This study was designed to learn if self-monitoring of a verbal behavior will affect the rate of a behavior and whether behaviors selected for increase will increase and behaviors selected for decrease will decrease. Each of the five subjects was asked to select from his own audio tape recordings one desirable and one undesirable behavior to be self-monitored. The occurrence of the first selected behavior was monitored for the next five school days and tallied. After a week's interval, the second behavior was selected for monitoring. The procedure was the same for monitoring the first behavior. Approximately one month after the conclusion of the second monitoring period, a final recording was made by each subject to sample the occurrence of the two behaviors after the lapse of time. The findings were: a) monitoring of a verbal behavior is related to the rate of behavior; b) the rate of behavior that the subject intended to decrease showed a decline during monitoring and continued at rates lower than pretreatment; and c) behaviors that were monitored for increase showed three patterns in rate change: an increase during monitoring with a subsequent decline to a rate only slightly greater than that prior to monitoring, an increase during monitoring and sustained at posttreatment, and an increase in rate at posttreatment time. Findings confirmed that self-monitoring is a supervisory methodology which allows and encourages teachers to set their own goals. (PD)
Self-Monitoring as a Supervisory Methodology

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The purpose of supervision has been broadly defined as the improvement of instruction. More specifically, because the teacher is an agent of instruction, improvement in what he does is a legitimate goal of supervision (Heald, 1969).

Change may not result in improvement, but improvement requires change. Change is a complex phenomenon and may be conceptualized by considering types of change. Bennis (1961) identified eight types of change: planned change, indoctrination, coercive change, technocratic change, interactional change, socialization, emulative change, and natural change. Planned change is the most deliberate type of change while natural change is brought about with no apparent goal-setting or deliberateness. Planned change entails mutual goal-setting and an equal power ratio.

The supervisor's function of promoting change toward improvement is hampered when there is a lack of agreement between the supervisor and the supervised regarding the methods of change or goals of improvement.

In a large scale, National Education Association study (Heald, 1969), superintendents were confident of the capacity of programs of evaluation to improve the quality of teaching, but over half of the teachers reported that the written evaluations of their work resulted in no observable change in their behavior.

Marquit (1968) also found that teachers considered the assistance given by principals "rarely" or "sometimes" provided stimuli for improvement. Blumberg (1967) reported that teachers view supervisors as creating a superordinate-subordinate situation and giving less empathy to teachers than supervisors regard themselves as giving.
Sergiovanni, Metz cus and Burden (1969) in their studies of leadership found that a high percentage of teachers had strong preference for a style of leadership which encouraged them to develop their own capabilities.

Supervisors and teachers function within an organizational framework and change must occur within the structure of organization.

Bennis (1959) developed a paradigm for comparing characteristics in three types of organizations: problem-solving, habit and informal. He described the problem-solving organization as having a high degree of similarity of goals between superior and subordinate, high degree of professionalization, important outside reference groups, high degree of autonomy for workers, high usage of abstract and inferential thinking, difficulty in evaluating effectiveness, and long-term and intangible goals. The habit organization was considered as having the opposite characteristics. The informal organization was included as an aspect of organizational reality that occurs in both the problem-solving and the habit organization.

The global concept of the problem-solving type of organization emphasizes the importance of self-control, the satisfaction of self-esteem and the integration of individuals and organization goals. In problem-solving organizations, the supervisor can only indirectly control rewards and create conditions where subordinates best satisfy their own needs and achieve their own purposes.

The process of creating opportunities, releasing potentials, removing obstacles, encouraging growth and providing guidance is similar to the process Drucker (1954) called "management by objectives," which suggests that a person changes or improves his performance through setting objectives. Change which is proposed by others can cause resistance and this resistance is avoided when a person sets his own objectives. Self-control means setting objectives related to the demands of the task as determined by the person himself. Action is
motivated not because someone else tells a person to do something or talks him into it, but because a person sets his own objectives.

A requirement for successful self-control is that the person must be able to measure his performance and results against the objective. Drucker maintained that the measures have to be clear, simple and rational.

The concept of self-control has not received extensive attention, perhaps because of the difficulty in establishing a direct link between intrinsic rewards and performance. Kanfer (1962) has commented that because large portions of an individual's response repertoire are usually not under direct control of external reinforcing stimuli, the concept of self-control is crucial to understanding human behavior. He notes the assumption that a positive, generalized reinforcer, such as self-approval, follows only the behaviors which the person has learned are subject to reinforcement from others.

Teachers and supervisors function in a problem-solving type of organization where self-control is the appropriate source of power and where self-esteem is the type of satisfaction gained through achievement of standards of performance. The supervisor, in this study—the researcher, attempted to create conditions in which the teacher could experience the satisfactions of self-esteem and accomplishment through achievement of self-determined goals.

