

SUPERVISION has as its goal the modification of behavior. Few elementary or secondary school administrators or college professors of teacher education, however, think of supervision in this way, or at least wish to admit it if they do. Nevertheless, as a result of supervision the pre- or in-service trainee is expected to do or say something differently than he did prior to supervision.

A common problem with this expectation in practice is the failure of public school and university supervisors to identify specific behaviors to be influenced and then to attempt to influence these behaviors in ways which are suggested by contemporary research. This article will describe a theoretical orientation and research results which have substantial implications for the supervision of teachers for behavior change.

A General Theory

The use of modeling procedures as a means of influencing human behavior has been well documented.^{1,2} This research suggests that new social responses may be acquired or characteristics of existing responses changed as a function of observing the behavior of others and the consequences of their responses, without the observer himself performing any responses or receiving any direct reinforcement during the acquisition. A study by Bandura and McDonald³ indicated that imitation was more effective than operant conditioning procedures and that the provision of a model alone was as effective as the combination of modeling and reinforcement for initial learning. Bandura, Ross, and Ross⁴ have also gathered evidence

¹ Albert Bandura and R. Walters. *Social Learning and Personality Development*. Chicago: Holt, Rinehart & Winston, Inc., 1963.

² Albert Bandura. "Social Learning Through Imitation." In: M. R. Jones, editor. *Nebraska Symposium on Motivation*. Lincoln: University of Nebraska Press, 1962. pp. 11-269.

³ Albert Bandura and F. J. McDonald. "The Influence of Social Reinforcement and the Behavior of Models in Shaping Children's Moral Judgments." *Journal of Abnormal and Social Psychology* 67: 274-81; 1963.

⁴ A. Bandura, D. Ross, and S. Ross. "Imitation of Film-Mediated Aggressive Models." *Journal of Abnormal and Social Psychology* 6: 3-11; 1963.

SUPERVISION: AN ATTEMPT TO MODIFY BEHAVIOR

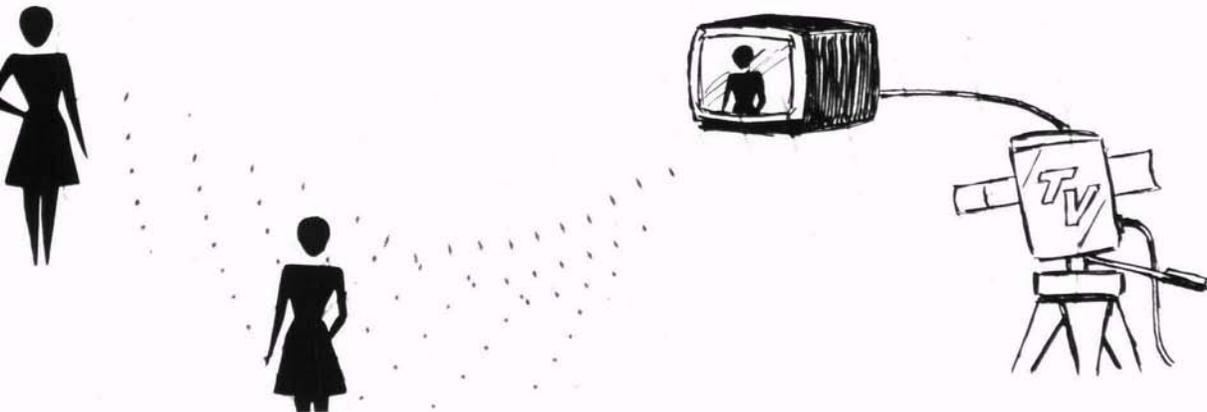
that indicates that film-mediated models are as effective in producing behavior change as are live models.

A recent group of studies conducted with both secondary teachers⁵ and elementary science teachers⁶ tend to support the use of imitation in teacher training. The first of these studies sought to train teachers to ask analytical questions of the type suggested by the Bloom's *Taxonomy*⁷ categories of analysis. Trainees were exposed to a video-tape model of the behavior to be acquired, a written description of the desired behavior, or a placebo. The treatment groups viewing the film-mediated model or reading the written model produced significantly higher frequencies and qualities of questions asked than did the control group. The latter study attempted to teach prospective elementary science teachers to ask observation and classification questions of the type suggested by

⁵ Mary Lou Koran. "The Effects of Individual Differences on Observational Learning in the Acquisition of a Teaching Skill." A paper presented to the American Educational Research Association, Los Angeles, February 1969.

