

What Is Teaching? One Viewpoint

PSYCHOLOGISTS, other researchers, and curriculum workers are in agreement that a most important variable in the classroom is that of the teacher.

The teacher behavior in the classroom that is most pervasive and continuous is, of course, the verbal action. The verbal and the nonverbal behavior of teachers is, according to Mary Aschner, "the language of responsible actions designed to influence the behavior of those under instruction" (1).

Indispensable data then for a description and analysis of teaching are verbatim records of what the teacher said and did and the response made by a child or group, including children's initiatory actions directed toward the teacher.

Data of This Study

The data of this study (2) were secured from 41 elementary teachers—7 men and 34 women. These teachers had classrooms in 19 buildings in 8 school districts.

The representativeness of the group may be judged from the fact they received their training degrees in 22 different states. Their age range was 25 to 50 years; their teaching experience, 5 years to 30 years; with a bimodal distribution at the ninth and fifteenth years. They

were career teachers and judged good by supervisory and consultant staff members.

Three 30-minute records were secured from each of the teachers by two observers working at one time in the classroom with the teacher's cooperation and knowledge of the exact time the observers would arrive to take the record. In general, the records were taken several days apart.

A brief episode from one 30-minute record may provide a more adequate picture of the data with which we worked:

Record #2620, page 2:

T.: Carl, do you remember the day you came to school and said you could play a tune on the piano? It was a tune we all knew and so we sang it with you. You found out you could play the same tune on the tone bells. I wonder if you'd play the same tune for us today.

T.: My! We liked to sing with you. Can we start our music time by your playing again and our singing with you? Why don't you play it on the tone bells?

Carl: I'd like to play it on the piano.

T.: Well, all right, you may play it on the piano if you'd rather. Do you want to play it all through once or shall we start right off together?

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Carl: I'll play it through. (Played on piano "Mary Had a Little Lamb" with one hand.)

T.: That was very nice!

Carl: I think you could sing with me.

T.: All right, we'd be glad to. (Carl played and children sang.) Thank you, Carl.

Carl: You could even do all of it.

T.: You mean we could sing all of the verses?

Carl: I can even do "followed her to school one day . . . etc."

T.: I'm sure you can, Carl. Thank you very much.

What does the teacher do? It is obvious that there is a wide repertoire of behavior open to the teacher.

The teacher *tells* people what to do.

The teacher *sets* goals, the specifics of attention. "Today, we shall do the 25 problems on page 90."

The teacher *gives* directions. "Take your books out and open them to page 90." "Do not write your name."

The teacher *reprimands*. "Take your seat, Johnny."

The teacher *accuses*. "You didn't work very hard."

The teacher *admonishes*. This is, of course, before anything happens. "Don't forget to close the door." "Make sure you look up your words."

The teacher *supports* and *encourages*. "That's nice." "Good." "Fine." "OK." "I knew you could do it."

The teacher *grants* or *denies* requests.

The teacher *clarifies* and *elaborates* on the problem or content under discussion.

The teacher *asks* questions.

The teacher *gives* cues.

There are many ways to categorize or organize the verbal behavior and non-verbal behavior of a teacher. It is the point of view of this investigator that the superior-subordinate relationship in the teacher-learner situation, with its

culturally bestowed power position over the child, makes it impossible for the teacher to act in the classroom without performing a *function* for some child, group, or the entire class as recipients. It is the teacher who holds the power to give aid or withhold aid; to judge and to punish; to gratify or to deny; to accept or to ignore the response of a child.

Actually, children who are not participants in a given episode of interaction with the teacher do respond to his behavior (3, 4).

The presumptuousness of looking at teacher behavior from the standpoint of functions performed for the child is recognized. The 30-minute consecutive record often made it possible to follow actions and reactions through an episode, and many times several episodes. In addition, for a four year period there has been consistent effort through interviews and paper and pencil tests to discover children's views of typical classroom

