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ABSTRACT
        Albert Bandura of Stanford University has proposed
four component processes to his theory of observational learning: a)
attention, b) retention, c) motor reproduction, and d) reinforcement
and motivation. This study represents one phase of an effort to
relate modeling and observational learning theory to teacher
training. The problem of this study is the development of a) a
methodology for deriving component behaviors of a teaching skill from
an array of models of that skill videotaped in the natural classroom
setting, and b) a methodology for developing a discriminative
observation scale based on the derived component. The specific study
skill on which this study was based is the oral story reading
behavior of preschool children. Teachers were videotaped while
reading two stories to a group of preschool children; experts from
the field of child development rated the instances of oral story
reading behavior on a seven-point scale of effective and ineffective
behavior. Nine teacher trainees, trained in the use of the
discriminative observation derived from the experts' work, rated the
instances, and the scale was revised. (In the concluding section, the
implications of this study for competency-based teacher education are
discussed.) (JA)

Implications of Bandura's Observational Learning

Theory for a Competency Based Teacher Education Model.

A Paper Presented at the Annual Meeting

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Implications of Bandura's Observational Learning

Theory for a Competency-Based Teacher Education Model

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Introduction:

One aspect of social learning theory which has evolved during the past ten years specifies the conditions underlying the process of learning by observing. This theory is referred to as Modeling and Observational Learning and is attributable to the efforts of Albert Bandura of Stanford University.

The process of training student teachers basic competencies involves the novice observing a seasoned teacher in the natural classroom setting. Frequently the teacher being observed does not display consistent exemplary behavior. And frequently the novice is unprepared to make appropriate discriminations among effective and ineffective instances of components of the skill.

The present study represents a systematic effort to apply the theory of observational learning to the training of student teachers in order that they may learn to be discriminating in their observations of teacher models. Observational learning theory proposes that discriminative observation is a skill which is prerequisite to acquiring matching behavior of an observed model (Bandura, 1969).

There are four component processes in the social learning view of observational learning. These component processes are: 1.) attention, 2.) retention, 3.) motor reproduction, 4.) reinforcement and motivation (Bandura, 1969, 1970).

The present study focuses on the first two component processes, although aspects of the others influence the methodology and will be referred to when appropriate.

Attentional Processes

The attending behavior of the observer is, "...one of the main component functions..." of the observational learning processes (Bandura, 1971, P 16). If important nuances of the model's behavior are left unnoticed then the observer will fail to include them when he/she attempts to reproduce the modeled behavior. Attentional processes include such variables as rules for establishing attention by informing the subject in advance what discriminations he/she is to make, providing the subject with an array of models if fine discriminations are to be made, repeating presentations when complex behavior is being observed and the presentation of components of complex behavior (Bandura, 1969, 1970).

By providing the observer with prior knowledge of what discriminations to make assurance is gained that the observer will attend to those components of the modeled behavior (Bandura, 1969, P 137). Within the present study there are two forms of discriminations that can be made by the observer; 1.) the observer must learn to identify the component skills of the teaching strategy and 2.) the observer must differentiate between effective and ineffective instances of the component skills.

Providing an observer with an array of models enables him/her to develop a higher order generalized concept of the class of behaviors being observed. Providing opportunities to observe heterogeneous models results in observers displaying "...novel patterns of behavior representing diverse

combinations of elements from the different models." (Bandura, 1969, P. 148). And by providing an array of models the observer is able to make finer discriminations of the component skills (Bandura, 1969).

When complex behavior is being observed, repeated presentations enable the observer to make positive identification of the behavioral components (Bandura, 1969). This end can also be reached by presenting the observer with clearly identified video-taped components of the complex behavior. Long models of complex behavior, on the other hand, exceed the capacity of the observer and interfere with learning (Bandura, 1969).

