

A Change in Pedagogy Is the Answer and Curricular Infusion Is the Process

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For every complex problem there is always a
simple solution. And it is usually wrong.
H. L. Mencken

The biggest challenge facing today's schools is the achievement gap that exists between advantaged students and students placed at risk. Half of all immigrants, minority, and low-income children never graduate from high school and in many of our cities more than 30% of low-income students score at the lowest percentiles on national reading and math tests. An even sadder commentary is the ways we have addressed this achievement gap and the resulting collateral damage that has dragged down good teaching, deskilled many of our teachers, squeezed subjects other than math and reading out of the curriculum, and produced data juggling, test result falsification, and outright lying on the parts of desperate administrators who want to avoid being branded leaders of "failing schools."

How did we get into this mess? Why hasn't the estimated three *trillion* dollars spent on school reform since the 1960s made more of an impact? We've tried just about everything—smaller schools, year-round schools, single sex classes, after school mentoring, school uniforms, charter and magnet schools, school-business partnerships, merit pay for teachers, paying students for performance, private management companies and for-profit schools, take-overs by mayors and state departments of education, distributive leadership, site-based management, data-based decision making, and just about every scheme into which someone can insert the words, "standards based" and "accountability." All of these so-called promising solutions have been suggested as silver bullets that can save our lowest achieving students, but they haven't worked.

What do all of these reform initiatives have in common? Most are built on structural changes, designed by well-intentioned policy makers or agencies (usually far removed from the classroom), and calculated to have an impact on entire school districts, states, or even nationally. More important, however, is that these structural changes have drawn mainly upon a low-level pedagogy that is highly prescriptive and didactic approaches to learning that emphasize the

accumulation, storage, and retrieval of information that will show up on the next round of standardized tests.

The mainstream diet for the majority of poor and struggling learners has been dominated by a remedial and compensatory pedagogy that has not diminished the achievement gap; and, I would argue, has actually contributed to its perpetuation. Many of these programs are designed to find out what a child can't do, doesn't like to do, and sees no reason for doing, and then teachers are told to spend most of the classroom time beating him or her to death with it. This compensatory pedagogy of prescription and practice simply hasn't worked! Evidence of this failure is plainly evident in one national report after another, and yet we continue our search for yet another quick-fix solution through structural rearrangements rather than alternative pedagogical modifications. But the solutions, by whatever new names we give them (e.g., Competency Based, Outcomes Based) are always reiterations of the same pedagogy—the same drill-and-practice model for learning. And the universal criterion for accountability always remains the same, again with new names given to the same old achievement tests of decades past. It is the singular reliance on these tests for accountability, and the exclusion of other important outcomes of schooling that forces the pedagogy of prescription and practice that lobotomizes our teachers in the process. Is it any wonder that some of our very best teachers are leaving the profession and fleeing urban schools where prescription has become the almost universally practiced pedagogy?

If these approaches have continued to produce dismal results, perhaps it is time to examine a counter-intuitive approach based on a pedagogy that is the polar opposite of the pedagogy that Pavlov used to train his dogs! Accountability for the truly educated mind in today's knowledge-driven economy should first and foremost take account of such high-end learning skills as the ability to:

- plan a task and consider alternatives
- monitor one's understanding and the need for additional information
- identify patterns, relationships, and discrepancies in information
- generate *reasonable* arguments, explanations, hypotheses, and ideas using appropriate vocabulary and concepts
- draw comparisons and analogies to other problems
- formulate meaningful questions

- transform factual information into usable knowledge
- rapidly and efficiently access just-in-time information and selectively extract meaning from that information
- extend one’s thinking beyond the information given
- detect bias, make comparisons, draw conclusions, and predict outcomes
- apportion time, money, and resources
- apply knowledge and problem-solving strategies to real world problems
- work effectively with others
- communicate effectively in different genres and formats
- derive enjoyment from active engagement in the act of learning
- creatively solve problems and produce new ideas.

These are the learner-centered skills that grow young minds, promote genuine student engagement, and increase achievement. Although focusing on these outcomes may be counter intuitive to the “more-practice-is-better” pedagogy, we need only look at the track record of compensatory learning models to realize we have been banging our collective heads against walls and following an endless parade of reforms being forced through the schoolhouse door with no results.

