data Collector filled out a feedback sheet and left it after each session. Conditions during the generalization period remained the same as during baseline.

Self recording. During this phase, the Project Data Collector gave teachers #1 and #2 (1) a golfer's wrist counter (Lindsley, 1968), and (2) written instructions for using the counter to record their own verbal approvals during the intervention period. Subjects were not asked to keep a

\[^{1}\text{Written materials distributed to the teachers appear in the Appendix.}\]
list of the number of daily approvals they recorded daily, but teacher #2 did so spontaneously at the beginning of the second week of this phase. The self recording phase was not implemented with subject #1. Feedback from the Project Data Collector on number of verbal approvals during the intervention period continued, while conditions during the generalization period remained the same as during baseline.

**Self recording plus feedback.** During this phase, teacher #3 received a golf counter for the first time, and instructions on its use. All subjects also received (1) a graph for plotting the number of verbal approvals recorded during intervention periods, (2) instructions for plotting the data, (3) a note asking subjects to post their graphs in an inconspicuous place, and (4) a list of suggestions to help subjects remember to use the counter at the appropriate time. The list also had a handwritten note at the bottom, from the Project Director, asking teachers to aid him in collecting these data since it was important to the Project. Subjects continued to receive feedback once a week from the Project Data Collector during this phase. Conditions during the generalization period remained the same as during baseline. At no time did teachers show any evidence of suspecting that they were part of an experiment. As an example: teacher #1 told an Observer that using a counter and a graph was "just too much" and then said, "I really shouldn't be irritable toward you, I know you really don't have anything to do with it."
Data Recording

The frequency of verbal approval during each session was recorded. Observers used a definition of the dependent variable that they had become familiar with during the first half of the school year while collecting data for a project study. This definition was derived from an earlier study by Hawkins (1971).

The data sheet developed for this study, consisted of a 3 by 5½ inch sheet of paper with a daily schedule form mimeographed on one side to disguise its function. This sheet was stapled to a sheet of carbon paper (with the carbon facing the back of the sheet of paper) and to a notebook or a plastic backing sheet. Praises were recorded by pressing the thumbnail against the upper sheet of paper, which produced a carbon mark on the reverse of that sheet.

Reliability

In each experimental condition, at least one reliability check was made during the intervention period, and one during the generalization period. A second Resource Person, also equipped with a concealed data sheet, entered the classroom. The teachers were simply told that other members of the performance contracting staff occasionally observed teachers who had not been assigned to them in order to provide all teachers with a greater variety of suggestions for improving their classrooms. The two Observers sat near each other and counted verbal approvals independently. Independence of
recording was assured by (1) the fact that the sheet was usually partly, or completely concealed by the notebook or hands of the observer, (2) the movement needed to record a response was almost imperceptible, and (3) no visible mark was left on the outer surface of the paper. Observers avoided looking at each others' hands or notebooks. One observer cued the other when to begin and end each session.

Reliability was calculated by dividing the larger observed frequency into the smaller, and converting this ratio into percent agreement by multiplying by 100. The mean inter-observer agreement was 87.7% for thirty-one reliability checks. The range of agreement scores was 0% to 100%. The score of 0% occurred when the experimenter recorded no responses during one session and the reliability checker scored three responses. The range of agreement was 71% to 100% for all other sessions. The mean difference between the two observers' scores was 2 (range, 0 to 19). This was calculated by subtracting the smaller from the larger.