Retentional Processes

Retentional processes include such variables as symbolic coding of components of complex observed behavior and covert and overt rehearsal (Bandura, 1969; Gerst, 1971). In a study designed to compare the effectiveness of three forms of recall of observed behavior Gerst found that symbolic coding was superior to visual imagery and descriptive coding. Symbolic coding is the process of developing short key phrases that are highly descriptive of the operations to be recalled. Observers tend,"...to code, classify and reorganize elements into familiar and more easily remembered schemes...translating action sequences into abbreviated verbal systems and grouping constituent patterns of behavior into larger integrated units." (Bandura, 1969, P 140-1).

Covert rehearsal is the process of mentally reviewing event sequences without overtly reproducing the acts while overt rehearsal involves the actual reproduction of the act. "Reproduction of matching responses, either on an overt or covert level, also provides the

observer with opportunities to identify the response elements that he
has failed to learn and thus to direct his attention to the overlooked
modeling cues during subsequent exposure..." (Bandura, 1969, P 140).

Motor Reproduction Processes

A variable within motor reproduction processes that has sign-
ificance for teacher training is one which is a function of the avail-
ability of the necessary component responses for reproducing the modeled
behavior. In most observational learning settings the only new aspect
is the novel combination of component behaviors which are being modeled.
Therefore new skills are readily acquired when the behaviors modeled
closely match previously acquired component skills of the observer.

Reinforcement and Motivational Processes

The process of vicarious reinforcement has been investigated by
Bandura who concludes that an observer is reinforced vicariously through
the reinforcement contingencies that support the model's behavior
(Bandura, 1971). It is therefore possible that the same reinforcing
contingencies that support superior modeled behavior will differentially
reinforce an observer as he/she observes effective and ineffective modeled
behavior.

The present study focuses on the development of a methodology for
deriving component behaviors of a teaching skill from an array of models
of that skill in the natural classroom setting and a methodology for the
development of a discriminative observation scale based on the derived
component behaviors. The discriminative observation scale is designed for
the expressed purpose of training student teachers to learn from models
by discrimination processes.

Statement of the Problem

The problem of this study is 1) the development of a methodology for deriving component behaviors of a teaching skill from an array of models of that skill video-taped in the natural classroom setting and 2) a methodology for the development of a discriminative observation scale based on the derived component behaviors. (The discriminative observation scale is designed for the expressed purpose of training student teachers to learn from models by discriminative processes.)

Methodology

In order to investigate this problem the following methodological elements were employed.

Element 1   Recognized experts in the field of child development were asked to identify component behaviors of a teaching skill, given video-taped instances of an array of teachers performing the skill in the natural classroom setting.

Element 2   Recognized experts in the field of child development were asked to discriminate between effective and ineffective component behaviors of a teaching skill given the identical video-taped instances as in one above.

Element 3   A discriminative observation scale was developed from the component behaviors derived in one, above and from the effective and ineffective instances of component behaviors identified in two, above.

Element 4   The forms of reliability and validity appropriate for a discriminative observation scale are discussed and when data is available determined upon the completion of a validation study and a second validation study.

Setting of the Study

The specific teaching skill on which this study has been based is the oral story reading behavior of preschool teachers. Reading stories to preschool children was chosen as the array of modeled teaching behaviors for the following reasons:

1. Reading stories to children is an important element in the preschool curriculum for the development of cognitive and imaginative processes (Foster, 1967; Almy, 1955; Read, 1971; Martin, 1968).

2. Reading to children is one of a cluster of preschool teaching skills which has received little to no attention by teacher training institutions.

Procedure

Twelve preschool teachers were video-taped while reading two stories each to a group of children. Colleagues of the researcher helped identify teachers who represented the spectrum of effective to average story readers. Two edited versions of the twenty-four video tapes were prepared, designated Video Tape I (VT I) and Video Tape II (VT II). Each tape was composed of seventy-two thirty-second instances of oral story reading behavior prepared in such a way that each teacher appeared randomly six times in VT I and six times in VT II.