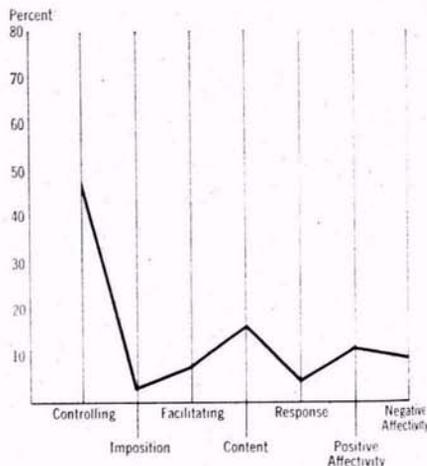


FIGURE 1
MEAN DISTRIBUTION OF TEACHING ACTS FOR
90 MINUTES OBSERVATION FOR 35 TEACHERS

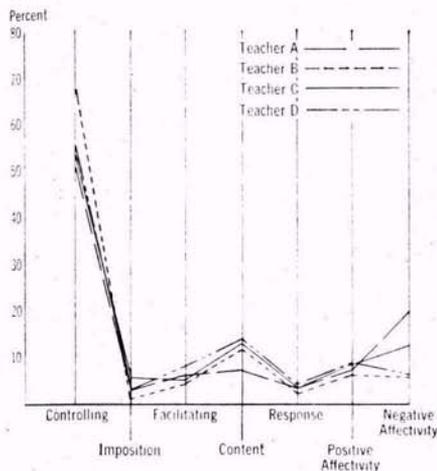


FIGURE 2
DISTRIBUTION PATTERNS OF TEACHING ACTS
FOR 4 TEACHERS HIGH IN CONTROLLING

situations. To date, responses have been secured from some 1400 fifth and sixth graders in three states (5, 6). Interviews have been held with younger children, and with junior high youths.

As expected, children react in an individual manner; however, there is a great range of intensity of reaction. In general, there is a high degree of emotionality, with children responding to elements in the situations that were not intended or foreseen by adults. Another tentative finding was that for any given teacher behavior, from 7 to 20 percent of those to whom it was directed appeared to make no response. They were not involved or they failed to identify with the situation when given the opportunity in interviews or paper and pencil test. The mode for this noninvolvement was 14 percent. Most of the teachers are, of course, aware of the phenomenon of one or more children seeming not to be "with it."

Description of Teaching

Figure 1 presents the mean distribution of teaching acts performed by the teachers during three 30-minute periods of teaching. It is immediately clear that the largest number of teaching acts falls within the category of controlling functions. Figures 2 and 3 present the mean distributions of teaching acts for teachers who are among the highest and those who are among the lowest in the exercise of control in the classroom. Since the present report is devoted largely to an exposition of Controlling Functions, and the Development of Content, a brief definition of the other categories may be useful.

Teacher Imposition: These are acts where the teacher projects himself into the situation. For example: In a few classrooms without routine procedures for supplies, the teacher might say over and over again, "Keep your seat, I'll bring it to you." Another

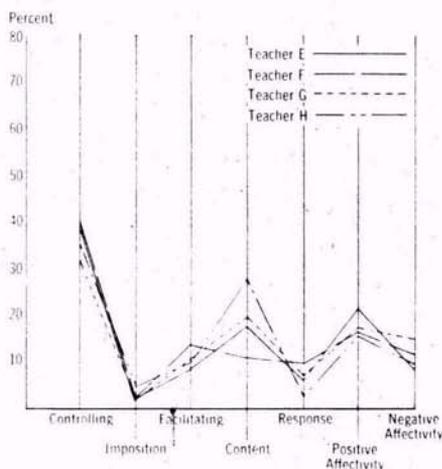


FIGURE 3
DISTRIBUTION PATTERNS OF TEACHING ACTS
FOR 4 TEACHERS LOW IN CONTROLLING

is the expression of evaluation; e.g., on reading a story in a foreign locale, "Their names are certainly queer." Moralizing is another act that falls in this category. As may be noted in the figures, very few teaching acts fall in this category.

Facilitating: These acts may be thought of as management functions that are relatively neutral. All statements that designate time, change of schedule and so forth. Those information seeking acts that are nonevaluative; that is, the child is free to have or not have it, e.g.: "Who brought lunch money?" Rhetorical questions of "Wasn't that fun?" "Did you enjoy it?" "We're finished, aren't we?" Such questions, if they evoke a response, secure a chorus of "yes" or "no" as expected. More often than not the teacher does not wait for an answer.

These management functions differentiate least among teachers and are the most stable with a teacher's series of records.