But we also need to infuse into the curriculum a series of motivationally rich experiences that promote student engagement, enjoyment, and a genuine enthusiasm for learning. Common sense and our own experience tell us that we always do a better job when we are working on something in which we are personally engaged—something that we are really “into,” and that we truly enjoy doing. Take, for example, the demonstrated benefits in performance that result from extra-curricular activities that are based on a pedagogy that is the opposite of the pedagogy of drill and practice. How many *unengaged* students have you seen on the school newspaper staff, the basketball team, the chess club, the debate team, or the concert choir? Their engagement occurs because these students have some choice in the area in which they will participate; they interact in a goal oriented environment with other likeminded students interested in developing expertise in their chosen area, they use authentic problem solving, interpersonal, and creative strategies; they produce a product, service, or performance; and their work is brought to bear on one or more intended audiences other than, or at least in addition to the teacher. The engagement that results from these kinds of experiences exemplifies the best way to approach learning, one

that differs completely from the behaviorist theory that guides so much of prescriptive and remedial education.

All learning, from diapers to doctorate, exists on a continuum ranging from deductive, didactic, and prescriptive on one hand to inductive, investigative, and inquiry oriented on the other. Students who have not achieved are subjected to endless amounts of repetitious practice material guided by the didactic model. Then, when scores do not improve, we often think that the obvious solution is to simply redouble our efforts with what has been popularly called a “drill and kill” approach to learning; an approach that has turned many of our schools into joyless places that promote mind numbing boredom, lack of genuine student and teacher engagement, absenteeism, increased dropout rates, and the other byproducts of over dependence on mechanized learning.

Shouldn't we be smart enough to blend the benefits of an inductive and investigative pedagogy into a system that has mainly failed our at-risk populations? And shouldn't we also be smart enough to note the rising dissatisfaction of middle-class parents whose children are also becoming subjected to the same drill oriented, test prep curriculum? One parent recently speculated that there was a sinister conspiracy afoot to close the achievement gap, and the conspiracy consisted of dragging down the scores of high achieving students!

Although student engagement has been defined in many ways, we view it as the infectious enthusiasm that students display when working on something that is of personal interest and that is pursued in an inductive and investigative approach to learning. It is through these highly engaging approaches that students are motivated to improve basic skills and bring their work to higher and higher levels of perfection. True engagement results from learning activities that challenge young people to “stretch” above their current comfort level, activities that are based on resources and methods of inquiry that are qualitatively different from excessive practice. Our guiding principle in this kind of learning is simply: ***No Child Left Bored!***

Research on the role of student engagement is clear and unequivocal—high engagement results in higher achievement, improved self-concept and self-efficacy, and more favorable attitudes toward school and learning. There is a strong body of research that points out the crucial difference between time-spent and time-engaged in school activities. In the recently published international PISA study, the single criterion that distinguished between nations with

the highest and lowest levels of student achievement was the degree to which students were engaged in their studies.

It will not be easy to turn around a school system whose leaders have made massive financial and policy investments in one particular brand of learning, nor will it be easy to circumvent the powerful influence of the textbook and test publishing industries that have thrived on a prescriptive curriculum and standardized test-driven approaches to accountability. But a gentle and evolutionary rather than revolutionary approach to school reform is possible if we begin to take advantage of the remarkable advances that have taken place in the information technologies, advances that have brought within reach the equivalent of a dozen teaching assistants in every classroom, all day, every day.

Dr. Leon Lederman, the Nobel Prize winning physicist, recently said, “Once upon a time, America sheltered an Einstein, went to the Moon, and gave the world the laser, electronic computer, nylon stockings, television, and the cure for polio. Today we are in the process, albeit unwittingly, of abandoning this leadership role.” Every school and classroom in this country has in it young people who can continue this remarkable tradition. But the tradition will not survive without a national resolve to change the pedagogy that drives instruction in classrooms that serve *all* our young people.

Curricular Enrichment Infusion: A Practical Application to a Change in Pedagogy

What is Curricular Enrichment Infusion?

Curriculum Enrichment Infusion is defined as a process intended to provide extended learning opportunities and challenges to students to make a regular curriculum topic more enjoyable and engaging, thereby producing more enthusiasm for learning. Enrichment gives students more opportunities and incentive to study topics and concepts with greater depth and complexity.