Three experts from the field of child development rated the seventy-two instances of VT I and VT II on a seven point scale of effective and ineffective behavior. In addition to rating each instance they wrote a brief judgmental statement describing the behavior they had rated. These statements were divided into unit behavioral statements (UBS) with a single behavioral referent, typed on separate cards and sorted into categories of behavior. These categories formed the basis for developing a discrimina-

tive observation scale with categories and items derived directly
from the unit behavioral statements of the experts.

Nine teacher trainees were given three hours of training in the
use of the discriminative observation scale with VT I. They then
rated the seventy-two instances of VT II. The resulting date was
used for item analysis, the determination of the level of interrater
reliability, the internal consistency of the scale, and the level of
agreement between teacher trainees and experts in discriminating be-
tween effective and ineffective instances of oral story reading be-
havior. Upon completion of this data analysis the scale was revised
and presented to a second group of teacher trainees (n=11) who were
oriented to its use in a similiar manner. The resulting data was
subjected to the same analysis.

Results

The average level of inter-expert agreement on what constituted
effective and ineffective oral story reading behavior for VT I was
r=.44 and for VT II was r=.42. Although these correlations are sign-
ificant from zero (p $<$.05) for a one-tailed test of significance, they
do not represent a high level of agreement among experts. This can
be partially explained by the fact that each expert was encouraged to
rate each instance from the standpoint of his/her own expertise. An
analysis of the unit behavioral statements supports this in that each
expert attended to specific components of oral story reading behavior
more than others; e.g., Expert A emphasized the initiation of inter-
action, B, dramatization and animation, and C the listening-respond-
ing aspects of an interaction.

Ninty-one percent of the experts' statements were classified into
eight categories while only nine percent had no behavioral referent.

Although experts varied to some degree in emphasis across categories
they were in complete agreement as to which categories constituted the
most critical components of oral story reading behavior. The categories
and unit behavioral statements summed across experts were: Initiates
Interaction 22.7%, Listening/Responding 22.3%, Dramatization/Animation
20.3%, Book and Illustration 7.8%, Behavioral Control 6.4%, Pace 5.4%,
Story Ending 3.7%, and Eye Contact 2.0%.

The discriminative observation scale formed on the basis of this
analysis and presented to two groups of teacher trainees with only three
hours of training resulted in an average inter-rater reliability of
r=.63 for group one and r=.66 for group two. The level of internal con-
sistency reliability as calculated by coeficient Alpha was r=.93 for
scale one and r=.90 for scale two. The level of average trainee to aver-
age expert agreement on effective to ineffective oral story reading be-
havior was r=.40 and r=.32 for groups one and two respectively.

The content validity of the discriminative observation scale was
established through a comparision of the component behaviors identified
by the experts with studies reporting behaviors of general teacher ef-
fectiveness and studies reporting behaviors specifically associated with
effective oral story reading.

Rosenshine (1970) has recently reviewed the leterature on effective
teaching and found among other behaviors four that correspond to three
of the categories of the discriminative observation scale. They are,
frequent movement and gesture, variation in voice, use of eye contact,
and animation. These categories of behavior have a high degree of cor-
respondence to the categories of Dramatization/Animation, Pace, and Eye
Contact of the present study.

The importance of teacher/child interaction has been well documented
by the studies of Flanders and others who have adopted his system of ob-

serving teacher/child interaction (Flanders, 1970; Amidon and Hough,
1967). Thus support is given to the importance of teacher/child
interaction categories of the present study which include, Initiates
Interaction and Listening/Responding.

The literature on oral story reading is dominated by writing on
story reading in library settings (Sedlock, 1951; Foster, 1967). Only
one article has appeared that identifies specific behaviors of an oral
story reader (Martin, 1967). Martin's article identifies five classes
of oral story reading behavior; characterization, imagery, the vocal
pause, comic technique, and animation. Her definitions of these classes
of behavior show a direct correspondence with the definitions of the
categories Pace and Dramatization/Animation in the present study.