Personal Response includes meeting the individual requests of children, listening to their personal interests and experiences unrelated to the content under consideration.

These are all positive responses and most often are interactions between a teacher and a single child.

Positive and Negative Functions need little comment since they are the praise and reproof categories. It is realized that the use of positive and negative reinforcement controls behavior; however, by their very nature these teaching acts are, as a group, more affectivity-laden. Therefore, it was deemed desirable to trace them out separately.

Although space does not permit an elaboration of these last three categories, it is hypothesized that they have much to do with the personal liking or not liking of the teacher. There is something in a personal response that conveys the idea, "You count—you are important enough for me to listen to you, and to do something just for you."

Approval and acceptance were expressed most often in a stereotyped manner: "Fine," "Yes," "O.K.," "Good," "All right." Such expressions without a definite referent served the purpose of allaying tension. It was one way of saying, "All is well."

It is hypothesized that the acceptance of reprimands of any degree of intensity depends to a large extent on the teacher's use of *public criteria*. If he makes clear the elements in the situation that call for certain required behavior, children may protest, but they can accept the reprimand as just. Consistency of teacher behavior is another element in fairness.

In general, more acts of positive affectivity were recorded for teachers than of negative affectivity; however, Figure 2, depicting teachers high in control, shows two teachers who were more negative than positive in their teaching. The gross differences in distribution of teaching acts shown in Figures 2 and 3 suggest that the classroom is quite different for the children in attendance.

Controlling Functions

Our study showed that the teaching acts most frequently performed were those of control. By control, reference is not limited to discipline. Since these teachers were considered good teachers, their classes were well organized and generally attentive. By control is meant goal setting, directing the children to the precise thing to which they give attention. Not only is the content named for children, but they are held to a specific answer and processes of working. Such control is firm and pervasive. In many classrooms the control might be considered implacable. Sixty-eight percent of the teachers had one or more of their records with 50 percent or more of their

teaching acts categorized as controlling.

The teacher most often wanted only *one* answer and refused all others. For example, a third grade was reporting on books read, then classifying them according to theme. One little girl made a few remarks about her book and then said, "It's a fantasy." The teacher immediately replied, "You mean imaginative, don't you?" No reward for the use of a divergent word or a suggestion of any relationship or differentiation between the two.

The control of content is exercised by the teacher in the structure of the *what* to give attention to. In a third grade arithmetic class each child had a foot rule. The teacher structured the group by saying, "Today, we are going to study the middle line. What is it called?" Several children answered, "One-third," "a fourth," "a half." One boy was busy measuring some paper on his desk and said, "This is $6\frac{1}{4}$ inches." (Correct) The teacher replied, "Just the middle line today. We just talk about the half."

As long as the question or statement that structures the class or the individual requires but *one* answer, the teacher is in absolute control. Nothing more may properly occur until the next question is asked. Such structure of content appears to evoke memory but little more in mental activity.

When structure is open, more than one answer is possible. Indeed, there may not be an absolutely right answer. For example, "What might happen if the new highway went across the state by one route instead of another?" Closed structure of content resulted in question and answer between teacher and class—it was strictly recitation. Open structure, with more than one answer possible, resulted in participation of several pupils before re-entry of the teacher in the

situation. In other words, more ideas were generated and more pupils became involved in the work.

Control as Regulation of Who

Another phase of controlling behavior is that of regulating who will do what: answer questions, give the report, take lunch money to the office, etc. Such regulation can serve indirectly as punishment or as reward.

"Your work is finished, so you take the books to Mrs. Jones." At least a criterion of choice, "your work is done," is made public. In one episode the children were sharing their stories with one another and the teacher regulated after each story with, "Whom shall I choose, whom shall I ask to go next?" A child would then be named. As teacher choices followed one another, the excitement mounted over the who was to be next and not over the content of the stories.

Other teachers set up some *neutral* manner of regulating. "Write your names on the board when you are ready and we shall take them in order." Another teacher had children put a slip on a spindle. Their stories were then read in order of completion. Some teachers made charts of committees who worked at the various housekeeping and management chores a week at a time.

We found in one sixth grade that the students considered the teacher unfair. He was perplexed, so we tried to find out why this perception. It turned out that Lou and Hazel always got to answer the telephone. They sat next to the office and could answer without moving about unduly. This fact had not been shared with the children; consequently, all they saw was unfairness.

