

You Can Turn Around the Failing Student

Slow-learning students can be high achievers. Here's how one teacher brought it about.

BY KIM MARSHALL

When I finally got around to reading about mastery learning in Benjamin Bloom's book *Human Characteristics and School Learning* (McGraw-Hill), I was intrigued. Under mastery learning, almost *all* students would master every important learning skill and they would be passed along (from lesson to lesson or from grade to grade) only when the skills were mastered. Mastery learning will work, Bloom insists; kids *don't* learn all skills because we don't demand that they do; we settle for too little; we expect that students won't master some skills.

As I said, the idea is intriguing—and attractive. But I read the book with two questions in mind:

Are some slow kids simply unable to master some basic skills?

Under mastery learning, will faster learners get bored and be held back?

After reading *Human Characteristics and School Learning*, I sided with Bloom: mastery learning *will* work. What's more, I realized that I'd been using elements of mastery learning in my own classroom without even knowing it. Since reading the book, I've decided to make some changes in my system.

Bloom begins with the observation that when kids enter the classroom without the prerequisite skills and a positive attitude toward learning, they tend to do poorly. Only the most superb teacher can teach long division to a girl who sees herself as being dumb and who, in fact, doesn't know how to multiply and subtract. In other words, what happens inside most classrooms is less important than—or at least dependent upon—what the student walks in with.

Bloom goes on to show what we all

know: the process snowballs. The failure to master multiplication in the second grade leads to a failure to master division in the fourth grade, long division in the sixth grade, and then leads to discipline problems in the seventh and to dropping out of school in the eighth. Each new skill is to some degree dependent upon a previous skill and is a prerequisite of the next learning task.

According to Bloom, every time a student is passed along without having mastered an important skill (and many are, Bloom has found), the educational system has made a disastrous error. Kids who didn't master one task continue to do mediocre or failing work on future tasks. Bloom says that "the errors in this system are eventually built into the student, and only rarely is he able to fully recover from them." This process tends to maximize the inequalities in classrooms, widening with each passing year the achievement gap and psychological distance between the top and bottom students.

When kids continue to fail, they can develop negative attitudes about specific tasks, and then about subjects, and then about teachers, and then, over the years, about school, and ultimately, about themselves. They believe (as do many teachers) that they can't learn; and in this case, believing makes it so.

Bloom has expressed in massive charts and graphs what we have all seen: kids who—everyone thinks—can't learn and seem doomed to failure.

But instead of blaming genetic and socioeconomic factors, poor parenting and excessive TV watching or the

poor quality of teachers, Bloom puts *teaching* under his analytical microscope. He concludes that by a fairly simple change in emphasis in our teaching technique we can break the vicious downward spiral of failure.

Bloom rates the quality of instruction on whether the large majority of students are brought to mastery of the skill being taught—mastery being defined as an 85 percent or better grade on a criterion-referenced test. He divides teaching and the quality of instruction into four elements:

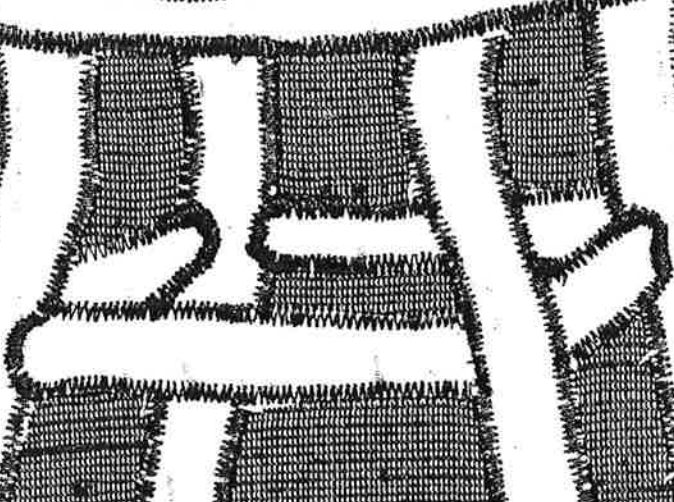
Cues—how we present and explain material. Bloom makes the point that there are a variety of ways to present cues but that in most schools "the major cues tend to be *verbal* in nature," and this means that "students who are most proficient or comfortable with verbal cues will learn most easily, while students who learn in other ways will be at a disadvantage." His main point about cues is this: "The greater the variety of instructional materials and methods used within a classroom, the greater is the likelihood that each student will secure the cues he needs for his learning."