Another work developed by Foster (1967) for training librarians in
oral story reading stresses such behaviors as the appropriate positioning
of a picture book and techniques for controlling behavior. Included in
the Foster book are techniques for maintaining the uninterrupted flow of
the story. Her intent is to provide librarians with techniques to main-
tain absolute silence and attention during the reading of a story. In
the present study such behavior on the part of the teacher model was
considered as inappropriate story reading behavior. In its place was
the permitting of a reasonable amount of physical movement as might re-
sult from the theme of the story and planned interruptions of the story
in order to allow for meaningful teacher/child interaction. This repre-
sents a major departure from the literature and is justified on the grounds
that there is a significant difference in the relationship between a class-
room teacher and her children and the relationship of a librarian and the

children she interacts with once a week during a story reading session.

No single source has been found that enumerates all of the behaviors of an oral story reader as does the present study. One can therefore conclude that the methodology for deriving component behaviors of a teaching skill as developed in this study represents a strategy for establishing a comprehensive set of component behaviors of a teaching skill that may have implications beyond oral story reading.

Discussion

Relevance of this study to Bandura's theory of observational learning

Bandura has proposed four component processes to his theory of observational learning. They are 1.) attentional, 2.) retentional, 3.) motor reproduction, 4.) reinforcement and motivational (Bandura, 1971). The present study represents one phase of an effort to relate modeling and observational learning theory to teacher training. The focus of this study is derived from the following quotation taken from Bandura's (1969) book entitled, Principles of Behavior Modification.

Simply exposing persons to distinctive sequences of modeled stimuli does not in itself guarantee that they will attend closely to the cues, that they will necessarily select from the total stimulus complex the most relevant events, or that they will even percieve accurately the cues to which their attention has been directed. An observer will fail to acquire matching behavior, at the sensory registration level, if he does not attend to, recognize, or differentiate the distinctive features of the model's responses. To produce learning, therefore, stimulus contiguity must be accompanied by discriminative observation. (1969, P136)

Attentional Processes

If, as Bandura implies, in order for a teacher trainee to effectively learn from a model he/she must first learn to discriminate among the components of a model's behavior, then the first problem to be resolved in the present study has been to derive the component behavior of a teaching skill. Since the present study had as its focus observational learning and the development of a methodology which could be replicated, the strategy employed was to use video-taped instances of modeled teacher behavior for component analysis. This procedure, which has been described earlier, yielded eight distinct component behaviors. These component behaviors became the basis on which the discriminative observation scale was developed. This scale was used as a means of informing teacher trainees prior to training of the discriminations they were to make when observing video-taped instances of teacher behavior. In addition to requiring that the trainees discriminate among eight component behaviors they were required also to discriminate between effective and ineffective instances of each component. It was through this training in discriminative observation that the present study sought to direct the trainees' attention to, "...attend to, recognize, or differentiate the distinctive features of the model's responses." (Bandura, 1969, P 136). The use of effective and ineffective instances is supported in Bandura's proposition that an observer's incentive to observe is enhanced by submitting him/her to multiple models requiring selective attention to conflicting cues (1969, P 137).

Bandura, (1969) further proposes that providing observers with an array of heterogenous models enables them to display "...novel patterns of behavior representing diverse combinations of elements from the different models...", to make finer discriminations of the component skills

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Bandura, (1969) further proposes that providing observers with an array of heterogenous models enables them to display "...novel patterns of behavior representing diverse combinations of elements from the different models...", to make finer discriminations of the component skills

and to develop a more highly generalized concept of the class of behaviors

he/she is observing (P 148-9). The present study provided the observer

with a heterogenous array of models with the intent of optimizing the

probability that the observer could acquire fine discriminative observation

skills.

Bandura, (1969) and Mc Donald, (1970) propose that presenting the

components of complex modeled behavior will facilitate learning and that

long instances of complex modeled behavior exceeds the capacity of the

observer and interferes with learning. This proposition prompted the

use of thirty-second instances of modeled oral story reading behavior

with time provided between instances for trainees to code the observed

behavior on the discriminative observation scale.