RESULTS AND DISCUSSION

Teacher #1

Intervention period (see Fig. 1). The mean frequency of verbal approval during the baseline phase for subject #1 was 9.0 (see Table I). The mean rose to 12.6 responses during the feedback phase. While instructions or implicit suggestion
Fig. 1. Frequency of Verbal Approvals for Teacher #1.
<table>
<thead>
<tr>
<th>Time</th>
<th>Subject and Period</th>
<th>Baseline</th>
<th>Feedback</th>
<th>Self Recording</th>
<th>Self Recording plus Graphing</th>
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<tr>
<td>9:13 am #1 intervention period</td>
<td>9.07</td>
<td>12.61</td>
<td>--------</td>
<td>30.14</td>
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</tr>
<tr>
<td>12:36 pm #1 generalization period</td>
<td>5.20</td>
<td>2.88</td>
<td>--------</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>8:30 am #2 intervention period</td>
<td>6.87</td>
<td>8.84</td>
<td>16.5</td>
<td>35.5</td>
<td></td>
</tr>
<tr>
<td>11:00 am #2 generalization period</td>
<td>--------</td>
<td>9.30</td>
<td>4.75</td>
<td>4**</td>
<td></td>
</tr>
<tr>
<td>8:15 am #3 intervention period</td>
<td>5.33</td>
<td>4.61</td>
<td>7.33</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>10:30 am #3 generalization period</td>
<td>4.40</td>
<td>5.00</td>
<td>5.00</td>
<td>--------</td>
<td></td>
</tr>
</tbody>
</table>

*the mean for days when counter was not used.

**a single score, not a mean.
may have played some part in this increase, it is more likely that the increase was due to the subject's extreme variability in rate that is apparent throughout both the baseline and feedback phases during the intervention period. This variability seemed to be controlled, in large part, by the type of classroom activity scheduled for a given day. Group review of text material was associated with the highest rates (sessions 38, 43, 48, and 58); spelling tests, and seat work were associated with the lowest rates (sessions 29, 45, 49, 56, 58, and 61).

During the Self Recording plus Graphing phase, the mean response frequency was 30.1; approximately two and a half times greater than the mean frequency during the preceding phase. Response frequency for the single day during which the counter was not worn (session 76) was 11. The mean number of responses for days on which the counter was worn was 33.3. Low response rates were sometimes associated with the type of task the teacher performed. On day 74, the teacher was working at the board and could not keep the counter with her since her hands were full (the teacher received a strap on day 76). On day 75, a unit test was given and the teacher was silent except for the first four minutes of the session. If data for these days are deleted, the mean response rate for days on which the counter was worn would have been 45.2.

The data clearly show a marked increase in response rate for sessions in which the counter was used, but a downward
trend during this condition is also evident. This trend may indicate that the effect of the self modification procedure employed in this phase was attenuating, but it may also be the result of a change in course material. The observer noticed a change from group discussion and review of language arts (first five sessions) to a unit on newspapers (last two sessions).

**Generalization period.** During this period, a different subject was taught to a different set of students. The mean for the Baseline phase was 5.2. This dropped to 2.88 during the Feedback phase, and to 0.7 during the Self Recording plus Graphing phase. The increase in verbal approval seen during the intervention period did not generalize to another period. The decrease in rate of verbal approval among the generalization period may be related to the gradually increasing uncooperativeness of the students.

**Teacher #2**

**Intervention period** (see Fig. 2). Mean response frequency during baseline was 6.8. Problems with the experimenter's schedule were responsible for the gap between session 4 and session 14. The mean rose to 8.8 responses during the feedback phase. This increase may be attributable to changes in activity or to the effects of instructions and implicit suggestion.

During the self recording phase, the mean rate rose to 16.5 responses. However, the Observer only saw the subject
Fig. 2. Frequency of Verbal Approvals for Teacher #2
use the counter once (indicated by an arrow on Fig. 2); this was during the initial session of this phase. If data from this session are deleted, the resulting mean of the sessions in which no counter was used is 12.6 responses, only slightly greater than the mean of the previous phase. The upward trend of the mean response rate noticeable for the feedback phase, and the days during the self recording phase that the counter was not used may be attributable to the effects of instructions or implicit suggestions.