⁶ John J. Koran, Jr. "The Relative Effects of Classroom Instruction and Subsequent Observational Learning on the Acquisition of Questioning Behavior by Preservice Elementary Science Teachers." Summary of Research #1, Mimeographed Paper, The Science Education Center, University of Texas at Austin, 1968.

⁷ Benjamin S. Bloom. *Taxonomy of Educational Objectives; Handbook I, Cognitive Domain*. New York: Longmans, Green & Co., Inc., 1956.



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Gagné⁸ in the AAAS *Science—A Process Approach*. The treatment group viewing a video-tape model asking the desired types of questions generated a significantly greater frequency of these questions than did a control group.

Feedback is an equally well-documented means of influencing behavior. McDonald and Allen,⁹ in a series of studies done with secondary teacher trainees, have found that reinforcement and discrimination training administered by the experimenter were effective methods of producing behavior changes in teachers (video-tape playbacks of teachers' performance were used while reinforcing). A similar study by Claus¹⁰ with elementary teachers tended to confirm the McDonald-Allen results but with a different type of sample (elementary teachers instead of secondary) and a different dependent variable (questioning behavior instead of verbal and nonverbal reinforcers).

Informal results of supervisor attempts to influence teacher behavior during the

⁸ Robert M. Gagné. "The Psychological Basis of *Science—A Process Approach*." Washington, D.C.: American Association for the Advancement of Science, 1965.

⁹ F. J. McDonald and D. W. Allen. "Training Effects of Feedback and Modeling Procedures on Teacher Performance." USOE, 6-10-078. Stanford University: School of Education, 1967.

¹⁰ Karen Claus. "The Effects of Cueing During Modeling Procedures on the Learning of a Teaching Skill." Stanford: Stanford Center for Research and Development in Teaching, 1968.

microteaching clinic at Stanford University (Summer 1968) by using video-tape models, feedback, and reinforcement as a part of the supervisor's strategies have also appeared to produce change in teacher behavior. These studies contribute to a sizable body of literature which suggests specific strategies that may be of practical value to both the school supervisor and the professor or supervisor in teacher education.

A Practical Application

The implication of the above line of research, and of the methods which were used, for supervision in the schools is great. First, it is essential that a supervisor have clearly in mind the behavior he wishes to influence so that his feedback can be specific and so that the supervisee will know what or how to change as a result of supervision. The component parts of the behavior must be clearly communicated to the supervisee. This can be done by showing the supervisee a video tape which highlights the desired behavior in the context of a lesson or by presenting a written description of the behavior to the trainee.

Both the video-tape model and the written description of a behavior have been

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found to be effective in producing initial acquisition of certain behaviors. Once the trainee has been exposed to the behavior by one of the above methods and has had time to acquire the behavior, an opportunity to use the behavior should be provided. In university teacher education situations "microteaching" provides an excellent context in which the trainee can practice; and after a microteaching session, the supervisor can provide specific feedback regarding the extent to which the skill has been acquired as well as reinforcement for correct responses. Suppose that the skill to be acquired by elementary teachers is that of asking observation and classification questions. The supervisor would first have to specify clearly the components of the behavior:

ASKING OBSERVATION-CLASSIFICATION QUESTIONS

Definition of *Observation*: Questions which elicit from students observations when one or more physical characteristics of the objects observed vary as detectable by sight, touch, taste, hearing, or smell.

Teacher asks the following types of questions:

1. Questions requiring students to identify objects according to color
2. Questions requiring students to identify objects according to shape
3. Questions requiring students to identify objects according to size

4. Questions requiring students to identify objects according to texture
5. Questions requiring students to identify objects according to taste
6. Questions requiring students to identify objects according to smell.

Definition of *Classification*: Questions which elicit from students categorization behavior of objects by single or multiple dimensions such as color, shape, size, texture, taste similarities or differences.

