

Teaching in the School of the Future

*The teacher's behavior
will be far more responsive
and more effective.*

IT IS perhaps inevitable that from an intensive and thoughtful investigation of "what is" will come a prediction of "what will be," and ultimately a conviction about "what ought to be."

The following convictions about teaching in the schools of the future grew out of an attempt to differentiate reliably the relevant components of the teaching act as it is practiced in the public schools and an attempt to assess the quality of teaching in elementary schools.¹

Convictions about teaching are based upon values held and assumptions about the achievement of these values, which in this case have to do with life in a democracy, the kind of people a democracy requires, and the kinds of experi-

¹ Research Staff, George L. Miller, Director, Marie M. Hughes, Consultant, Gretta P. Romney, Edith B. Stimpson, Naoma T. Rowan, Loyd C. Whitlock, *Progress Report of the Merit Study of the Provo City Schools*, Provo, Utah: The Provo Board of Education, 1958.

Marie M. Hughes and Associates. *A Research Report; Development of a Means for the Assessment of the Quality of Teaching in Elementary Schools*. Salt Lake City: University of Utah Press, 1959.

ences necessary to nurture such a people. These values and assumptions will of course become evident in this presentation as teaching today is contrasted with the envisioned teaching in the future school.

In spite of the current worry about "poor discipline" in the schools, in spite of the recent charges about the excesses of so-called "progressive education" and its effect upon high school achievement and juvenile delinquency, in spite of some good reasons for believing in the importance of pupil planning, pupil purpose, and the crucial importance of helping each pupil in a search for his own meanings, in spite of the rather well accepted importance of pupil involvement in and general commitment to the learning tasks, teaching today seems to be highly directive. Perhaps the most striking characteristic of teaching today is the amount of teacher control present. Says Hughes in her report:

The most frequent and pervasive functions performed by the teachers were in the category of controlling. The teachers directed the children in what they should do and how they should do it; what they should answer and how they should answer. The

George L. Miller is principal-director, William M. Stewart Laboratory School, University of Utah Campus, Salt Lake City.

extent to which children can explore ideas, reach out in their experience and on their own, is very limited under controls of the kind presently exercised. In approximately two-thirds of the 129 records, the control functions performed by the teachers exceeded forty per cent of all teaching acts.²

More Responsive Teaching

The major prediction about teaching in the schools of the future is that it will be far less directive and controlling, but will be much more responsive. This means that teaching will pay very careful attention to the data coming from the child or group, both verbal and non-verbal. Out of this pupil behavior will come highly skilled professional teacher response. This responsive teacher behavior (reaction) will help the learner idiomatically to take *his* next step, both in building *his* intellect and in furthering *his* socialization. Under this kind of teaching in the future more "content" will be learned, the content will be learned with greater relatedness, pupils will be more creative, and they will be better behaved!

Some of the elements of responsive teaching will be contrasted with some of the elements of teaching which represent more imposition.

Intellectual Development. In the future when the teacher tells pupils to what they may legitimately give attention (*structuring*),³ this *structuring* will be more often *open* than *closed*.

This means that the *structuring* will more often be done in such a way that

² Hughes, *op. cit.*, p. 289-90.

³ From here on italicized words, such as *structure*, *clarify*, and the like which describe certain teaching behaviors are from the Provo Code for the Analysis of Teaching, or from the University of Utah Revision of the Provo Code for the Analysis of Teaching, found in the two works cited previously.

the learner may select from a variety of possibilities or alternatives rather than merely responding more or less as an automaton. When it is important to do so, the teacher will use *structure orient* to "build a bridge" from that which has gone before (been done or known) to the new expected task or area of attention. Occasionally the *structure* will be *turned back* to the learner or group; that is, the responsibility for determining an area of attention or task may be shifted from the teacher to the learner or group.

In the all too typical teaching of today the teacher is in "complete control"—minutely directing the pupils in almost every move. This piecemeal direction is usually seen as unrelated by the pupil. In contrast to this, the more effective *structuring* invites the learner's involvement and judgment as well as his conformity and the exercise of his memory.

More professional teaching is illustrated in the first three of the following examples taken from records of teaching:

(Third Grade)

Teacher: What is the danger of too much water on soil that has no covering of grass or trees?

Child A: There would be floods because nothing can stop the water. The soil would all be washed away just leaving rocks.

Child B: Rocks are rolled away in floods, too.

Teacher: How can farmers prevent flooding of their land?

(Sixth Grade)

Teacher: Right now I'd like to explain what we will do this morning.

Mr. D—(student teacher) had planned to work with you on writing for a little bit this morning, but our news items took a bit longer than we expected them to, so we will do our writing another time, and get into social studies.

We have studied about different parts of the country and about some of the states that were in the different sections, but we haven't done much with the capitals of the states. Now we want to learn about the capital cities. So we will take a look at all of the states and all of the capitals. Will all of you look at this wall map of the United States . . .

