

Mastery Learning in a Smaller School System

Joan D. Abrams

Administrators in Red Bank, New Jersey, are confident that mastery learning is the key to their students' higher achievement.

A year ago last May, the Red Bank Borough Board of Education, on the recommendation of its superintendent, decided to move toward mastery learning. The decision was made because mastery learning appeared to be an exciting and viable approach to improving learning within the schools.

I like to say that mastery learning is an idea whose time has come. The present push toward basic skills and towards minimum competency has made mastery learning into a Cinderella that may very well come out of the ashes of theory and limited pilot studies into the palatial glow of everyday practice.

Red Bank is hardly the site of princely estates. It is a charming town with many of the problems of an urban environment. Many of the children have difficulty relating to the schools. Achievement is not commensurate with the generous resources given us by the community. These include a variety of materials, first-class buildings, and an extremely favorable teacher-pupil ratio, along with a large number of teacher aides.

About 60 percent of the children are minority youngsters. Despite excellent financial support by the community, a great number of our children are a year or two below grade level in basic skill areas. In the upper grades, some are even further behind.

Our challenge was to find a teaching strategy that would work with these pupils, a teaching strategy so powerful that it would overcome some of the preconceptions of the teachers who work with the children and who demand less of them than they are capable of producing. Mastery learning appeared to be the answer.

Once the board made its commitment to mastery learning, we talked about the program with community groups and made presentations at board meetings and teacher meetings in an attempt to enlist support. Our chief objective was to have every teacher in the school system participate. We planned inservice workshops for teachers between September and January, and targeted February as the entry point when teachers would be expected to begin using the program. Each teacher was expected to have a unit to begin teaching for mastery. While that unit was in operation, the teacher would prepare another unit, and then another. We also decided that each teacher would have at least one group engage in mastery learning.

Mastery learning is a simple and self-evident idea; why isn't it used more extensively? In my opinion, although there has been a great deal written about it on the conceptual level, very little has been written to help the practitioner who wants to use it.

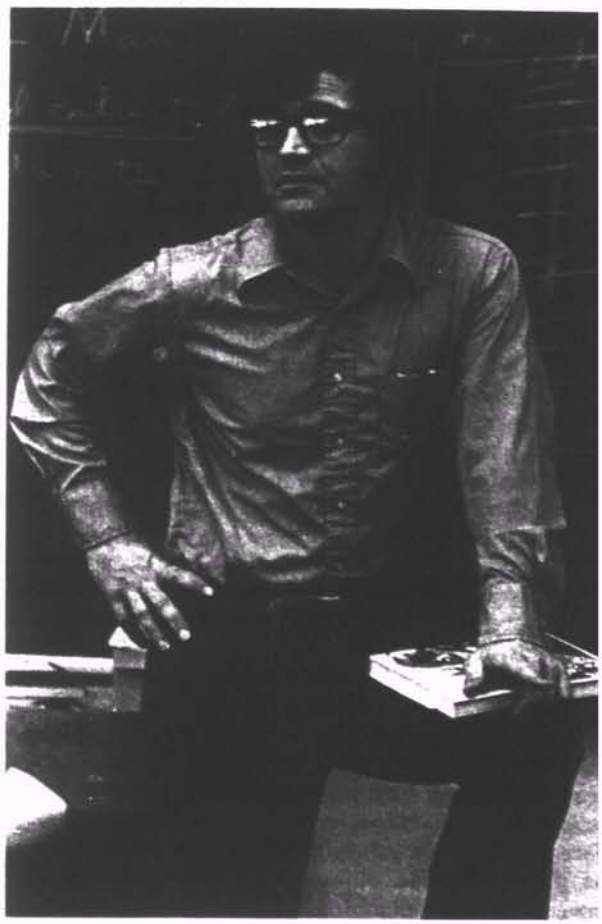
Put in simplest terms, mastery learning involves the identification of topics within a curriculum area and the development of objectives that test learners' mastery of each of those topics. The pupil delivery system includes a mastery test, a series of lessons that teach the material assessed in the mastery test, and a series of diagnostic tests to be adminstered at frequent intervals while instruction is going on. The diagnostic tests are crucial to the process because they provide teachers with the feedback mechanism required for them to determine if their instruction is really hitting its target. As a result of the formative tests, children are moved to corrective work if they have not mastered the subject material or to extension activities if they have. Thus, while mastery learning is a group approach to teaching, it also provides through its diagnostic-corrective-extension activities a high degree of individualization. Because it is based upon group instruction, it is easier for the average teacher to handle than some of the more sophisticated individualized classroom management plans.

The most ardent adherents of mastery learning claim that simply using diagnostic testing and subsequent corrective and extension activities can raise the achievement of children substantially. We determined, however, that we would use the mastery learning inservice to improve the teaching act itself. In other words, if teachers presented the material in optimum fashion, fewer correctives would be needed, and mastery would be achieved faster.

We also recognized that, as in most other systems, a disproportionate amount of classroom instruction was based upon the level of simple recall. We determined that we would acquaint teachers with Bloom's taxonomy and help them develop pupil activities that would extend the children's critical thinking skills. We refer to the activities of children who achieve mastery as extension activities rather than enrichment activities. These activities are an attempt to extend instruction up the ladder of the taxonomy into areas of application, analysis, synthesis, and evaluation.

All Red Bank teachers were given a minimum of 15 hours of inservice preparation. Administrators and supervisors who would be expected to guide them were given about twice as much preparation. Work-

Photo: Joe Di Dio, NEA.



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shops were televised so that those who missed sessions or who wanted further clarification could arrange for a videotape showing of the presentations.