Bandura, (1969) proposes that by repeating presentations when com-

plex behavior is being observed, the observer is able to make positive

identification of the behavioral components. Two procedures were under-

taken to assure positive identification of complex behavioral components.

During the orientation of the observers to the discriminative observation

scale instances of each component behavior were shown on video-tape, pro-

viding the observer with both a verbal and visual model of the component

behavior. Later when a group of trainees were in disagreement as to how

to code a complex behavior the video-tape was re-shown, utilizing both

stopped action and slow motion, when it became necessary for the ident-

ification of nuances of complex behavior patterns.

These theoretical positions and related strategies all pertain to

the acquisitions of discriminative observation skills by teacher trainees.

The discriminative observation scale training strategies represent only

those Attentional Processes variables which were manipulated within the

scope of the present study. Two other Attentional Processes identified

by Bandura that were not included in the present study are, 1.) the

characteristics of the model in terms of "...physical and acquired distinctiveness...as well as his power and interpersonal attractiveness...", and 2.) observer characteristics which are derived from previous learning experiences such as, dependency, self-esteem, level of competence, sex of the observer etc., as well as motivational variables and transitory emotional states (1969, P 13).

Retentional Processes

Bandura has identified four variables that affect the ability of an observer to retain in memory the modeled events. The variables are 1.) symbolic coding, 2.) cognitive organization, 3.) symbolic (covert) rehearsal, and 4.) motor (overt) rehearsal (1971). Symbolic coding is the process by which an observer retains in memory the behavioral acts he has observed. This does not infer that every behavioral act observed is retained intact; instead the observer abstracts, "...common features from a variety of modeled responses and construct(s) higher-order codes that have wide generality." (Bandura, 1971, P 21). An assumption of this study was that in using an array of twelve models the teacher trainee observers were presented with a sufficient variety of models to abstract generalizable symbolic representations of effective oral story reading behavior.

Bandura (1971) has proposed that in addition to the symbolic representation of images the process of observational learning entails verbal representation of the modeled event. A variety of representational systems has been studied by Gerst (1971) including vivid imagery, the use of concrete verbal terms, and concise labels. He concludes that observers who utilize concise labels of the modeled event retaines precise details of the event longer than when employing the other two retentional processes. In the present study the eight categories and twenty-one items of the discriminative observation scale provided the observer with a cognitive organization

oral story reading. The observers, during the course of training and testing, utilized these labels up to one-hundred and forty-four times. As a consequence, they reported that they could not read a story to children without reviewing the entire discriminative observation scale in their mind.

Two forms of rehearsal have been identified that have been shown to enhance the retentional process; they are symbolic (covert) rehearsal and motor (overt) rehearsal. Symbolic rehearsal is the process of mentally reviewing the sequence of acts necessary to perform a modeled act while motor rehearsal entails the actual reenactment of the modeled event.

Although discriminative observation training was the only objective of the present study it is obvious by the content of the above report that a number of the trainees did participate in motor rehearsal of the modeled behavior. What level of symbolic rehearsal if any was practiced by the trainees was not a function of this study and its determination was not undertaken in any form.

Motoric Reproduction Processes

"The rate and level of observational learning will be partially governed, at the motoric level, by the availability of essential component responses." (Bandura, 1971, P 22). Within oral story reading it can readily be assumed that each teacher trainee possessed within his/her behavioral repertoire all of the necessary component skills. It was therefore necessary for each trainee to learn only the manner in which the behaviors were combined in order to become an effective oral story reader. From the standpoint of learning to be a discriminative observer motoric reproduction capability may only aid the observer to be more discerning in his/her observations.

The remaining components of motoric reproduction processes include such variables as, the possession of the physical capabilities to perform the act, and the accuracy of feedback to the observational learner regarding the fidelity of his/her performance as compared with the model or generalized model.