(Junior High School)

Teacher: John has just summarized the first part of our discussion. Which aspect should we next consider?

In contrast to the preceding illustrations are the following:

(Third Grade)

Child A: Sometimes it is all colors when we have a pretty sunset.

Child B: Can we make it any color we want?

Teacher: I think it's a good idea to make your picture different and use your own ideas. There are some things we need to remember when we use water colors.

Child C: Not to mix the colors.

Teacher: Which do we want to show the most, the bird or the background?

(Sr. High School)

Teacher: Will each of you take about one-half sheet of paper. I think I am going to have to start marking all the people absent who don't have paper. You know you should have paper and pencil in class.

Now first thing I want you to do is conjugate the verb "dive." Conjugate it in the indicative mood, present tense, active voice, first and second and third person, singular and plural.

(Sixth Grade)

Teacher: Let us read the three facts we have learned today. (All read together.)

When, within an established *structure*, a topic or idea is being explored, the responsive teacher of the future will make far greater use of *clarifying* than is found in present teaching, or the teacher will act as a *resource* when the

learner needs help. This means that the teacher will react to the learner's statement or question in a way that will build on, amplify or clarify in terms of the learner's point of view or frame of reference rather than taking things out of the learner's hands by *intervening* with new *structure* or *informing*.⁴

If each person achieves meaning by connecting the new (to him) to the old (to him), if meaning for a learner grows more effectively out of his own unique seeking, out of his own involvement, then responsive teaching which functions as *clarifying* will be far more efficient than the imposition upon the learner of the teacher's own thinking.

The first two of the following examples illustrate responsive teaching. The first is *clarifying*; the second illustrates the teacher acting as a *resource*. The third and fourth examples serve to illustrate the imposition of the teacher through the use of *intervening structure* and *informing*.

(Fourth Grade)

Teacher: A large part of our country is suffering from lack of water due to little rainfall. Why should it matter to us if it rains or not?

Child A: Crops won't grow.

Child B: We need food to eat.

Teacher: What has rain to do with food we eat?

(Sixth grade child to Librarian)

Child: What would insects be?

Teacher: Well, technically the field of biology has to do with all living things. We put insects in 595 which is part of zoology. That is probably a new word for you but it means the science of living animal life.

⁴ Space does not permit a discussion of all the teaching behaviors which have been differentiated, but the words themselves roughly suggest their definitions.

(Fourth Grade)

Teacher: What is happening in the picture?

Child A: The man is sweeping snow.

Child B: He's making a pile of snow.

Child C: It has snowed deep.

Teacher: Where is he sweeping the snow?

(Sixth Grade)

Teacher: These are the foods C— is talking about (points to special foods on mobile).

(C— continues to read about carbohydrates.)

Teacher: Now you can see from your mobile that you don't need as many of these to balance your meals. You need more of the green and yellow fruits and vegetables—those containing vitamins A and C. Now it is said that these foods were burned to make heat for your body. What is required to make coal burn?

Responsive teaching of the future will help the learner to move forward into the new, more complex, and the more difficult, through teaching behavior which is primarily *encouraging* and *stimulating*, rather than so much through exhortation, admonition, bribery, threat or punishment. *Encouraging* behavior in this sense is that behavior which predicts success for the learner and/or assures him that the teacher is "standing by" to help. *Stimulating* behavior in this sense offers the learner alternatives in responding. The learner is left free to make an appropriate choice. Following are examples of *encouraging* and *stimulating*.

(Fifth Grade)

Child A: (Giggles) You'd look silly, Mrs. P—.

Teacher: Of course I would. And that's exactly why we want you to practice so you won't look silly, and your Mother and Dad can be proud of you.

Child A: Sure, that's right. And I can

come in and watch the others practice, can't I?

Teacher: You bet you can. And you'll be surprised at how fast these extra practices go. I think you feel much better about the practices now don't you, A—?

(Junior High School)

Child: How shall I make my report? I would like it to be different.

Teacher: Well there are several possibilities. You know we have the new overhead projector. You could use it as Mr. J— did in our assembly, to give an illustrated lecture, or it could be used in some other ways.

You could work with a friend and write a dialogue. It could be a planned question and answer sort of thing. Also, you might get several friends to work with you and have a round table discussion.

Do you think you could use any of these ideas?

If in some real sense each must do his own learning and make his own commitment, then teaching behavior which is more *stimulating*, and teaching behavior which is more *encouraging* will be more efficient for learning than teaching which imposes through *admonishing*, *moralizing* and *reprimanding*.

In building intellectual power, feedback on one's performance is, of course, very important. Skillful teaching will make for greater use of *evaluating positively* or *negatively* with *discrimination* than is found to be present in today's typical teaching. Far too often the evaluation which is found today is so general that it is of little help to the learner in knowing how to correct his performance or what to continue doing in order to maintain it. However, if the evaluation is given with *discrimination*, the learner can know rather specifically what he needs to do to correct his performance or what he needs to continue in order to sustain his high level. The first illustration shows *evaluation* with

discrimination; the other illustration is typically general.