Planned change which is the type of change with the highest level of deliberateness was intended to be basic to the procedure. Along with the concepts of self-control and intrinsic rewards was considered the evidence reported by McFall (1968) and Simkins (1969) that close attention in the form of self-monitoring affects a behavior even though no change may be intended.

The question became—if a teacher selected an aspect of verbal behavior to change and monitored the occurrence of that behavior, what would be the result?
The effects of self-monitoring of a behavior which the teacher wished to increase was studied in contrast to the effects of self-monitoring of a behavior which the teacher wished to decrease. The comparison between monitoring behavior intended for increase or decrease provided a means to determine if the change in rate would be in the direction intended by the teacher.

The five teachers who were subjects in the study were teaching in the American School in Rio de Janeiro, Brazil. The American School follows closely the curriculum in general use in the United States, providing classes from kindergarten through grade twelve. The school is accredited by the Southern Association of Colleges and Secondary Schools of the United States and enrolls over 1,000 students, about two-thirds of whom are American. The five subjects were Americans trained in the United States. Two of the subjects taught second and third grades in the lower school, and the other three subjects taught English and Social Studies in the upper school. The data collection period was September - December, 1970.

The methodology was based on two general principles or guidelines: autonomy and self-control for the subject and preserving the naturalness of the teaching situation. The autonomy of the subject as a teacher and the concept of self-control required that the teacher be allowed to determine the appropriateness of specific procedures in relation to the continuing instructional program for each class. When the teacher did not willingly comply with specific procedures, a policy of non-enforcement was followed. The lack of insistence that the subject comply with all directions was considered to promote reciprocity, by emphasizing the conforming behavior rather than the non-conforming behavior (Schwartz, 1964). Efforts were made to preserve as much consistency as possible. To determine the effects of self-monitoring by a teacher "in-situ" it was necessary to tolerate the natural occurrence of irregularities which are a part of every classroom.
Orientation to the procedures was given in an individual conference with each subject.

The first step in the methodology was to make a series of audio tape recordings of the teacher's verbal behavior. Each subject was asked to make recordings for three consecutive days to collect samples of his teaching. Zander (1961) had suggested that persons will be more likely to act on the basis of information they gather themselves than on information gathered by others. Each subject operated the recorder and decided which period to record. The recordings served as base line data and was also the data which the teacher examined and from which a behavior was selected for change. The subject also completed a written form which accompanied each recording to provide information on setting, time, and other pertinent circumstances. Each subject recorded a minimum of three fifteen-minute segments during the initial period of data collection.

The subject was instructed to listen to the recordings and select a behavior which he wished to change. A conference was arranged to specify the behavior selected for change. The conferences were also recorded. Each subject was to monitor the occurrence of the selected behavior to the next five school days. The subject tallied the occurrence of the behavior by using a small punch counter and recorded the total on a form after each period. Audio recordings made during the monitoring period were used by the supervisor to confirm the subject's tally of the occurrence of the behavior.

An interval of a week during which no recordings were made followed the first monitoring period to allow a rest period for each subject. At the end of the week, the pre-treatment recordings were returned to each subject and he or she was asked to listen to the tapes for the purpose of identifying a second behavior for monitoring. If a behavior considered desirable had been selected
for the first monitoring period, the subject was asked to choose a behavior that he considered undesirable and would like to diminish. Similarly, if a behavior considered undesirable had been chosen for the first monitoring period, the subject was asked to choose a behavior he would like to increase for the second monitoring period.

The supervisor met again with each subject to discuss the behavior selected for attention during the second monitoring period.

The second monitoring period was to extend over five school days. As previously, the subject was to punch the counter whenever he was aware the behavior had occurred, and audio recordings were made.

Approximately one month after the conclusion of the second monitoring period a final recording was made by each subject to sample the occurrence of the two behaviors after the lapse in time.

The basic question was whether self-monitoring of a verbal behavior would affect the rate of the behavior. The sub-questions were whether behaviors selected for increase would increase and behaviors selected for decrease would decrease.

Three behaviors were selected for decrease and each of these behaviors showed a decrease and continued to occur at a rate lower than prior to monitoring. Subject I monitored "ok" and "all right" during the first monitoring period and the average scores were 3.4 during pre-treatment, .9 during the first monitoring period and .8 during the second monitoring period and 1 at the post-treatment period. Subject II monitored "ok" and "all right" during the second monitoring period and the average scores in sequence were 10 during pre-treatment, 5.2 at the first monitoring period, 1.5 during monitoring and 2.4 at post-treatment. These two series of average scores show a slight rise at the post-treatment period but the behaviors continued to occur at rates lower than prior to monitoring.
Subject IV monitored interruptions after dictation and the average scores were 2.8 during pre-treatment, .3 during the first monitoring period, .2 during the second monitoring period and .1 at post-treatment, an average which was lower each succeeding period of data collection.