Reinforcement and Motivational Processes

Within this domain three variables have been identified that are necessary components of observational learning; they are, external reinforcement, vicarious reinforcement, and self-reinforcement. Bandura (1971) has demonstrated that, "...the introduction of positive incentives promptly translates observational learning into action..." (P 22). External reinforcement has been shown also to effect selective attention of modeled events.

Vicarious reinforcement is the process by which an observer vicariously experiences the reinforcement the model is receiving while the process of self-reinforcement involves internalized praise for meeting aspiration levels. During the process of discriminative observation training it was reasonably certain that forms of vicarious reinforcement were occuring as the observer perceived the model being reinforced through various forms of interactions with children. It may further be assumed that the observer's perceptions of modeled effective and ineffective interaction with children during the oral story reading session governed the forms of oral story reading behavior that were being retained by the observer. A second concern was that the experimenter became part of the external reinforcement process during discriminative observation training and therefore affected the components or oral story reading behavior to which the trainees attended.

In discriminative observation training the role of self-reinforcement plays a minimal role; although when the trainee proceeds to the next phase of
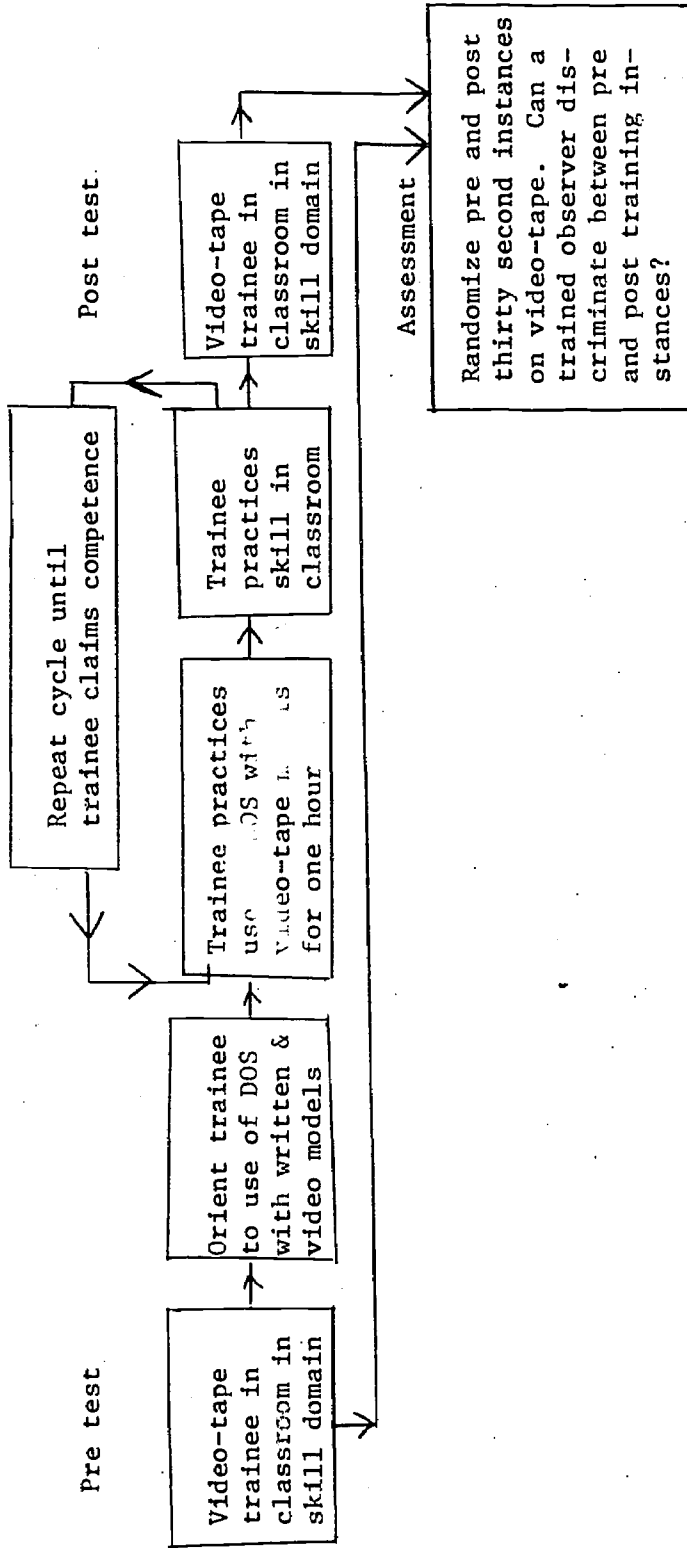
training when he/she has the opportunity to perform the modeled act,
self-reinforcement does play a prominent role.