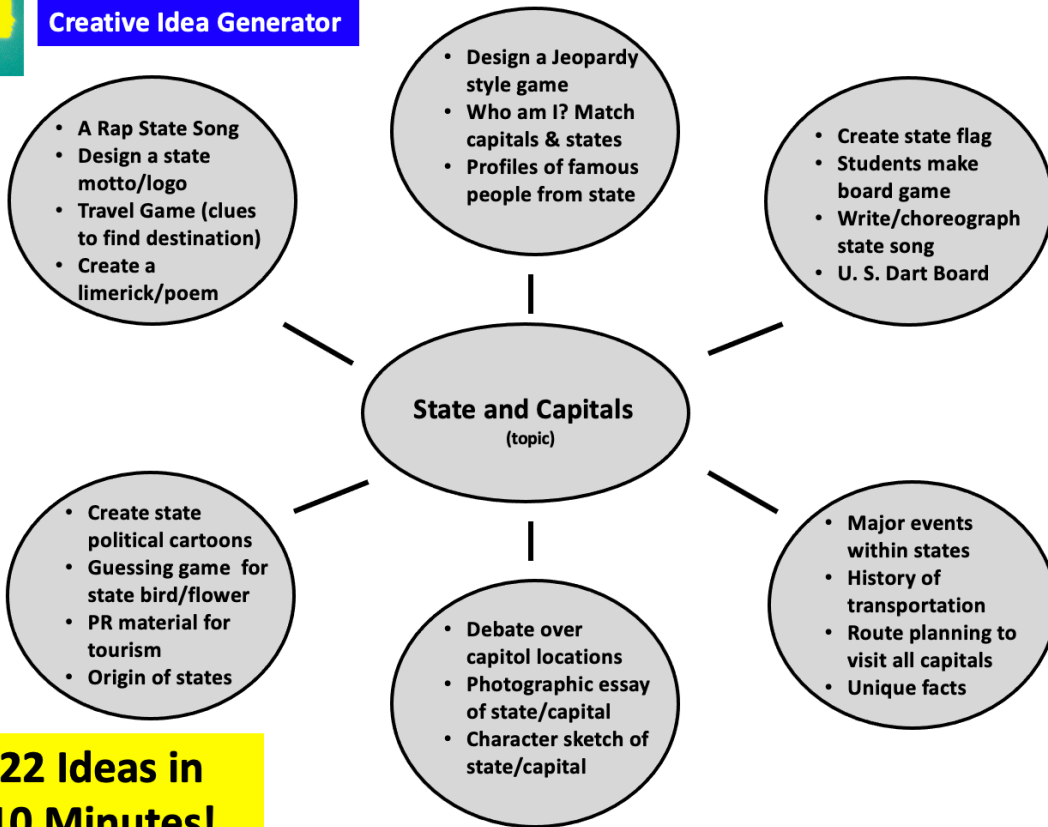
The process begins by organizing teachers into small groups based on their interest in a particular subject matter area. They are provided with a list of the rules for brainstorming, the definition above, and examples such as the one presented below. Each group is given a Creative Idea Generator and one person is appointed as the recorder for the group. The following four guidelines are the only directions for guiding the group's discussion:

1. The proposed activity does not always have a single, predetermined, or correct answer.
2. The activity focuses on what students do rather than just sit and listen.
3. The activity is intended to be fun for most students.
4. The activity has various levels of challenge to which interested students can escalate in follow-up activities if they choose.

Each group is first asked to identify a topic in their subject area group that is mainly a memory-oriented assignment and that is usually going to be a test question at the end of the unit of study. In the example that follows a group of middle grade social studies teachers agreed that memorizing the names of U. S. states and capitols mainly employed memorization. The figure below is an example of the collective suggestions made by three groups of teachers (three or four teachers per group) who participated in a professional development session using this process. In the months that followed the teachers proudly sent me some of the results of the fun and innovative products created by their students. One example of extensive follow up was a group of students who found online a company that makes state shaped cookie cutters (<http://www.cheapcookiecutters.com/>). They started a "baking company" and went to other classrooms where they taught about states and capitols by having students cut, bake, and decorate state shaped cookies, research the capitol's location, and place a chocolate dot at the appropriate spot.



Creative Idea Generator



**22 Ideas in
10 Minutes!**

The biggest pay off from this activity is that the teachers, themselves, became more creative, and although they covered a require curriculum topic, they observed a much higher level of enjoyment and engagement on the parts of their students. The so called “regular curriculum” is not going to go away; but any mainly memory- oriented topic can be made more interesting and engaging with a little modification. Most importantly, it can improve the professionalization of a career that has largely been relegated to a dreary job of teaching students how to memorize rather than how to develop their thinking skills and creativity.