(Third Grade)

Child: Look at my writing. Is it better?

Teacher: I believe it is better. Look, the tall letters are all about the same height, the small letters are about the same height, but if you can also make each letter touch the line your writing will look even better.

(Third Grade)

Child: Here is my story, Teacher.

Teacher: Fine, but the writing is not good enough. Please do it more carefully next time.

Socialization or Enculturation

In any society the school is expected to help the young value the "right" things and behave in the "proper" ways. Especially in the United States this continues to be an important function of the school. Teaching in the future will more effectively facilitate socialization in several important ways.

Teachers' use of *public criteria* and *universal standard setting* when it is necessary for learners to conform will help the pupils to identify with the general culture rather than to be tied to or repelled by the particular person who happens to be his teacher. When the teacher uses *public criteria*, he is making explicit the reason for a certain request or direction, or for granting or withholding permission. This usually lifts the control beyond the personal desire or whim of the teacher and locates it within the framework of necessary social control. The same may be said of *standard set*, *universal* which when used serves to indicate the standard which the learner is expected to meet, but within the framework of general social expectations rather than the peculiar personal desires of a teacher.

The social controls need to be seen as man's attempt to make life more rational, that is, under his control. Man does not care to live as though he were in, and of, the jungle. Social controls make life more predictable. If you cross the street with the green light, chances are you will get to the other side. Of course, many school rules are peculiar to the situation, but those factors that make the rule a necessity for living together with decency and consideration are the source of the rule and not an authority figure *per se*.

The use of *Public Criteria* and *Universals* assists the child in attaining cognitive clarity about rules and other elements of social control. Under conditions of unclear or lack of cognition, he is less objective in regard to external reality and reacts more strongly with his feelings. As his resentments develop toward persons whom he views as the source of his discomfort, it becomes more difficult for him to respond appropriately to authority.⁵

Other teaching functions which facilitate socialization and which will be performed more by teachers of the future are *regulate routine* and *regulate neutral*. In these acts the teachers will be directing the activities of pupils as becomes necessary, but the direction will be more often either according to previously established and understood procedures which have become routinized, or the regulation of pupils will be determined by some "accidental" order or arrangement such as a "sign-up chart."

Ameliorating the Teacher's Status Power

It is safe to predict that the teacher will always be expected to exercise status power over the pupils. It is quite likely that the teacher will and should continue to stand as an authority for society, as a parent surrogate. The school must have

⁵ Hughes, *op. cit.*, p. 141-42.

control, but if learning in a democracy is to proceed most efficiently then *this status power of the teacher must be operationally ameliorated for much of the school time*. This is likely a safe assertion because a democracy would seem to need as citizens those who have healthy self concepts, healthy feelings about others, personal involvements in and commitment to that which needs to be done, personal involvement with things and places, as well as individual competence and initiative. It would also seem safe to assume that these goals cannot be as fully met under rigid authoritarian direction as under conditions where the learner has many opportunities for making choices and for becoming aware of the results of the choices which he has made.

In addition to many of the teaching functions already mentioned, a reduction in the amount of *stereotyped support*, of *general support*, of *moralizing*, of *accusing*, of *admonishing*, and of *reprimanding*, with a corresponding rise in the use of clear *structure*, *standard set*,

and evaluating *positively* or *negatively* with *discrimination*, would ameliorate the status power of the teacher. The teacher in the schools of the future will know this and will perform accordingly.

In summary, the schools of the future will still have teachers. Television will be used to give information under proper conditions, but teaching will be seen as interaction—the interaction between teachers and learners.⁶ Teachers will be working (interacting) directly with pupils and the size of the groups will be determined by the needs for successful interaction. The teachers will be carefully enough trained that the countless educational decisions which are made as teachers interact with learners will be conscious professional decisions. Yes, teaching will be recognized as interaction, but the teacher's behavior in this interaction will be far more responsive and thus far more effective than is the typical teaching of today.

⁶ Marie M. Hughes and Associates. "Teaching Is Interaction." *The Elementary School Journal*. Chicago, Illinois: The University of Chicago Press, May 1958. p. 457-64.

Adolescents: 1985

(Continued from page 483)

arose in the late fifties and early sixties clamoring for a copying of a European educational system. Some wanted to use tests and allocate the pupil to a specialized curriculum as early as ten years of age and give him the required courses the experts deemed suitable for him. They proposed restricting the curriculum of the secondary school to the intellectual pursuit of information in certain

areas of knowledge. Values and social development were to be left to the home and church.

However, increasing juvenile delinquency, more homes with both parents working, increasing mental and emotional disturbance could not be ignored. The secondary school program had to be made broad enough to deal with values, human relations, fundamental skills in communication, the cultural heritage, as well as work in a student's special field.

Copyright © 1960 by the Association for Supervision and Curriculum Development. All rights reserved.