Reinforcement—rewards for success. Bloom emphasizes the need for a variety of rewards and for tying rewards to individuals, because what's positive reinforcement for one student may be negative for another.

Participation—how involved the kids are in the learning process. Bloom says that participation (overt or covert) is "an excellent index of the quality of instruction." Bloom also explains that the slowest kids need much more participation than the fastest kids.

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Feedback / Correctives—testing, grading and remedial procedures. This is the biggie, the element that ties the other three together. However good a job teachers are doing on the first three elements of instruction, most of us don't pay enough attention to our feedback and correctives—we merely record where kids are at the end of the unit, rank them in relation to their classmates, and move right along.

Almost All Kids Can Learn Almost All Learning Skills

Bloom and his colleagues asked themselves: What would happen if kids who didn't master a given learning task were immediately taken aside and given extra help and encouragement until they could master it? What would happen if teachers wouldn't accept anything less than B's from their students and kept working with them until they reached that level of mastery? Would it work?

The first question at the beginning of this article (Are some slow kids simply unable to master some basic skills?) suggests that it can't be done. Many teachers believe slow learners can't learn some skills, so there's no point in spending a lot of time on them.

But Bloom's research and the experience of schools that use mastery learning show that the conventional wisdom is wrong; in fact, this attitude is itself part of the problem. Bloom has found that if teachers concentrate on the fourth part of their craft—feedback and correctives—virtually all failing students can be turned around. By reteaching and retesting kids until they have reached mastery, Bloom finds that three things happen which make the teacher's work progressively easier as the weeks pass:

1. Kids who have mastered one skill, no matter how long it took, enter the next learning task able to use that skill. If the learning sequence is arranged to build on previous units, subsequent steps will become easier.

2. Kids who have been given the extra time needed to reach mastery feel a little better about the subject, the teacher and themselves, which is another important element in helping them to do better in the next round.

3. Kids who have had to spend all that extra time to get up to mastery get the message that if they fail the next test, they'll have to go through it all again. As a result, they are likely to concentrate and work harder to master the work the first time through.

A consistent application of mastery learning slowly reduces the amount

of extra time it takes to bring the slow learners up to mastery, until eventually they can be taught comfortably in the mainstream. Giving good feedback and correctives after each learning task will, when used over the weeks and months, pay off—and that's the most surprising and hopeful part of Bloom's book. It means that a big commitment of teacher time and energy at the beginning of a year (or in the early grades) is cost effective, and will make learning easier for everyone later on.

I've seen something like this happening in my own classroom, but before I read Bloom I hadn't recognized it. In the first two or three months of every year, the kids with the lowest reading and writing and math skills take up virtually all my teaching time as I move around my learning-station classroom. It's a struggle to get them through their work and drag them up to the point where they can pass the tests.

But the trend after the first few months is that these slower kids gradually need less and less help, start passing their tests, go back and correct most of their previous failures, and in time pick up enough reading and writing and computing skills and enough motivation and self-confidence to work largely on their own.

Now I understand why. The system leads the slower kids to a mastery of the basic skills and the specific cognitive prerequisites of later units, and they slowly patch up their battered egos and begin to function like "normal" sixth graders. The narrowing gap between the time taken by the slowest and the fastest kids to do the work, and the decreasing distances between the highest and lowest grades in the class, fit right into Bloom's theory.

