The Myths that Drive Data-Driven Schools

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The most recent attempt by educators to emulate the "sound principles" and methods of business and science is to become data-driven. The leaders in a data-driven school are able to demonstrate how some number, preferably scores on standardized tests, moved up as a result of some program they initiated.

Data-driven schools also possess the capacity to quickly access individual profiles of student performance on a wide variety of testing instruments. A sophisticated data-driven school provides teachers with

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lesson plans and instruction activities that will remediate the "diagnosed" learning deficiencies of each student in the school. Of course, the lesson plans and activities are aligned with state, national, and professional standards. What more could an educator ask for?

But what do data or numbers really show teachers? In the words of W. Edwards Deming, "Three percent of problems have figures; ninety-seven percent of the problems do not." Although his 97% was referring to processes in manufacturing, the same could be said about the daily interactions between teachers and students.

The Why or How

A test score, or a set of test scores, really tells a teacher only about 3% of what goes on in a classroom. The remaining 97% of why or how learning takes place can be found only in the daily interactions between the teacher and the students.

In the current rush to become more businesslike and to adopt scientific approaches to teaching, school leaders and policymakers are promoting accountability measures, such as No Child Left Behind, that require educators to compile, disaggregate, and use data to select a scientifically based program that will raise scores.

Data-driven schools have become the new reality of schooling. Before this new reality becomes the standard for evaluating the quality of schooling, we need to question the myths behind the reality of data-driven schools.

Myth 1. The numbers are accurate. The fundamental problem with data that are gathered by schools and documented by various state agencies are the processes and criteria used to gather, record, compile, and report data. I have not read a study on dropouts in the last 10 years that does begin with a disclaimer by a researcher that the data gathered is probably inaccurate because each school has its own definition of dropout.

The disclaimer reflects the fact that school systems lack the personnel and technology to accurately collect and report data. Instead, schools are complying with reporting mandates by using data based on a wide variety of methods for collecting information about student behavior and a wide variety of interpretations of the behaviors being reported.

The same could be said about standardized testing in most schools. I am certain that representatives from any national testing company would have serious questions about the reliability of their tests if they stood in hallways and classrooms on testing days and watched the normal vagaries of the real world of
schooling violate many of the protocols in their test manuals.

**Myth 2. We are looking at the right data.** School leaders in some data-driven schools have become fixated on one number or one set of numbers from standardized tests to judge the quality of their instructional program. Such a fixation results in simplistic directives to staff to "raise that score."

But are there other data that would reflect more accurately the quality of education in their buildings? Are there teachers in the building, for example, whose failure rates are too high? Does the percentage of minority students being suspended seem to be high in comparison to the total school population?

How many pages a day are being duplicated school machines? Do these copies reflect thoughtful approaches to understanding subject matter, or are they just busy work?

Are certain departments or teachers checking out a lot of videos? Are those videos checked out primarily on Fridays and Mondays? When are the textbooks collected at the end of the school year? What happens during the last two weeks of school? Such data sources are easy to access and provide a quick audit about what is really going on in classrooms.

**Myth 3. Numbers can accurately describe the social phenomena.** The social sciences are trying to imitate the natural sciences by using quantitative sources to identify the causes and solutions of human problems.

The advantage that natural scientists have over those of us in schools, however, is their ability to limit the variables they study and arrange them in a way that ensures that they are not contaminated by other variables that would skew or invalidate the results of the experiment. The very nature of scientific prediction requires that concepts, theories, hypotheses, and experiments be developed within a closed system where input, process, and output are perfectly aligned.

As all of us who have worked in schools know, the real world of schooling is messy and not given to rational approaches to decision making. The students (inputs) cannot be controlled, the processes (what teachers do in the classroom) cannot be controlled, and the goals of schooling (outputs) are unclear. At the end of the day, what remains of our rationalized school is a combination of trial and error, common sense, and judgment.

What all these irrational properties have in common is an expert practitioner with an intuitive grasp of the relationship between the uncertainties of student behavior and the instruc-
tional responses that result in purposeful approaches to understanding knowledge and skills.

Myth 4. Test scores should always go up. Stakeholders and policymakers seem to think that variations in student performance should either remain stable or go up. As statisticians will tell you, there is variation in all aspects of our lives—household expenses, weight, and gas mileage all vary over time.

In education, attendance rates, suspension rates, and test scores all vary over time. As a colleague said to me once, “I know for sure that my ACT scores will either go up or go down.” I cannot describe how to accurately interpret variations in school data in this article.

I will, however, repeat the admonition of Deming, the father of total quality management, that workers should never be blamed for problems beyond their control. Currently, schools are losing funds and principals are being terminated because governing bodies cannot distinguish between changes in behavior that are meaningful and changes in behavior that are part of the randomness of being human.

Myth 5. Even if the numbers were right, we would do the right thing. For decades, educators have been aware of numbers that reflect disturbing trends and the consequences of ill-conceived practices in schooling. Segregation, tracking, retention, time-out rooms, assertive discipline, suspension, and the outlawing of bilingual education are among a small number of dysfunctional policies and practices that the data would ask governing bodies and educators to rethink.

Rational approaches to solving human problems will never overcome the emotions, values, and prior beliefs of those who govern and those who administer schools. If a governing body or school administrators believe students who are native Spanish speakers should not be instructed in their native language in their school, no amount of data will change the policies and practices that support that belief. It takes enormous discipline to transcend our autobiographies and act objectively to address human problems that touch an emotional chord.

Myth 6. Programs teach. Embedded in any data-driven approach to schooling is the belief that a program, a model of schooling, a model of teaching, can move some number upward. Programs do not teach; teachers teach.

If there is one certainty about teaching that researchers agree upon, it is that students achieve in classrooms taught by caring and knowledgeable teachers using good judgment and intuition.
to make the minute-by-minute adjustments that are the foundation of how students learn.

Data-driven programs go in the opposite direction. Programs driven by the numbers require teachers to use instructional routines to teach content that can be quantified. The goal of such programs is not learning, but the ability to test and inspect.

**Myth 7. Illusion of control.** The ideology of data-driven schools is the belief that policymakers and school leaders can make learning predictable. Governing bodies that regulate and finance schools are mandating accountability measures based on rational decision-making models that rely on the ability of an expert, a method, and a form of calculation to make schools more efficient, predictable, and self-directing.

Students, however, do not respond well to the instrumental rationalities that work in industry or government. If you teach, you know immediately why. Classrooms reduced to routines and quantifiable outcomes lack the novelty and emotion that are catalysts for all learning.

Students thrive in learning environments where teachers use imagination and a variety of personal attributes to transform novel experiences into purposeful approaches to understanding the world. Students languish in classrooms where routines and tests become the order of the day.

If the data we gather about teaching and learning are mythical representations of what really happens in classrooms on a daily basis, then what should educators be paying attention to? The simple response is for school leaders to return to the classroom and become participants in the daily interactions between students and teachers.

The complex response is the development of nuanced understanding of the types of interaction that result in a passion for learning and intellectual growth and what types of interaction induce conformity and anti-intellectualism.

**Finding Passion**
The studies we do have unfortunately document the pervasiveness of routines and boredom and the rarity of passion and thoughtfulness. The causes and solutions for student boredom and lack of intellectual engagement in our schools will not be found in a belief in the magic of data, but in the complicated tangle of beliefs, emotions, ideas, and practices that teachers attempt to make sense out of on a daily basis.

The challenge then for school leaders is to stop looking at the data, no matter how beguiling its call, and start looking in the classrooms.