Differences From Traditional Teaching

"But that's just good teaching," I heard many people say when mastery learning was described to them. Who could argue with a plan that identified what the learner was to accomplish, presented the material, checked to be sure he/she had learned it, and offered more instruction if he/she hadn't? Nevertheless, there are some significant differences between mastery learning and the type of instruction that usually takes place in a classroom.

A crucial difference is the distribution of the teacher preparation effort. While all teachers should plan their instruction, they tend to do so on a weekly basis. In other words, they plan as they move along through the teaching process, dividing their instruction time into rather equal bites of effort. Mastery learning requires that most planning be done before the instruction begins. The mastery tests, diagnostic tests, correctives, and extension activities must all be in place along with a carefully laid out teaching strategy for presenting the objectives. While instruction is proceeding, little planning remains to be done.

Another crucial difference is that mastery learning depends less on who the particular children are in the classroom and more upon the material that they are expected to complete. While some would see this as a negative and a dehumanizing factor, Bloom contends that under mastery learning conditions, 80 percent to 90 percent of the children can achieve. This is a very humane goal. In other words, it is the instruction, not the child, that must be modified. This is done through the series of correctives that follow each diagnostic test.

Another significant aspect of mastery learning is its emphasis upon objectives. Mastery learning requires precise identification and skillful honing in on what the student is expected to learn. Thus, it lends itself readily to minimum competency tests and to the improvement of achievement test scores.

Because of the amount of planning necessary to move an instruction program into the mastery learning mode, it is essential to have multi-year plans. Compressing that schedule would require releasing teachers from class for long periods for the necessary planning. However, mastery learning units, once developed, can be used for several years with only slight modification. They can also be pooled among a group of teachers in a subject area or on a grade level.

Obstacles to Mastery Learning

Mastery learning has its obstacles. I have already mentioned the amount of time necessary for inservice training and the reordering of priorities when scheduling for teacher planning time. In addition, we found that our teachers viewed mastery learning as an innovation and were rather reluctant to take it on because they had seen too many innovations come and go. However, once into it, many of them said it wasn't really that different. It took bits and pieces of what they had been doing and put them together in a more logical and sequenced whole.

Mastery learning requires a reordering of procedures. The formative (diagnostic) tests are something new for teachers. So is the idea of using extension activities rather than giving the child more practice on the same level. A change in teacher attitude



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is also necessary. If you accept mastery learning, you believe that all children can learn. This makes for greater teacher responsibility.

When teachers use mastery learning, supervisors must look at plans from a different perspective. They are not necessarily in a plan book, neatly laid out from day to day, and from hour to hour. Plans for mastery learning are the learning packet, which includes a statement of subject domain, the identification of objectives under that domain, mastery tests, formative tests, correctives, extension activities, and a teaching plan. Thus, the supervisor must be more sophisticated and flexible in order to follow what the teacher is planning to do.

Once objectives are identified, the teacher does not necessarily follow a textbook, page by page. Priorities must be established, and the instruction must clearly identify what items among the welter of topics in a book are to be emphasized. It takes time to put all of this in place, particularly if the teacher has more than one preparation. Bloom's taxonomy is a rather sophisticated construct. We know that most of our children learn how to decode messages and that most of them are able to do the four basic processes in mathematics. They fall down around the fourth-grade level. Their powers of critical thinking and analysis have to be called into play. We think that even the higher achievers are not being challenged as much as they should be. Unfortunately, the teacher who was taught primarily on the recall level and who has been habituated to instructing children on that level finds it difficult to obtain or to prepare the materials that mastery learning requires to challenge the child's critical thinking abilities.

Another hurdle in the program is the hidden agenda. Teachers who think children can't learn and begin to instruct them according to mastery learning must face the fact that the child may not have learned because he/she wasn't taught well. This involves a reversal of expectation. The teacher who thought that children couldn't learn, having presented the lesson and having given the formative tests, must expect that the children will do well on that test. Otherwise, why give it? Thus, the responsibility for learning moves on to the teacher as much as on to the child. The dilemma is resolved when the children do better on the second formative test, because then the teacher feels like a pretty good instructor.

Plusses

A surprising number of teachers have told of instances when they taught a lesson extremely well and thought all the children would pass but they didn't. Teachers who had previously thought children couldn't learn began to expect good results. When they didn't get them, they faced the possibility of flaws in their own presentation of the materials.

Mastery learning makes this experience relatively painless because the correctives are already there to use. This reduces the teacher's feeling of being threatened. Reteaching the work, the teacher uses different approaches, and the children do much better on the second formative tests. Both pupil and instructor are pleased because they are achieving their goals.

"Put in simplest terms, mastery learning involves the identification of topics within a curriculum area and the development of objectives that test learners' mastery of each of those topics."

Many teachers told me that without mastery learning they would have assumed the children were doing well, and they would have gone on to another subject without giving youngsters the reinforcement that they required. Other teachers said that mastery learning helped them organize their materials. A number of people have remarked that in the mastery learning classes, children are much quieter, more engaged, and interested in "getting it." Discipline problems are therefore diminished.

We also found that even those children who do not achieve mastery are doing significantly better than they did under nonmastery learning conditions. Children who before had been getting 30 percent or 40 percent of their work right were getting 70 percent or 80 percent right. The teachers are even using new jargon. Instead of talking about passing or failing, they talk about mastering. Everybody is doing substantially better.

Motivation is much greater. The teachers tell me that children really like mastery learning. Their self-image is improving, and their motivation is gaining strength accordingly.

Children have also expressed more positive attitudes toward testing. The reason, of course, is that the tests measure what has been taught, and children are let in on the secret of what is expected of them.

We have not been in the program long enough to have hard data concerning improvements in our basic skills areas. However, our administrators are so confident of the power inherent in mastery learning that they are willing to peg part of next year's salary increase to improved achievement. So am I.

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