Teaching Everyone Every Skill Needn't Hold Back Bright Students

As the second question at the beginning of this article hints, teachers sometimes believe that giving time to bring up the slower students means taking time and attention away from brighter kids. Not necessarily. It seems to me that a skillfully planned mastery learning class can be as stimulating and challenging for faster kids as conventional classes are—and may be better for them socially and psychologically.

To avoid boring or holding back faster students, a good mastery classroom has to be structured so that kids are free (after they're finished with basic mastery work) to get involved in enrichment activities or in helping their slower peers. The extra work

provided for them can't be merely busywork or meaningless games, but should be deeper applications of the learning being done by the rest of the class. If such options exist, I don't think faster learners will suffer from being kept in the mainstream of the class for the basic work, so long as the basic work isn't too repetitive and burdensome (which it shouldn't be, of course, because pages upon pages of drill are bad for everyone, especially slower kids).

The faster learners won't be harmed by reviewing things they already know and filling in chinks in their knowledge. Some psychologists are exploring the idea that "over-training," far from being a waste of time, may be the basis for greater creativity. Bright students won't be harmed by helping their slower peers; in fact, teaching something to another person has always been a good way to internalize knowledge. And they won't be harmed by being kept from developing an elitist, snobbish attitude toward slower kids, as so often happens when fast kids are treated specially.

How Mastery Learning Works in My Classroom

As I said at the outset, I found that I was using aspects of mastery learning in my own classroom long before I read Bloom, but reading his book suggested some changes I should make. Let me describe my peculiar way of organizing my class, and then tell what those changes were.

Every day has seven components, which fit between and flow around obstacles like lunch and special subjects (my class is self-contained except for art, science, music, shop, home economics and gym):

1. *Correcting time.* Kids pull their desks into a circle and we quickly go over the previous day's work with kids correcting their own papers.

2. *Class meeting.* Still in the circle, we discuss class problems, current events, moral dilemmas, or whatever else comes up.

3. *Tests.* Kids spread out from each other and take the test or tests of the day (these are staggered through the week, each at the end of a one-week unit).

4. *Learning station time.* Kids pick up between four and six worksheets from pockets around the room and do the work or projects in groups of four or five. Everyone does the same sheets by the end of the day, but they can do them in any order, with as much or as little help as they need. I circulate around the room and do virtually all my teaching on an individual

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basis, zeroing in on the kids I know are having trouble.

5. *Activity Time I.* Kids who finish their worksheets early have to do an additional assignment, which is a fairly high-interest puzzle or project. Then there is a limited range of medium-interest options open to them, including an enrichment math paper, the Question of the Day, the Brain Teaser of the Day, the Detective Mystery of the Day, reading, writing stories or poems, or helping friends who haven't finished their worksheets.

6. *Activity Time II.* When everyone has had time to finish the required work, the room is opened up to more high-interest activities, including chess, Scrabble, Stratego, Labyrinth, mazes, checkers, and contests on jigsaw puzzles and Soma cubes.

7. *Quiet reading time.* In the final 45 minutes of the day, everyone cleans up the room, chooses a book or magazine, and settles down to half an hour of silent reading.

Each student has an individual progress folder (about ten pages stapled into a manila folder) that usually is waiting at his or her seat every morning with the previous day's test tucked in it and recorded on the right page. The folder has pages for all the major subjects; an item analysis and progress graph for the cumulative math review tests; a page for conduct, effort and homework grades; and pages for them to note the books they've read and what they thought of them. Kids who fail tests can take them again and improve the grades in their folders, so there is a constant traffic of kids to the filing cabinet that holds copies of the tests.

Reading Bloom's book made me wonder if what I've been calling "learning stations" for the last seven years is really closer to mastery learning. The book confirmed my faith in the basic system I've been using, but led me to make some important alterations. My feedback and correctives weren't working as well as they should have because I wasn't setting my standard for mastery high enough and because I wasn't insisting that kids take tests again. I've always felt a little uncomfortable letting kids pass with C's, and the kids pick up on the mediocrity of the grade too; they're always asking if C is a passing grade. Now I plan to require a B or above, and I'm changing the *option* of taking failed tests to a *requirement* that any test below 80 percent be retaken after a review session with me, an aide, or a peer who understands the material.

