



Testing Mania: Test Performance is Not a Measure of Learning

By Angeline Lillard, Ph.D.

The Bush administration has laudably put education at the top of its domestic agenda with the No Child Left Behind Act. But the goal of improving learning may well backfire due to how the accountability component of the education act is implemented: highly focal standardized tests. The accountability component of the No Child Left Behind Act calls for all 3rd through 12th grade children to take annual standardized tests in math, reading, and science by the year 2007. Schools whose children fail to meet standards will be held accountable. On the surface this certainly sounds like a positive plan, and many very intelligent people embrace it, but research on the impact of this kind of testing on learning should give us pause.

Research shows that children do not actually learn better when there is an emphasis on test performance, even when those tests are of the everyday sort children routinely take in school. For example, in one study children read a short passage. Some students were told, "After you are finished, I'm going to test you on it. I want you to see how much you can remember. You should work as hard as you can because I'll be grading you on the test to see if you're learning well enough." A second group of students was simply told that they would be asked questions about how much they liked the passage, how difficult they found it, and so on.

It is probably no secret to children taking state accountability exams that they are taking them for the reasons given to the first group, not the second. A typical response to why one has to take Virginia's Standards of Learning test is, "So they can see whether I am ready to go on to the next grade." After reading, all the children in the study were asked to recall as many facts from the passage as they could, and to write an essay describing the main point (for conceptual learning). The same test was administered (by surprise) one week later to examine retention of facts and concepts. The outcome was that the second group of children scored the highest on conceptual learning, indicating better understanding of the passage. In addition, one week later children in the second group remembered almost all of the facts and concepts they had learned initially, suggesting that their initial score was a good measure of lasting learning. The first group memorized more facts initially, but by one week later they had forgotten so many that they recalled no more than did the first group. And their conceptual learning was inferior.

Other studies echo the point. For example, a study in Great Britain examined math performance in two different schools that were similar at the outset in terms of students' math scores and in terms of socioeconomic factors. But over the three years of the study, one school heavily emphasized preparation for standardized tests, while the other school paid little attention to those tests. Teaching methods were suitable different for these ends, with the former school attending to the children's learning of specific mathematic procedures that they would be tested on, and the latter school giving open ended problems which the students were to solve alone or in small groups. The end result was that the children at the second school did better on the standardized tests than did the children at the first school. More importantly, their knowledge of math was flexible and could be applied to new situations they had never before encountered.

Children who had been learning in preparation for tests, in contrast, seemed to have "inert" knowledge: they did not know how to apply their learning outside of the very specific context in which they had been taught. These and other studies indicate that learning in preparation for testing is superficial, inflexible and not retained.

Research also suggests that the conditions created by the accountability impair teaching. Under the education act, when students do not do well on the tests, schools and thus teachers will be held accountable, making way for a system of teacher rewards (positive and negative) tied to student performance. Illustrating the negative effects of such systems, in one study, a group of tutors was told they would be given movie tickets if their proteges learned well, and another group of tutors was not offered any reward. Tutoring sessions were videotaped, and tutee learning was later assessed. Although the tutors who were not anticipating rewards spent less time teaching, their students learned more than did the students of other tutors, suggesting teaching is more efficient when its success is not tied to a reward. In addition, the videotapes revealed that when a reward was hinged to student performance, tutors



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showed little positive emotion in their interactions, and they used forms of communication to negatively impact learning, such as criticizing the child as a person. No-reward tutors used more positive approaches. Tutors are of course not teachers, but the results are suggestive. Teachers in low-income neighborhoods face tremendous challenges, and this research suggests that adding the risk of losing their jobs if their disadvantaged students do poorly on a standardized test may not lead to the outcomes we hope for.

The purveyors of standardized tests will note that children perform better on the tests each year, and will take that as evidence that the tests are working to improve learning. But what children will be learning is how to take and do well on those particular tests. Other learning may go out the window. For example, juniors in my high school district no longer do what was once considered one of the hallmarks of their high school career, a major history paper, because there is simply not time with the Standards of Learning tests to prepare for. Is the skill of choosing among multiple choice options (which the accountability exams largely consist of) really what we want children to learn, in lieu of learning to write, to analyze problems, and to develop creative and workable solutions? Teaching to the test leads to learning to the test, and the test our children really need to pass is one of living a meaningful, productive life, not their state's standardized accountability exam.

Even parents who are reasonably pleased with their local elementary school should be very concerned when their child's teacher has to give to such exams energy that might instead be focused on their child's conceptual learning and personal development. Those who are not pleased with the current state of schooling should not mistake that these tests are a panacea; they may be an illusionary fix. Further, as the research described here shows, they may fly against one of the other main components of the No Child Left Behind Act: using scientifically-supported best educational practices. True solutions to the problem of poor learning in schools would come from radical restructuring of schools to align with scientific evidence on how people learn.

Biographic Information

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