The use of *Public Criteria* for the controlling actions of the teacher is sugges-

tive. It ameliorates the power of the teacher. It gives the authority an impersonal embodiment.

Control Over Many Activities

The controls exercised are expressed in all kinds of activities. It was difficult to get hold of the criteria used by teachers in their expression of control.

A child was making cut-out paper to be placed in a cornucopia poster filled with fruits and vegetables. The teacher said, "Why don't you make them bigger?"

Child: I made them like they are on my grandfather's farm.

T.: Get the picture from my desk and make them big like that.

The teacher judged in cases of altercation or conflict of interest. Incidentally, the conflict of interest was frequently between teacher and child or group. To illustrate, a teacher said:

T.: Do you wish to have help you with your reading?

Child: Madeline.

T.: How about Susan?

Child: Jane.

T.: Let's see. Mary would be a good one. Yes, go sit with Mary.

A junior high school teacher working with the English class putting out a paper said:

T.: Here are some interesting things about the Navy that we could put in the paper. Who wants to write it?

Agnes: I will. I read it and thought the boys might like it.

T.: No, you already have three things in. I'll write it myself.

We hypothesize that consistent use of *Public Criteria* might aid in reducing the conflicts with authority. *Public Criteria* are situationally placed:

T.: There is time for *one* story before noon.

T.: We had trouble with a certain kind of problem yesterday; therefore, we will work on similar problems today.

T.: The children using the saws are on the barn committee and must have them until they finish; therefore, you have to wait.

Public Criteria can also express the conventions and accepted ways of doing. "You have too many erasures on your paper to read it easily," instead of "I won't take a paper that looks like that."

Place of Controlling Functions

This investigator believes that it is the business of the teacher to manage (control, if you prefer) the classroom so that learning for all the children present may proceed. Controlling functions will undoubtedly constitute between 30 and 40 percent of a teacher's behavior; however, the power component may be ameliorated through the use of:

Open-structure that permits some choice or requires more than one answer.

Increased Regulation (*who* is to respond) that is neutral or done with public criteria that expresses the reason for the choice.

Directions that are clear with limits set to reduce repetition of directions and lessen the number of reprimands.

Rules that are group developed, situationally oriented, and enforceable. They should make sense to children.

Development of Content

There is a relationship between the development of content and the nature of the control exercised by structure. When the structure permits no exploration on the part of children it serves to delimit and restrict.

A primary class was reading about a baby elephant. They discussed its age and other things pertaining to the picture of the baby elephant. Finally Ben spoke up and said:

Ben: Look, here is an elephant with a tusk.

T.: Yes, that elephant is on the other page. Read this page and find out what Baby Elephant did when she got to the monkey cage.

It might have been profitable to raise the question why one elephant had tusks and the other did not. It can be hypothesized that the mental processes evoked by the different situations are likewise different.

In another class the teacher and class were looking at a large map of the two hemispheres, when one child asked where the local town was. The teacher replied, "It is about here, but can't be seen on this map. I'll get you one and you can find it and other towns you know."

The teaching acts that develop content elaborate and add to the content or problem under consideration. Response is made to the data placed in the situation by the children. It is believed that children involved in content have something to say. They are encouraged in this by the teacher who respects their efforts. The teacher *stimulates* by offering several suggestions of ideas or of activities that might be done. The choice of doing, however, remains with the child. (It is, of course, proper to give a direction or an assignment, which then would be an act of control.)

Evaluation that keeps content as a referent is in this category. To illustrate, "You have used several kinds of sentence structure in your composition. Very good." The phrase, "That's good," spoken after a child has read the composition

does not tell him whether he was good to have written it at all, or good to have read it, or just good to have gotten through the episode. In terms of compositions, he has received nothing definite that helps him move ahead with his writing. He has received teacher approval. With most of the evaluation made in the form of generalized approval or disapproval, such expressions foster dependence on teacher instead of judgment and interest in the content.

If children and youth are to become interested in subject matter for its own sake, do they not need to link their own experience and make their own personal inquiry in relationship to it? If children are not listened to, how can one know what concepts are developed or what interpretations are made?

An upper grade discussion had been going on concerning early California Indians.

T.: Incidentally, did the California Indians have a pretty easy life?

