Teaching Tactics and Teaching Strategy

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THE TIMES are saturated with the idea that we need to bring unity out of diversity. The social scientists attempt this through the construction of successively grander models. The politicians call for national unity, and a sense of direction. The romantics among us seek unity through a return to the primal elements of life. In education, our response is characteristic: to give the urge a name, and to begin our efforts by rallying around the new name.

The new name is "teaching strategies." We borrow the name from games theory. In chess, a strategy consists of a general plan for achieving the objective of checkmating one's opponent. The difficulty with the analogy is that in teaching we are not engaging an adversary. We are trying to encourage growth in a number of domains which taken together add up to the human condition. I have concluded that "teaching strategy" has only limited usefulness for us, and that what we chiefly have to concern ourselves with is "teaching tactics."

There need be only one teaching strategy. It is to induce a situation in which the conditions for learning are met. What are

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the conditions for learning? Miller and Dollard put them in convenient form nearly two generations ago:

1. Drive or motive—the student has to *want* something.

2. Cue or stimulus—the student has to *notice* something.

3. Response—the student has to *do* something.

4. Reward—the student has to *get* something.[1]

[1] For a more recent summary of the Miller-Dollard formulation, see: Celia S. Lavatelli, Walter J. Moore, and Theodore Kaltsounis. *Elementary School Curriculum.* New York: Holt, Rinehart & Winston, Inc., 1972.

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If a particular tactic fulfills all of these requirements, it is within the framework of an acceptable strategy. If it does not, or if it emphasizes one at the expense of the others, its compliance with the strategic requirements is thrown into question.

Our use of the term "teaching strategies" in the plural, it develops, is in error. Once more, we have inflated our language. There is only one teaching strategy; there are many teaching tactics. Let us examine some of them.

1. The Teacher-Centered Classroom

Normal schools had become widespread by the turn of this century, and teachers were being trained in a tactic that we now call the teacher-centered classroom. The lesson plans they prepared bore a remarkably close resemblance to plans for programmed instruction, though without the intrinsic reward. From the point of view of our strategic model, the difficulty with the teacher-centered classroom was that the student's drive—what he or she wanted—was not examined or taken into account deliberately. It was left to take care of itself.

It was not surprising, therefore, that a very large number of young children took as their drive pleasing the teacher. The difference between wanting to learn subject matter and wanting to please the teacher was not examined in those days, nor does it enter the minds of the many teachers who continue to use this tactic.

The strength of the tactic is in its presentational character. In terms of the model, the "cue" is attended to with care. If a student failed to learn something, it wasn't because it hadn't been said within his or her hearing. The response component of the model was confined to a very narrow band: The students answered questions that came from the teacher. They "recited." The reward was, generally speaking, irrelevant to learning, but rather, a simple recognition that in the teacher's opinion the learning had taken place.

The principal failure of teacher-centered classrooms as a tactic, therefore, would appear to be their failure to deal with the student's own purposes, either as expressed before learning is undertaken, or as met as a consequence of learning activity.

Various other tactics seem to me to be derivatives of the teacher-centered classroom: programmed instruction, computer-assisted instruction, individually prescribed instruction, and the like. The teacher, or a surrogate for the teacher, is the central figure in each of these approaches. Students do not take part in planning their learning, nor are their motives considered. These derivatives differ from the teacher-centered classroom of 1900 principally in that the students progress at individual rates. The possibility that they need to proceed by different paths, or different logics, is acknowledged only slightly, if at all. The common strength is that content is organized in such a way as to make it possible to master it in short steps, to bring these bits of mastery together into successively larger groupings, until the students are finally able to respond to complex questions and to make complex statements.[2]

2. Mastery Learning

As a tactic, mastery learning has appeared only during recent years, having been put forward by Benjamin Bloom.[3] As a tactic, mastery learning is best understood as a special case of criterion referenced instruction, in which the objective of instruction is made apparent to the student at the outset, and kept before the student until he or she has

[2] It is perhaps unfair to ask of the designers of programmed instruction and its variants that they take into account the learning paths of students. Perhaps this demands more of the art than can be delivered. Teachers take such learning paths into account when they say to students, "Think of it this way. It is as if. . . ." Such knowledge as there is in this field has clustered around examination of logical procedures in mathematics, and around heuristics. In this latter connection, see an interesting article: "Judgment Under Uncertainty: Heuristics and Biases." Amos Tversky and Daniel Kahneman. *Science* 185 (4157): 1124-31; December 27, 1974.

[3] See: Benjamin S. Bloom, J. Thomas Hastings, and George F. Madaus. *The Handbook of Formative and Summative Evaluation*. New York: McGraw-Hill Book Company, 1971.

achieved it. While in the process of achieving it, the student is given frequent feedback about the proportion of the distance toward the goal that he or she has covered ("a percentage of mastery").

Bloom points out, following John Carroll, that the normal curve of distribution of achievement is a product of holding time constant. If time were allowed to vary according to the needs of the learners—if every learner had the amount of time he or she

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needed—then every learner theoretically would achieve everything and the normal curve would become skewed toward success. But the variation in the amount of time needed by learners is as between 1 and 7: the fastest students are 7 times as fast as the slowest students. If we allow for such variation as these ratios suggest, the conventional organization of the classroom has to be abandoned in favor of individual work programs.

From the point of view of our strategic model, mastery learning places heavy emphasis on drawing the student's attention to the ultimate goal, and soliciting his motivation toward achieving it by offering him the promise that he can do it. He has constant knowledge of results (formative evaluation) through frequent checks on the progress he has made, and when he has mastered a given objective, he knows it. His motive is more nearly to achieve the objective than it is to please the teacher. As a tactic, mastery learning thus gets around some of the objections to programmed instruction in the teacher-centered classroom.

The principal limitation to mastery learning has been that the goal is hard to state clearly enough so that quantitative estimates can be made about progress toward the goal, once one leaves the field of mathematics. Most of the applications so far, therefore, have been in mathematics. It remains to be seen whether the tactic is equally applicable in other domains.

3. *The Project-Centered Approach*

Old as it is, the project-centered approach offers a valid alternative to those mentioned previously in that it focuses on the individual student, his talents, his interests, his responses, and his rewards. As such, the old project curriculum of Kilpatrick and his followers seems to come closest to meeting the requirements of the strategic model adopted here. In favor of reviving our interest in this whole set of ideas is the fact that there is a solid body of literature and experience extending over a 30 or 40 year period with this approach. The excesses and mistakes that are made in its name have long since been exposed and can be avoided.

One need not have the whole class centering on one project—there could be as many projects as there are children. Indeed, that is what happens in the ordinary teaching of art in the elementary school now. Within the framework of the project-centered approach, or tactic, can be brought to bear the presentational skills associated with programmed instruction and individually prescribed instruction. This approach lends itself naturally to the newly rediscovered open classroom. All in all, the project-centered tactic appears to be the most satisfactory of those discussed here.

In summary, I have argued that there is only one grand strategy available for teaching, and that it is satisfactorily set forth in the Miller-Dollard formulation of the conditions for learning. I have tested against this strategy three classes of teaching tactics, and have found that the old project-centered curriculum meets the requirements of the Miller-Dollard model the most satisfactorily. I also believe that the term "teaching strategies" is inflated, and should be dropped. □