

## Using Data to Drive Instructional Practice

“If assessments are to support improvements in student learning, then their results must inform students how to do better next time” Rick Stiggins.

### **Introduction**

In examining the culture of data use, there are guiding assumptions for data-driven inquiry that need to be reflected upon. Data has no meaning; meaning is created by those reviewing the data; knowledge and meaning making of human beings is not done in isolation, it is both personal and social in construct. The culture of the organization plays a pivotal role in how data is perceived, and both individual and organizational culture impact perception. Understanding should precede planning, and part of understanding is knowing that we do not always have the answers, that ambiguity and uncertainty exist. Learning organizations are those that move away from professionals thinking they know everything, to individuals being curious and asking questions in attempts to better understand; and finally being able to use data in thoughtful and collaborative inquiry sets the foundation for improved student achievement (Wellman & Lipton, 2004).

Schools' focus on data from assessment has both positive and negative outcomes, and that all depends on the perception and understanding of what assessment means and how it is used. Differentiating between assessing learning and assessing *for* learning is one of the essential questions schools must ask themselves about each test they use. Teachers and school leaders should understand how to use classroom assessment, standardized tests, demographic data, school data and anecdotal data, to inform student learning and student behavior. One caveat to be aware of is that when we refer to using data, we are not merely looking standardized test scores. The presentation will include the process necessary for learning to use data to drive instructional practice.

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Our schools exist in a testing craze, standardized tests, classroom assessments, weekly tests; yet, teachers and school leaders struggle to understand what to do with these numbers. The fundamental purpose of assessment is to improve learning, and understanding how to use those assessments is essential to school improvement. In this presentation, we will differentiate between summative and formative assessments, assessing for learning and assessing learning, and how to examine scores and student behavior in order to better understand the whole child and their learning process. To achieve this, schools must first create a school culture driven by reflective practice (Dufour, 2014). School leadership must set the tone for a data driven, reflective culture that is focused on developing instructional practices.

School strategic plans should include professional development goals and focus on data analysis as an essential part of school planning. Teachers and administrators must have professional development in how to use data as well as the time to reflect, collaborate and analyze the data (Stiggins, 2008). The following steps of implementing the analysis process will be explained and practiced in this session: asking the right questions, collecting the data, analyzing the data, setting priorities and goals, developing strategies, and monitoring results. School leaders and teachers will have an understanding of what is necessary for developing the process and have an opportunity to practice the steps outlined so that they are able to implement it once they return to their classrooms and schools.

### **How to a Create a “Culture of Reflection” in Your School**

Reflective practice means examining the everyday happenings in classrooms and in schools by stepping back and asking questions rather than making statements. By looking at the “big picture” and asking what are our goals, are we meeting them, what should we change and so on, we allow open minded dialogue into the “why” are things the way they are rather than

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making assumptions. The dilemma is usually that schools do not incorporate time for reflective practice. School leaders would need to be explicit in ensuring both individual and group reflective practices. Using pre-service and post school professional development days to reflect on the previous year is a first step, but then it must be followed up by a “let’s stop and ask ourselves some questions” attitude throughout the year. One of the initial reflective practices should be an examination of our own personal assumptions and preconceived notions that impact how we behave and how we perceive our students, parents, our practices, and even our colleagues and leaders. We each have biases we carry, and there needs to be self-awareness for individuals to remove as many filters from our perception as possible, to give us a clearer picture of reality before we come to conclusions or make decisions. Reflection is about inquiry that is thoughtful, and both personal and collective in nature for all members of the school team.

### **Why We need to Use Data Analysis**

1. To use collaborative efforts with strong leadership that creates a reflective school culture based on a continuous process of school improvement.
2. To create data driven dialogue among school personnel that provides the foundation for the process.
3. To analyze data, develop action plans (including lesson design), monitor results and improve student achievement.
4. To better understand why should we be focused on data?
5. To sift through school data to search for consistent patterns or themes
6. To better understand our schools, students, our needs and our strengths
7. To increase student achievement and student success

## DATA ANALYSIS PROCESS

### STEP 1: Asking the right questions

- Provides direction and focus
- Begin with school-wide general questions

#### 1a: Asking the right questions:

- What do we want to know?
- What are we attempting to measure and monitor?
- What types of data do we have?
- What are we hoping to learn about our own practices as a result of this data analysis?
- What are our primary concerns about the current instructional programs?
- What areas instructional/curricular need improvement?

#### 1b: More specific questions

- How do student outcomes differ by demographics?
- To what extent have some programs, interventions, and services improved student outcomes?
- What is the longitudinal progress of a specific cohort of students?
- What are the characteristics of the students who achieve proficiency?
- Where are we making the most progress?

### STEP 2: Collecting the data

- Gather and organize data in order to gain insights about teaching, learning, and leadership practices: must be reliable

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- Select the source or sources which will provide the data needed to answer the questions.
- Teachers should have access to data
- Teachers should be divided into focus groups
- Teachers should be given guidelines for analysis

### **2a: Disaggregation of data**

- Disaggregation: To separate something into its component parts, or break apart
- Normally student achievement data are reported for whole populations, or as are uncovered. aggregate data. When data is disaggregated, patterns, trends and other important information
- Break down data into focused components
- “Disaggregation is not a problem-solving strategy. It is a problem-finding strategy.” Victoria Bernhardt, Data Analysis for Comprehensive School-wide Improvement, 1998

### **2b. Disaggregation of data**

- By programs
- By grade level
- By subject
- By demographic groups (gender, etc.)
- By program (e.g. math program or science program)
- By specific areas within subjects (e.g. vocabulary in reading comprehension)
- Can be as general as you want or as specific as you need

### **2c. Triangulation of data**

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- Definition of Triangulation: Using multiple data sources, data collection procedures, and analytic procedures.
- Implement a multidimensional view for data to ensure a more accurate view that will help in making more effective decisions.
- Use several sources before making a conclusion about the data.
- Examples of sources:
  1. Standardized test scores
  2. Classroom assessments
  3. Portfolios
  4. Demographic Data
  5. Observation/Anecdotal data

### **STEP 3: Analyze the data**

- This step will help us create a detailed picture which will generate discussion and assist the team in identifying trends, patterns, and anomalies.
- Pinpoint the data points for discussion and investigation.
- As patterns emerge, explanations or conclusions can be drawn which can guide interventions and answer questions
- Are there any patterns that “pop out”?

### **STEP 4: Set priorities and goals**

- Based on identified trends and patterns set priorities and goals for school, grade level, class, and individual students.

### **STEP 5: Develop strategies: action plan**

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- This step will address appropriate data-driven actions and measurable relevant goals.
- Identify the process and responsible staff for monitoring progress towards relevant goals.
- Use the SMART goals worksheet to set goals or other format used by the schools for strategic goal setting

### **STEP 6: Monitor Results**

- After implementing the action plan, monitor the results
- Review outcomes
- Decide what worked, what did not
- Discuss next steps in the cycle
- Ensure that data analysis is a continuous cycle of improvement

As school leaders who want to take their schools to the next level of excellence reflective practice must be understood and implemented through the school. The ability to guide reflective practices is integral at every level in the school from students, to teacher to administrators. The philosophy of always asking “why” and digging deeper for answers should be ingrained in everyone in the school. Why are students not doing well in science, but improving in strides in reading? Why don't parents attend school events? Why do teachers leave after a year? Why are parents clamoring to bring their children to our school? What practices are they drawn to, and how can we maintain and improve those practices? Asking questions becomes the norm, and searching for answers from different sources provides validity and diversity in outcomes that will enable schools to continue to grow and develop as learning institutions.

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