Arthur: No.

T.: Yes they did, Arthur. Don't you remember? Who can tell me about it?

What logic was Arthur using in his reply? Was it strictly subjective, "I wouldn't have liked it," or had he assessed the situation with some judgment?

When do children use a variety of mental processes such as making comparisons, explaining with some logic, noting relationships, generalizing from a series of data? What kind of questions and teacher responses evoke what mental activity (7)?

Perhaps teachers need to develop what might be called *creative use of interruptions*.

Not long ago a mother reported the disgust of her kindergarten son whose

teacher allegedly told him that he couldn't talk about dinosaurs until third grade. The child had been to the Dinosaur Monument and Museum with his family. While there, the father had bought each boy a book which had been read at home.

One can conjecture all kinds of reasons why the teacher did not wish to get off on dinosaurs. However, the question remains, "In what situations do teachers act in ways that children can see them as people who *aid* in their personal quest for knowing? Since this child's dinosaurs were tied to Vernal, Utah, it might have been very stimulating to listen to his story and also mention the Berea Tar Pits within the city of Los Angeles, as another locale where bones had been found.

It is, of course, possible that the child wanted attention only. Even so, the school can meet such personal needs of children through the use of their explorations and inquiries in the development of content. It is suggested that children's questions and remarks be integrated with the lesson plan of the teacher.

The present study of teaching found that the most prevalent series of teaching acts were in question-answer test or recitation situations. Far too many such situations were spent in working for the specific answer wanted by the teacher.

Of the total group of 41, only 3 teachers had all of their records with 20 or more of their teaching acts in this category of development of content. Seventy-four percent of all records had 20 percent or less of teaching acts falling in this category of exploration, amplification, utilization of children's questions and remarks, evaluation and stimulation. This category has been described as working with the content or problem and called *development of content*.

Some relationships of one category to

another may be of interest. Development of Content and Negative Affectivity correlate $-.42$ significant at the $.001$ level in social studies. This relationship is not unexpected, since teachers who use many acts of Negative Affectivity are not responsive to children's ideas and explorations even in subject matter.

Personal Response is correlated $-.35$ with Controlling and a $-.38$ with Negative Affectivity. Again, this is not unexpected and it holds for all records regardless of kind of work the classes were doing.

The point of view expressed in this report is that teaching may be described in terms of functions the teacher behavior, verbal and nonverbal, performs for the child, group or class to whom it is directed. It was found possible to categorize such teaching acts in seven categories: Controlling, Imposition, Facilitating, Development of Content, Personal Response, Positive Affectivity, and Negative Affectivity.

Control of the class was exercised in varied activities, but particularly in terms of *what* to give attention to and *who* was to do what; also, the how of doing was prescribed and enforced.

Management of the classroom for learning is the teacher's job; therefore, control functions are necessary. It was suggested, however, that the power component the teacher holds may be reduced with changes in verbal behavior.

In dealing with subject matter, little attention was given to children's exploratory remarks or their questions. The questions teachers used for structure were usually closed; that is, asked for one *right* answer. It was suggested that one right answer evoked the use of recall as a mental process instead of stimulating a larger range of mental activity.

It was suggested that *responsiveness* on the part of the teacher to children's remarks, questions, personal experience (data they place in the situation), would lead them to greater involvement in content (subject matter) and stimulate use of higher mental processes.

Teachers demonstrated different patterns in teaching. Different patterns do affect the learning of children (8, 9).

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Editorial—Homework To Be Done

(Continued from page 214)

are being achieved. Large organizing themes or areas for the K-12 program need to be identified as guide lines around which teaching-learning experiences at the various levels of the school can be developed. Each group needs to consider the adequacy and arrangement of the physical facilities and equipment for fostering desirable learning in science.

Local leaders will need to assist in making plans for ascertaining the effectiveness of the science program. Throughout the span of school years, both teachers and students need to know whether the behaviors and attitudes set forth in

the goals and objectives and encouraged in the learning experiences are being achieved.

Science programs in the schools are on the move. As more and more schools face up to the homework that is before them, the more confident we can be that children and youth everywhere will be involved in learning science that is appropriate and significant for life in modern times.

The articles in this issue explore a number of fundamental considerations that have bearing on the development of programs of excellence in science in the schools.

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