So what does all this have to do with anything? Where are we headed?

As the gap between low and high achieving students continues to grow and the implementation of high-stakes accountability systems becomes the norm, the need for data to guide classroom decisions becomes increasingly important. Unfortunately, many educators have little or no experience in **using data systematically to inform decisions about classroom teaching**. The density and range of available information (as previous weeks work and resources can attest to) contributes to the arduous task of effectively analyzing and applying assessment results to decisions about day to day instruction. Data can be used not only to evaluate and track student performance but also to assess instructional effectiveness and various other factors that influence student learning—something few educators like to think about. When looking at test scores and noticing that 65% of the class failed—one might ask, "what did I do wrong? Is there another way to assess this group? How else can I teach this? What type of questions did I ask?" But unfortunately, most just look at the test scores, make the comment, "this group just isn't as sharp as last years", or "I just don't see why they don't get it", and move on.

While the intentions of having teachers understand how to "**use data systematically to inform decisions about classroom teaching"** sounds good, it has become apparent that many pre-service and in-service teachers lack much of the background knowledge to apply the strategies needed to reach the desired goals (analyzing the data and connecting it to classroom instruction). Few K-12

educators know even where to locate the online data resources (Local School System AYP and assessment data, and school demographics), and little if any post-secondary data is available for College/University faculty (there are some data on freshman retention rates, graduate completion rates, demographics, average GPA entrance levels etc…). Two commonly raised questions that students have are of critical importance: *what type of data should I be collecting and what does the state, local school system, and school data have to do with my classroom data?* For post secondary levels: *what does college/university data have to do with my classroom data?* Once participants are introduced to the types of data that could and should be collected, anxiety seems to grow as to how to collect this effectively, as most are unfamiliar with technology applications such as *Excel*®. While data interpretation is easier for some, by and far the largest disconnect, for all students/educators, is *connecting the data analysis to instructional strategies.* Many can interpret their classroom data, but do not understand how this information can be used for instructional improvement, e,g., what changes should be made in a teacher's lesson/unit plan, instructional focus, IEP for a student etc. To help, I have developed some short case study examples that we will use to investigate the process. Keeping the end in mind (**informing decisions about classroom teaching)** lets work backwards:

- What are several instructional strategy recommendations that I can try based on the data analysis from my class?
- To make recommendations based on data I have to analyze and interpret the data.

- To analyze and interpret the data I must collect and organize the data.
- To log in data I must know what I should be teaching—what students should know (what will they be assessed on) –state standards within the state/local curriculum
- AND, after all is said and none—will my efforts within my classroom help the mission (the overarching goal) of the school?
    - Examples:
        - My school, as a unit, needs to focus on reading, because our assessments scores are low in that area. I teach chemistry. Although I want my "chemistry" content scores to be improved, I also must ask myself, *what can I do in my chemistry class to help students improve in the area of reading?* Perhaps on labs, quizzes and homework I can include more reading narratives and short answer responses rather than just balancing equations, or perhaps I can include articles and current events on chemistry on a weekly basis.
        - My elementary school, as a unit, needs to focus on basic literacy skills. Analyzing the data we find that the averages are brought down by the extraordinarily low scores of English as Second Language students. What can I do to understand why these students are scoring so poorly? Will intervention in school help? Will parental resources

translated help? What literacy skills should I focus on first? Is fluency the problem because students lack the skill/practice? Or is comprehension the critical area –and if so why? Perhaps they do not understand some of the vocabulary? Would using more culturally relevant stories help?

I have provided two case study examples which I hope will help shed light on the significance of data analysis and its usefulness in instructional modification and improvement. It will also shed insight on what is possible in the way of analysis given the right tools. Additionally, I hope it will better indicate the direction we are headed in this workshop and possible ideas for the final project.

In the workshop we will have the opportunity to review several case study examples, and then work with your own data set. We will review state and national standards and curriculum, and will explore the range of state assessment data available. Next, we will drill down to the analysis and interpretation of classroom data.