Seven behaviors were monitored for increase and showed increases in rate although not with the same pattern or degree of change. Three of the seven showed increases during monitoring with subsequent drops to average rates only slightly greater than at the pre-treatment period. Subject I monitored verbal interaction with two students during the second monitoring period and the average scores were 2.5 at pre-treatment, 1.1 during first monitoring period, a high of 4.5 while being monitored and a post-treatment average of 2.5. Subject II monitored varied positive responses during the first monitoring period and the average scores were .2 during pre-treatment, a high of 1.9 during monitoring, .5 during the second monitoring period and .7 during post-treatment. Subject III monitored expression in voice during the first monitoring period and the average scores for the four periods of data collection were .8, 1.3, 1.4 and .9. The average score of the behavior did not drop immediately after monitoring but was similar in pattern of change to the positive behaviors monitored by Subjects I and II which showed an increase and later declined to a rate only slightly greater than prior to monitoring.

Two behaviors which were selected and monitored for increase showed an increase in rate the post-treatment period. Subject IV monitored positive responses to students and the average scores for that behavior showed no change until post-treatment, when the rate tripled. Subject III monitored her use of questions during the second monitoring period and the scores for the four periods of data collection were 1.6 during pre-treatment, 1.9 during the first monitoring period, 2.6 during the second monitoring period and 4.9 at post-treatment.
The two closely related behaviors chosen for monitoring by Subject V were voluntary responses of students and consecutive student responses. The average scores or rates for the behaviors showed the greatest increase during the period when monitoring was occurring with a subsequent decline in rate. A combination of the average scores for these behaviors shows the highest score at the post-treatment period representing a sustained increase in the frequency of student participation in class discussions.

The findings are summarized as follows:

1. Monitoring of a verbal behavior was related to the rate of the behavior.
2. The rate of behaviors which the subjects intended to decrease showed a decline during monitoring and continued at rates lower than pre-treatment.
3. Behaviors which were monitored for increase showed three patterns in change of rate: an increase during monitoring with a subsequent decline to a rate only slightly greater than prior to monitoring; an increase during monitoring and sustained at post-treatment; and an increase in rate at the post-treatment period.

The data enumerated above showed changes in the rates of behaviors which were monitored. Related findings demonstrated affective and motivational changes.

The monitoring was reported to have affected the behavior of the subject at times other than when monitoring. The subject who wished more expression in her speaking said she was more aware of expression in conversations with people at home or at school after beginning the monitoring. Subject V considered the monitoring to have made him more aware of student participation in his other classes although he was deliberately monitoring in only one class. Subject IV said the monitoring had helped her to control her pacing of presentation when filming classes for television.
Listening to the tapes caused the subjects to gain insight into their behavior, to hear and observe characteristics which were apparent in a new way. Subject II said that her voice was not as distinctive as she thought it to be and she realized she was using slang expressions frequently. She thought the monitoring generally had improved her professional outlook. Subjects I and V both noticed the quantity of their talking. Subject II thought that listening to the recordings made her more objective and at the same time confirmed some of her ideas. Subject I said the monitoring had made her more aware of the discipline problems with her group.

Subjects used the insights and changed certain other behaviors in addition to the behaviors which they monitored. Some of these changes were: not interrupting students; asking more questions; watching facial expression; rephrasing questions; allowing spontaneous student responses; restraining "talking too much"; and using tape recorder in new ways.

Subject III responded to the program in a way which was unique. She would listen to each recording after class and would take notice of the behavior. She did a type of monitoring after the fact, rather than at the time of occurrence. Another response unique with this subject was her reluctance to define precisely what she meant by expression in her voice. Later she stated the realization that monitoring was more successful when the behavior was well defined. An aspect of her teaching which was not reflected in the quantitative scores was that during two periods she read with much expression. This represented a definite use of the behavior being monitored but these periods were not scored as part of the data as the use of expression was continuous.

Subject V chose behaviors for monitoring which were student behaviors. He did not directly monitor his own behavior. The changes in rate for the two types of student behavior required a change in the behavior of the teacher; i.e.,
he had to speak less so they could speak more. The behavior was chosen to reflect his goal for change—increase in student participation.

The choices of behavior made by Subjects III and V were progressive; i.e., the second behavior chosen for monitoring was similar to the first and was a refinement of the first behavior. This demonstrates a particular effect of self-monitoring, progress by the teacher in defining and specifying goals.

The findings were summarized as follows:

1. Monitoring affected the behavior of the subjects at times other than during monitoring.

2. After listening to the audio recordings, subjects expressed insights and observations regarding their teaching.

3. Subjects considered behaviors in addition to those they had monitored changed as a result of the monitoring program.

4. The second choice of a behavior to monitor evolved from the choice of the first behavior in the cases of two subjects.

The findings confirmed that self-monitoring is a supervisory methodology which allows and encourages teachers to set their own goals. A strong implication is that a teacher who sets his own goals will choose those which are compatible with his conception of teaching. This raises the speculation that teachers with elaborated and detailed concepts of teaching and learning will discern more possibilities for improvement.
Bibliography