Teacher asks the following types of questions:

1. Questions requiring students to place objects into student-devised groups or categories
2. Questions requiring students to identify whether objects are the same or different
3. Questions requiring students to place objects into teacher-stated categories.

The supervisory sequence which would employ the preceding performance specification in a microteaching situation is shown in Figure 1.

In the schools an administrator might release beginning teachers for short periods of time to observe a veteran teacher who does or says a specific thing well. If this is done, it is vital that the "model" be told what behavior to perform and how to perform it, and that the observer be told what to look for. Again, the specification of the behavior is critical and the provision of a written or video-tape model essential.

<i>Supervisor</i>	<i>Microteaching-Supervisory Context</i>	<i>Trainee</i>
1. Introduction of the skill	Introduction of behavior by video-tape model or written model	1. Acquisition
2. Observation of performance	Microteaching I	2. Practice
3. Provision of feedback, reinforcement discrimination training	Supervision I	3. Receive feedback, reinforcement
4. Help in planning, observation of performance	Microteaching II	4. Replan practice
5. Provision of feedback, reinforcement discrimination training	Supervision II	5. Receive feedback, reinforcement

Figure 1. Supervisory Sequence in a Microteaching Situation

Once the supervisee is aware of the behaviors to be acquired and has observed these behaviors on video tape or in person, a practice session should occur. This can take place in the classroom and might be thought of as being equivalent to "micro-teaching." At the end of a practice session the trainee would receive specific feedback and reinforcement contingent on the approximation of the skills in the performance specification. The model for this sequence would be similar to that previously described except that the "microteaching" would be "macro-teaching" in the classroom. The presentation of the model could very well be done by a colleague "live" in the schools, or by a videotape or written method.

Either of the approaches described can be recorded on video or audio tape to help in recalling specific situations about which to provide the teacher with feedback. Regardless of the setting and technology, the supervisor's job is to use feedback and reinforcement to shape the trainee's behaviors to approximate a specific performance standard. During supervisory sessions of this type, a useful approach is to focus on one or two behaviors, at the most, and to provide specific information (feedback) to the trainee about these.

When supervising in the schools, frequent visits of short duration by the supervisor rather than long visits spaced some distance apart seem to be satisfactory. In this regard the supervisor may observe in school for 10-15 minutes at a time or have the trainee video- or audio-taped for short supervisory sessions after school.

Once a behavior has been acquired and demonstrated by the supervisee to an acceptable level of proficiency, it is time to introduce another behavior. The same procedure may be used over again depending on the facilities and equipment available. As the trainee's behavior repertoire begins to show signs of expanding, supervisory strategies should be used, and conditions arranged so that the supervisee begins to see that certain

behaviors can be arranged in chains in order to facilitate retention of older behaviors and a flexibility of the response repertoire in actual instructional situations.

In conclusion, the success of the supervisor can only be measured directly by the magnitude of change, in clearly specified behaviors, that he produces in the supervisee. Indirect measures of supervisory effectiveness are the extent to which the students of a supervisee do or say things differently, in a desirable direction, as a result of the teacher's acquiring and using specific skills.

The implications of the research and methodology presented, for the supervision of pre- and in-service teachers, is great. Contemporary research shows that teacher behavior can indeed be influenced under both laboratory and school conditions. Supervisors must clearly define what they want teachers to do or say differently in order to know what to provide feedback on, and reinforcement for, during a supervisory session.

The instructional design which the supervisor employs utilizes social learning theory in the form of video- or audio-taped, written, or live modeling procedures to introduce behaviors to the trainee for acquisition; and operant condition techniques, feedback, and reinforcement to secure performance of the behaviors. Finally, the use of performance specifications of the type described permit the supervisor to do a pre- and post-type of analysis of a teacher's performance to provide information about his own supervisory behavior and, of course, information about the teacher's growth.

The methods discussed and the literature described suggest ways and means of going about supervision for behavior change and also a theoretical foundation for these supervisory strategies. These proposals should be considered hypotheses rather than solutions and should be tested under a variety of conditions and with a multitude of skills and trainee populations, with the final hope that they will assist in the emergence of a theory of supervision. □

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