Relevance of this study to a teacher training model

The discriminative observation scale has been designed as a component
of a teacher training model. The proposed teacher training model is repre-
sented by a flow chart in Figure 1. Prior to discriminative observa-
tion training the student teacher is video-taped demonstrating her
skill level within the defined domain of teaching skill. The student
teacher is then introduced to the categories and items of the discrim-
inative observation scale designed for that teaching skill by means of
written and video modeled instances of the component skills. The follow-
ing sessions represent a cycle of training in discriminative observation
and practice sessions utilizing the observed skills until the trainee has
gained confidence in his/her performance. At that time the trainee re-
quests that his/her terminal behavior be video-taped. The pre and post
training video-taped instances are then randomized and rated by an inden-
endent observer who has been trained in the use of the discriminative ob-
servation scale to a high level of reliability. If the trainee has suc-
cessfully acquired the component skills the ratings recorded by the trained
observer will clearly discriminate between pre and post-training instances.
Once confidence has been established in the parameters of the system it
would be possible to eliminate the pretest and evaluate only the post train-
ing video-tape.

This teacher training model represents an effort to resolve some of
the issues raised in the literature on teacher education. First, from the
perspective of competency-based teacher education the methodologies of
this study provide a system for precisely specifying the terminal behavior
of a training program through the discriminative observation scale and
through the video-taped instances of the behaviors. The discriminative

Figure 1

Pre test.   Post test.

Video-tape trainee in classroom in skill domain

Orient trainee to use of DOS with written & video models

Trainee practices use ᴐS with video-tape i... .s for one hour

Repeat cycle until trainee claims competence

Trainee practices skill in classroom

Video-tape trainee in classroom in skill domain

Assessment

Randomize pre and post thirty second instances on video-tape. Can a trained observer discriminate between pre and post training instances?

Flow-chart of teacher training model based on observation learning utilizing discriminative observation training.

observation scale provides too, a precise means of assessing the terminal behavior of the trainee. Left unresolved but in proposal format are the specific parameters of the skill training program. It is proposed here (Figure 1) that the microteaching component of self confrontation be replaced with training in discriminative observation utilizing multiple teacher models on the argument that humans are more accustomed to learning by observing other humans then they are through critically observing their own performance through a recording medium such as video-taped (Fuller & Manning, 1974). The teacher training model proposed here provides a systematic means for deriving component behaviors of a teaching skill, a methodology for constructing a discriminative observation scale, a methodology for training naive observers to discriminate among the skills, a methodology for providing practice in the skill (proposed), and a means for assessing terminal competencies in the skill.

A second apparent concern in the literature on teacher training is the interest in the identification of teacher behavior that correlates highly with student achievement. Recent reviews of the literature on systems of observation of teacher behavior (Rosenshine & Furst, 1973) and research on teacher education (Peck & Tucker, 1973) indicate a paucity of identified teacher skills that contribute directly to student achievement. Although the present study does not address itself to this problem directly it does represent an initial effort at systematically identifying what behaviors "experts" feel are associated with effective teacher behavior. It remains for future studies to verify the relevance of these behaviors to student achievement. If many research studies were to follow the methodologies developed in this study and the resulting date collected and analyzed a body of data would be developed focusing on what many "experts" believe to be effective and ineffective teaching skills. The confirmation of the relevance of these skills to student achievement through a systematic research

effort would then have to be undertaken.