Fortunately, there is plenty of leeway in the day to allow for reviewing and redoing work until it's mastered:

before the meeting in the morning when kids find their corrected tests in their folders; during Activity Time I if they finish their worksheets early, and during Activity Time II if they don't; during the quiet reading time or gym (unless failing tests becomes a device for avoiding either of these activities); and finally, if all else fails, after school. The idea is to attach as little stigma as possible to redoing work and retaking the tests—and yet to convey the unmistakable message that I am serious about mastery and that something moderately desirable will have to be given up when a skill is not mastered.

One thing my classroom has which Bloom doesn't mention is an ongoing cumulative review in math. Just because kids have mastered a skill doesn't mean they're going to remember it two weeks later. In language arts and social studies, kids are constantly using concepts and skills they've learned, but this isn't necessarily true in math. So every day I have a worksheet that reviews (by giving a couple of examples) all skills covered up to that point.

In any classroom there are trade-offs, because everyone can't have everything. Some of my brightest students aren't getting material that is fully challenging to their abilities. They find the basic worksheets pretty easy, zip through them and have plenty of time on their hands, and what they do with that time is pretty much up to them as long as they don't bother other kids. But for most of them this isn't a problem; it's a delight. They plunge into all the contests and enrichment activities and books in the room, enjoying them all the more because they are freely chosen rather than being mandated by a teacher.

Slower kids can do the same worksheets and problems as their faster peers because the slower students get a lot more help from me and from their friends. Within the flexible structure of the learning station time, it's possible for me or a specialist to take each kid back as far as necessary and to go through as many steps as we have to to get the kid up to mastery.

I concentrate on making learning material as interesting and relevant as possible. Many of the lessons can be handled at several different levels, and if the material is good, kids from a wide range of ability levels will learn from it. To me, there are diminishing returns from trying to individualize materials to the exact level of each child. My class isn't individualized, but I think it meets individual needs.

Ultimately I think everyone bene-

fits almost equally from a system that seems to give disproportionate attention to the slower kids. I agree with Bloom that the adoption of a mastery learning approach means a basic reorientation from the education of the few to the education of the many. It's a shift from the concept that there are good and poor learners to the concept that you start with fast and slow learners and, after a few years of proper correctives, most kids can learn, in about the same amount of time, anything schools have to teach. It's a shift from the *selection* of talent (choosing the students who learn easily) to the *development* of talent (bringing almost all students through high school with a full range of skills). A widespread adoption of mastery learning, according to Bloom, would turn around the current pattern of failure in our schools within a decade. It would diminish elitism and competitiveness, and foster competence and self-confidence.

To be effective, however, mastery learning has to be applied consistently throughout a system. For me to begin using it in my sixth grade classroom without it having been used in earlier and later grades is a somewhat quixotic venture which may benefit a few kids for only a short period of time. For it to work, mastery learning has to be phased in at the first grade and work its way up through the entire school system, while teachers work on setting realistic and meaningful goals for each grade level and on writing good criterion-referenced tests to check on those goals (teachers will also have to weed out gratuitously difficult material). Perhaps in the first few years of implementation the higher grades might gradually work their way from a 60 percent level to the desired 85 percent mastery level so that kids who hadn't benefited from mastery learning in the early grades could catch up a little at a time. Equally important, mastery learning would have to be carefully explained to parents and students so that they understood the system and the philosophical shift required by mastery learning.

Bloom's theory suggests that using the right approach early enough and consistently enough can close the gap between the slowest and the fastest learners and, after a few years, make it possible to teach everyone at a higher level. I believe Bloom's evidence, and the evidence of my own eyes, that it can be done. ■

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