The mean response frequency during the self recording plus graphing was 35.6; and the counter was used during both sessions. The mean for this condition is more than four times as great as the mean of the feedback condition and more than twice as great as the mean of the self recording condition. However, when the two data points for the self recording plus graphing condition (when the teacher used the counter), are compared with the results from the one day during self recording (when the teacher used the counter), no difference is apparent. Thus there is no evidence that graphing had an effect.

**Generalization period.** The setting and students were the same as for the intervention period, but the academic subjects scheduled were different. Data are not available for the baseline phase during this period. Scheduling difficulties made it impossible to carry out a reliability
check. The mean response frequency during the feedback phase was 9.3 responses. Response rate dropped to a mean of 4.7 during the self recording phase. A single data point of 4.0 was available for the self recording plus graphing phase. The downward trend in the generalization data suggests that no change in the overall school environment was responsible for the upward trend in the intervention phase data.

**Teacher #3**

**Intervention period** (see Fig. 3). Variability in the data of this subject was slight. During baseline, the frequency of verbal approval emitted by teacher #3 was 5.3. The mean response frequency dropped slightly to 4.6 responses during the feedback phase, indicating that the teacher's knowledge of what was being recorded had no effect on her approval rate, at least when the Project Data Collector was not present.

The mean response frequency for this teacher rose to 7.3 responses during the Self Recording phase, but Observers never saw the subject use the counter during this phase. However, the Project Data Collector reported that he observed the subject using the counter on one occasion, and in conversation with an Observer, the subject volunteered that she had used the counter on two occasions. Changes in activities may account for this slight upward shift. A brief meeting with the project director (indicated by arrow on Fig. 1)
Fig. 3. Frequency of Verbal Approvals for Teacher #3.
during which several techniques for remembering to use the counter were discussed appears to have had no effect on response rate. At the end of the eighth day of the self recording plus graphing the teacher decided to no longer attempt to use the counter and graph. The counter was picked up the same day, at which time the teacher was thanked for "at least trying".

**Generalization period.** The setting and students were the same as for the intervention period, but the academic subjects scheduled were different. The mean response rate during baseline was 4.4. Response rate during the generalization period remained essentially the same throughout the experiment. Mean frequency was 5.0 during the feedback phase and remained at 5.0 during the self recording phase. No rate increase corresponding to the small rate increase during the intervention period of this phase was observed.

**General Discussion**

Experiments involving self monitoring have produced conflicting results. Kazdin (1973) points out that, in self modification studies, in which behavior has changed in a desired direction, it has often been impossible to separate the effects of self monitoring from other variables, such as social reinforcement, instructions, and implicit instructions.

Social reinforcement does not appear to have been a confounding variable in the present study. Teacher interactions with the Project Data Collectors were limited to
brief (two to five minute) weekly conversations with the
data collectors. Data Collectors did not ask for daily
or weekly response totals during the self recording phase,
nor did they praise teachers for increasing their frequency
of praising. Typical comments were: "I'm glad you were able
to use the counter." "Thank you for using the counter, Dr.
_________told me to tell you you are doing a good job."
Instructions, or implicit suggestion may be responsible
for the slight upward drift in praise frequency during the
feedback phase and the sessions during the self recording
phase when the counter was not used for teacher #2. However,
since neither explicit instructions, nor implicit suggestion
produced a dramatic increase in the frequency of praise, it
seems unlikely that instructions or suggestion caused the
great increase in teacher #3's praise frequency during the
self recording plus graphing phase, or for the fact that praise
(except for sessions 74 and 75 discussed above).

It is interesting to contrast this present experiment
with an earlier study by Cossairt, et al. (1973). Cossairt
compared the effects of instructions, feedback, and feedback
plus praise on rates of teacher verbal approval. He found
that instructions and feedback produced "inconclusive" results
while the introduction of feedback plus praise was followed
by increases in teacher praising.