A third problem evident in the literature is the need for the ident-
ification of components of a taxonomy of teacher behavior (Smith, 1969;
McDonald, 1973). If the methodology of this study were to become broadly
applied and data collected in a central clearing house, in time most forms
of teacher behavior would be identified and could be categorized into a
taxonomy. The correspondence of one discriminative observation scale with
another could also be verified if the video-tapes associated with each
study were placed in the data bank (Rosenshine & Furst, 1973).

Conclusions

The methodology proposed in this study has been shown to represent a
systematic means for identifying the component behaviors of a teaching
skill and has further shown how these component behaviors can be used for
training a naive subject in discriminative observation through the use of
a discriminative observation scale. The methodology has been based upon
the theoretical framework of observational learning as developed by
Albert Bandura of Stanford University. It may be concluded that each of
the methodological elements identified at the onset of the study contributed
in a successive fashion to the formulation of the methodology.

It has been shown that experts from the field of child development
were able to identify component behaviors of a teaching skill and that al-
though there was not a high degree of agreement among them this proved to
be a contribution to the identification of a larger number of component
behaviors than would have been identified if the level of agreement between
experts had been greater.

It has been shown that the identification of effective and ineffective
instances of oral story reading behavior was a necessary element of the
methodology in order to clearly differentiate between effective and in-
effective modeled component behaviors. This element provided a contribu-

tion to the development of the discriminative observation scale as well as the resulting discriminative observation training given the student teachers.

The preceeding two methodological elements provided the basic data upon which a discriminative observation scale was developed. The resulting scale was shown to have a high level of internal consistency reliability and that acceptable but not high levels of inter-rater reliability could be attained after only three hours of training. The content validity of the scale corresponded well with components of oral story reading behavior identified by others writing about story reading and effective teaching. The level of concurrent validity, that is, the ability of the student teachers to discriminate between effective and ineffective oral story reading behavior, was shown to be equal to the experts' ability to make the same discriminations. It can therefore be concluded that a discriminative observation scale can be validated in terms of internal consistency reliability, inter-rater reliability, content validity, and concurrent validity.

Discriminative observation training is proposed as a key factor in a new form of teacher training based on observational learning theory.

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Pace

pauses between phrases or sentences... [ ]
rhythm or beat used for emphasis....................................... [ ]
tempo

   too fast.....[ ]   appropriate.....[ ]   too slow.....[ ]

Dramatization - Animation

moves hands, feet or body...................................... [ ]
shares personal feeling with children - expresses delight and humor.... [ ]
expressive voice varies in tone or pitch.............................. [ ]

teacher enjoys reading to children....................................... [ ]
reads to self, no apparent communication - book dominant............... [ ]
reads without expression, dull.. [ ]

Book and Illustrations

children can see illustrations; teacher points for selective attention..... [ ]

illustrations shown children without comment.................................... [ ]
illustrations flashed at children or not shown................................... [ ]

Eye Contact

refers to text only occasionally... [ ]

looks at children at least 30% of the time....................................... [ ]
rarely looks at children... [ ]

Behavioral Control

permits reasonable activity level... [ ]
stops inappropriate behavior without disrupting story........................ [ ]

children too noisy, not attending... [ ]
interrupts story to discipline.. [ ]
demands absolute quiet.. [ ]

Initiates Interaction

uses questions to prompt interaction.. [ ]

expands on theme of story.. [ ]
story concept used to expand vocabulary....................................... [ ]

Listening - Responding

responds to child - reinforces child... [ ]

refers to illustration in response to child's inquiry............................. [ ]
ignores child's responses.. [ ]
allows child to digress from story.. [ ]

Story Ending

reviews story... [ ]

abrupt ending - teacher leaves.. [ ]