Friday, November 30. 2007

Professional Self-Development

Trouble with Data: Don't be Fooled by the NumbersData seems solid, substantial, productive, professional.And, there is so much of it.
Sources of data are everywhere, and teachers are exhorted to use data in making instructional decisions and educated choices. No "true professional" would leave problem-solving and decision-making to intuition, creative serendipity, hunch, or chance when they could engage the superior qualities of their mind in goal-directed, data-driven executive-like skills.
But, there are leaks in the dike that solid data is supposed to provide, and the legs of the data step-stool are a bit wobbly…the underpinnings of data could crumble or collapse at any time.
Data would seem to fit "hand and glove" with the Science of Teaching; but, instead of a mortise and talon relationship, data and teaching are often "strange bedfellows."Problems with DataWhat are the problems with data if data is so scientific and professional?Data accumulates fast. It floods our minds and requires time and resources to collect and manage
So much of the data that we collect is raw, uninterrupted. By itself, data is without meaning
Data take time to collect, and even more time to separate, sort, and make sense out of it
Data can be trivial, but can look like it is meaningful. For example, grades and test scoresGrades provide "constantly generating" data that has little meaning without the interpretation of the teacher that created them.
For example, does that "D" in English mean that the student…
Nearly failed the big test
Was absent too many time and missed a couple of quizzes
Didn't turn in his or her homework. Hint: The dog ate it!
Didn't complete the research report on time and lost 20 points
Just moved from Mexico and doesn't speak English well, yet
Etc. Who know but the teacher?Test scores can also be misleading.
For example, the scores on the high stakes test can all be 71 in one class and 100% of the teacher's students passed. In another class, the scores can all be 69 and 0% of the students passed. These teachers would look to be miles apart in their success, yet, their scores are statistically "dead-even."
In another test score example, the average classroom scores for one teacher are 4.7, exactly at grade level. However, another teacher has a class average of 4.8. When these scores are reported to the local newspaper and published by teacher name, community members come to believe that the second teacher with a "0.1" higher class average is a better teacher. But, nothing of the sort. These scores also indicate a "dead heat."A Little Data is a Dangerous ThingLimited understanding of the conditions and environment where data were collected, and meager control upon how the data were collected can result in unwarranted assumptions. Here are some pitfalls:Comparing "square pegs" with "round pegs"
Comparing unstructured data to structured data
Comparing data related to "fuzzy" categories
Comparing data where subjects reside in multiple categories
Comparing minor differences because the numbers
Finding "false positives" and rejecting "false negatives"
Bogging down in data collecting and getting sloppy in data acquisition because it is too much work
Becoming stressed and overwhelmed by too much data, i.e., information overload
Collecting data without a clear plan for how that data will be used
Creating reports and presentations based on correct data but false assumptions
Missing the intervening variable
Identifying the wrong independent variable (The one you can change)
Measuring the effect of items that are beyond your control
Etc. ad infinitum"Grain of Salt" Data Management PlanThe "Grain of Salt" Data Management Plan can also be called the "Information Overload Survival Plan."
Here are the rules to follow:

Posted by Classroom Toolkit Newsletter in Professional Self- Development at 02:00