

Washington Post, “The Answer Sheet” blog by Valerie Strauss

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## Here’s a great way to get kids to learn. Unfortunately, too many schools don’t do it.

By Marion Brady\*

When Mike Bloomberg, ex-mayor of New York, said he’d like to fire the lower-scoring half of the city’s teachers and give their students to the better-scoring half, doubling the size of their classes but paying them twice as much, he was affirming his belief in a particular theory of learning.

For a short demonstration of the theory, watch this short, million-plus-viewed [clip](#) from the 1986 film, “Ferris Bueller’s Day Off.”

The learning theory is called “direct instruction.” *Teachers deliver information via talk, text, and technology; motivated learners try to remember it.*

For recipes, repair manuals, getting cash from ATMs, assembly guides for IKEA furniture and similar tasks, direct instruction isn’t just efficient, it’s essential.

But as is evident from how little most adults remember and use of what they once studied after learning basic skills, direct instruction is spectacularly inefficient.

If education policymakers would stop taking the adequacy of direct instruction for granted and give the matter serious thought, the reason most adults have so little to show for their years of schooling would be clearer — the curriculum in near universal use in America’s schools since 1893.

Direct instruction delivers that curriculum to learners in volumes and at rates far beyond their ability to process it, store it in memory, and recall it. Much of the delivered information is abstract and, having little immediate use, is easily forgotten. The curriculum’s failure to model the systemically integrated nature of knowledge complicates learning, and its marginal relationship to real-world matters of consequence and interest makes it easy for learners to dismiss it.

The problems aren’t apparent because traditional schooling forces learners to pretend to learn, and many do so convincingly. Under pressure, they cram the secondhand information delivered by direct instruction into short-term memory long enough to recite and pass tests.

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\* This version is the one submitted to the blog. It differs in several places from the blog-published version.

## **An alternative theory**

With little success, experienced educators have tried to explain another theory of learning and encourage its use. I'm not smart enough to succeed where they've failed, so I won't try. I'll simply call attention to learning that's obviously more efficient than direct instruction.

We're born. On our own, without language, without books or teacher talk, without the ability to read, without homework, without drill, without learning standards, without standardized tests, without grades, without gold stars or smiley faces, without threats, rewards, promises, without chants or lesson plans, we learn to speak one, two, or even more languages, learn what's acceptable and unacceptable behavior in myriad social situations, learn important elementary laws of physics, learn to quantify as necessary, learn when and how to interact with, even manipulate, other humans, learn how to navigate any number of physical environments.

The theory that supports this kind of learning is called "active," "discovery," "inquiry," or "constructivism." It says we organize and assemble knowledge and skills from firsthand experience—from play, from watching and emulating parents and neighbors, from interacting with others, from trial and error, from "putting two and two together," from thinking about what we're doing while we're doing it.

An ancient observation sums up the theory: *Experience is the best teacher.*

Here's an example of the difference:

### **Direct Instruction** (textbook text)

*In much of the central and eastern United States, cold fronts recur every few days in late fall and winter. Sweeping down from Canada, the fronts move southeast, but the wind along the front blows from the southwest, parallel to the front. Initially, this wind will...*

### **Constructivist approach** (team project)

*Today's weather report says a cold front is due Thursday morning. Collect data—wind speed, wind direction, temperature, barometric pressure, cloud types, and other weather characteristics. Write a report with descriptions, graphs, photos, diagrams, etc.*

And another:

### **Direct Instruction** (teacher talk)

*Many Puritan ways of acting grew out of their religious beliefs. They thought all people were basically evil and would go to Hell unless they obeyed God's laws as presented in the Bible. To keep this evil tendency under control, Bible reading and church attendance were mandatory..."*

## **Constructivism** (team project)

*America has in part been shaped by Puritan thinking. Below is the alphabet as it was taught to Puritan children using the 1687 New England Primer. As you can see, large, bold-faced letters on each page were accompanied by a short verse, often based on the Bible. (E.g. “In Adam’s fall, we sinned all.”) Analyze the data. What seem to have been important Puritan beliefs? What attitudes and actions would those beliefs probably have created? Are the beliefs ...?*

Direct instruction delivers secondhand information. Standardized tests measure how much of that information learners can recall and (sometimes) apply to a matter chosen by the writer of the test item. Two thought processes — recalling and applying — are measured, a task so simple standardized tests can be scored by machines.

Today’s “reformers” believe direct instruction can be made to work if teachers will teach to subject-matter standards and kids will try harder to remember what they’ve been taught.

Constructivist-triggered experience is firsthand, and sense is made not by two thought processes but by dozens in complex combinations— abstracting, categorizing, comparing, contrasting, correlating, describing, empathizing, envisioning, extrapolating, generalizing, hypothesizing, imagining, inferring, integrating, interpreting, intuiting, and so on.

Experienced teachers know the importance of these thought processes. They know the importance of questioning, of the give and take of learner dialogue with peers, of trial and error, of writing to clarify thought. They know the importance of pacing and of sequencing experiences to gradually increase levels of difficulty, of emotion in anchoring new knowledge in memory, and of collaboration as the easiest way to generate that emotion.

Experienced teachers also know that those dozens of thought processes are too varied, too idiosyncratic, too complex for direct instruction to improve them, and for standardized, machine-scored tests to evaluate learner ability to put them to useful work.

Constructivism is clearly the better theory of learning. In the 1960s, unusually thoughtful federal legislation encouraged its development and use, but reactionary, direct-instruction, standards-and-accountability legislation killed it and continues to block the theory’s use.

### **What now?**

How matters stand:

- The Common Core State Standards enable machine-scored standardized tests.
- Those tests produce scores.

- “Reformers” manipulate the scores to “prove” public schooling doesn’t work.
- Teachers are blamed and denigrated and teaching is de-professionalized.
- Privatizers and politicians rush to the rescue: “Choice!” “Vouchers!” “Charters!”
- “Personalized learning”—direct instruction via computer terminal—is promoted.
- School taxes go down, along with citizen ability to think.
- Wall Street conservatives rejoice.

The weakest link in this cleverly engineered public-school-destroying chain is standardized testing.

*Parents and citizens who care about America’s future will support and encourage the opt-out-of-testing movement. Nothing less than mass refusal to participate will allow educators to explore learning that respects the potential of humanness.*

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The tens of thousands of downloads of constructivist-based activities my brother and I give away tell me that, given half a chance, constructivism sells itself, bottom up, by word of mouth. Below are links to a small book arguing the merits of experiential, project-based team learning, and four middle school level courses that bridge to it using familiar, bureaucratically comfortable school subjects. We think working teachers, freed from the destructive limitations of standardized tests, can, and will, improve our work.

All are free for the downloading—no strings, no sign-up, no advertising.

E-book, *What’s Worth Learning?*

<<http://www.marionbrady.com/documents/WWL.pdf>>

Course of study, organizing knowledge

<<http://www.marionbrady.com/IntroductiontoSystems.asp>>

Course of study, American history

<<http://www.marionbrady.com/AHH.asp>>

Course of study, world history

<<http://www.marionbrady.com/WorldHistory.asp>>

Course of study, world cultures

<<http://www.marionbrady.com/InvestigatingWorldCultures.asp>>