The present study agrees with Cossairt's results in
that instructions and feedback were seen to be relatively
ineffective in terms of changing teacher praise behavior. Cossairt suggests that social reinforcement is a necessary ingredient in changing the level of teacher verbal approval. The role of social reinforcement as it relates to self modification procedures needs to be more fully investigated. The effects of self recording should be compared with the effects of self recording plus social reinforcement.

Given the results of the current study, the question remains: can self modification techniques be more effective in terms of time and money than immediate feedback and praise? Either self modification must be reserved for the "highly motivated" subject or methods must be employed so that once prescribed, such techniques are actually put into use. It is clear that if self modification techniques consistently raise a low level of praising, but self recording itself is at a low level, then only the locus of the problem has changed. It may well be that with few exceptions, use of self modification techniques will be at a high level only when the experimenter arranges the contingencies appropriately. The advantages that self modification would then have would be that the experimenter would be freed from daily observation sessions, and might, in time, significantly reduce the amount of contact necessary to maintain responding.

Systematic investigation of methods that increase and maintain teacher verbal approval and, at the same time, make the most effective use of consultant time, should be instituted.
If social reinforcement should prove to be a major determining variable in the effectiveness of self modification, then questions for further study would include:

(1) how much contact is maximally effective to initially develop the use of self modification techniques; 
(2) how much contact is necessary to maintain the use of self modification procedures, and; 
(3) how quickly can the consultant thin out a schedule of reinforcement that maintains the use of self modification techniques. If careful investigation shows that a major investment in time is necessary to maintain self modification techniques then one of the above suggested, and important major advantages of such techniques would be negated. Self modification then would only be the technique of choice in the case of environments in which an outside observer could not be present, or when the behavior of interest was a private event such as negative thoughts.

There are two problems associated with self modification techniques that decrease their usefulness. First, it has been found in a number of studies, that even when a self modification technique is used consistently, the control such a procedure has over the behavior of interest attenuates in time, often as little as two weeks (Stuart, 1971). Variables that control such attenuation must be discovered and controlled in order to make self modification techniques consistently effective.

Second, Charters and Jones (1973) warn that supposed interventions may produce no change whatever. When the

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experimenter must rely solely on the report of the subject as an indicator of behavior change, the experimenter has no way of knowing whether he is reinforcing an actual change in behavior or only the reporting of a change in behavior.

Therefore, some sort of independent corroborative data are desirable when self modification techniques are employed. The experimenter may record a related response, or note changes that the subject's behavior makes in the environment. Corroborative data from peers may be available. In some circumstances, an independent observer, not identified as such to the subject, may be employed. However, if procedures necessary to insure the validity of the subject's data consume large amounts of staff time, then, a major advantage of self modification techniques is, again, negated.
Performance Contract Project Teachers

As you know Data Collectors are supposed to observe in each teacher's classroom for about one-half hour per week. During each observation period they count the number of times you use praise and the number of times you use reprimands in your classroom. We are now ready to give feedback to you on your data. It is our hope that the feedback will help you increase the rate of praise and decrease the rate of reprimands. The feedback will be given following each observation period and will be on a slip of paper that the Data Collector will leave on each teacher's desk. The Data Collector will show the total number of praises and reprimands which he heard and counted on the slip of paper.

On the following page is a copy of the definition of praise used by the Data Collectors. Some examples of praise are also included.

Not all of you will receive feedback at the same time. However, by the end of March all project teachers will be getting feedback on observations made in your classroom. Next month counters will be made available and some of you will be asked to count your own praises and thus provide your own feedback.

We hope this arrangement is satisfactory. Thank you for your patience and cooperation.

Performance Contract Project
Data Collectors.
PRAISE

Praise consists of vocal comments indicating approval or commendation of correctness, such as "Good," "Fine job," "You're studying well." "I like to see you..." "Right," or "Thank you." The words themselves (not accompanying gestures, expressions, or emphasis) must convey praise clearly enough that if seen in print, the reader would judge them to be a statement of praise.

This is not to say that gestures or expressions, such as a pat on the back, a friendly smile, or a look of love, are not important. They are important, but it is easier to judge a statement as praise based on the words spoken. Here are some additional ways to say "Good for you" (taken from an article by Edward S. Kubany in Teacher, Sept. 1972).

That's really nice.
That's great.
I like the way you're working.
Keep up the good work.
That's quite an improvement.
Much better.
It's a pleasure to teach when you work like this.
Good job.
What neat work.
You really outdid yourself today.
This kind of work pleases me very much.
Congratulations. You only missed ___.
That's right.
Terrific.
I bet your Mom and Dad would be proud to see the job you did on this.
Beautiful.
Excellent work.
I appreciate your help.
Thank you for (sitting down, being quiet, getting right to work, etc.).
Marvelous.
Right on.
For sure.
Sharp.
That looks like it's going to be a great report.
I like the way Tom is working.
My goodness, how impressive.
You're on the right track now.
That's a work.
That's clever.
Very creative.
Very interesting.
Good thinking.
That's the right answer.
Exactly right.
Super.
Superior work.
That's a good point.
You've got it now.
Thank you for raising your hand, Charles. What is it?
Sample Feedback Slip

DATA COLLECTOR FEEDBACK SHEET.

TEACHER__________________________

DATE____________________________

TIME____________ TO____________

DURING A ONE-HALF HOUR PERIOD I COUNTED

____________ OCCURRENCES OF PRAISE, AND

____________ REPRIMANDS.

DATA COLLECTOR__________________

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Performance Contract Project Teachers,

Sometimes merely keeping a record of what you do will change what you do. For example, suppose you are a person who wants to stop smoking. Counting how many cigarettes you smoke will often reduce the number you smoke each day. We want to see if counting your praises will have an effect on how often you praise students.

Each schoolday from __________ to __________ (this is the time the Data Collector comes to your room), we would like you to carry the counter we are giving you. During that time period each day, please use the counter to count each time you praise a student. Just push the counter button each time you praise. Please be sure the counter is set at zero before starting each day.

All of the teachers are not participating in this project yet, and your Resource Person may not be aware of it. If anyone does ask about it, it is okay to talk about it; it is no secret. To be sure you are praising as we ask, please review the attached definition and examples. Also, please re-read this note before using the counter, to be sure you know what to do.

Dr. Robert Hawkins
Sometimes keeping a daily graph on your own behavior will change that behavior. We want to see if graphing the number of praises each day will have an effect on the number of times you do praise.

Each schoolday from ____ to ____ we would like you to count the number of times you praise, using the wrist counter, and then plot the resulting total for the day. Look at the blank graph. This is the graph you will use. Now, notice the marks along the horizontal line. You will write the date of each day below the mark. Directly above it you will plot the number of times you praised that day between ____ and ____. For example, suppose on the first day you counted 19 praises. Directly above the mark for that day you find where 19 is according to the vertical scale. Write 19 in small numbers at that point.

As you know a Data Collector comes to your room once per week to count your praises. He comes from ____ to ____. If you use the counter at that time each day, perhaps you will praise more at least at that time. If this is effective we may ask you to use the counter at other times later or maybe try something else.

All of the teachers are not participating in this project yet. And your Resource Person may not know about it either. So it is perfectly acceptable to tell anyone who asks about it. To be sure you are praising appropriately please review the attached definition and examples.
Performance Contract Project Teachers,

In the beginning, it is often hard to remember to use a counter. If you do find it difficult to remember, the following suggestions might help:

1) leave the counter on your desk in plain sight,
2) print "use the counter from _____ to ____" on a note card and leave the card on your desk,
3) ask a student who sits near your desk to remind you when to begin and when to stop counting. Reward the student for his or her help (for instance, give him or her 10 points—if you use a point system in your room).

Please be sure to use the counter every day at the appointed time. Our data aren't telling us anything when you forget.
BIBLIOGRAPHY


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