



# 4-Lens Analysis of Student Data

Data tells “symptoms”; the underlying “problem” is often less obvious. To be most useful, data must be transformed into information through:

- Reviewing multiple kinds and sources of data (i.e., diagnostic, formative, summative, perceptual)
- Disaggregated analysis
- Problem-solving processes, such as root-cause analysis
- Informed discourse among practitioners and stakeholders

In the medical fields, physicians use Magnetic Resonance Imaging (MRI) to visualize internal structures in great detail. An MRI machine produces a number of images, or “slices” of parts of the human body. The various slices can then be reconstructed to develop a more detailed understanding of the whole of the scanned area of the body.

**Performance Fact’s 4-Lens Analysis of Student Data** process works in a similar manner. The 4-Lens process is a simple

but comprehensive way to probe all kinds of student data, including data from benchmark assessments, state tests, survey data, attendance and disciplinary data, etc. By looking at the data through “four lenses,” practitioners will acquire a richer understanding of “what the data says.”

**Lens 1: GROWTH** focuses on “value-added” in learning and achievement for identical group of students or cohort.

**Lens 2: CONSISTENCY** investigates learning and achievement for different groups of students, or non-cohort.

**Lens 3: EQUITY** provides insights into the learning and achievement by students by subgroup.

**Lens 4: STANDARDS** tells us about student mastery of the academic standards that would prepare them for success at the next level.

By “looking through the data” from four perspectives, the 4-Lens process provides practitioners with more insightful information about student learning and achievement.

The 4-Lens Analysis of Student Data is the first step of Performance Fact’s Data Summit™ methodology. The second step of the Data Summit™ is evidence-based examination of the effectiveness of teaching practices, leadership practices and organizational practices, because they are the precursors to student learning.

Whether your findings about the implementation cycle that just ended turn out to be encouraging or concerning, you will have another chance to choose again; another opportunity to make conscious decisions about your priorities for student learning and professional practices for the next 6-to-12 week implementation cycle. Such disciplined implementation significantly enhances your chances of accomplishing your student learning goals for the school year.

## WHAT YOU WILL DO

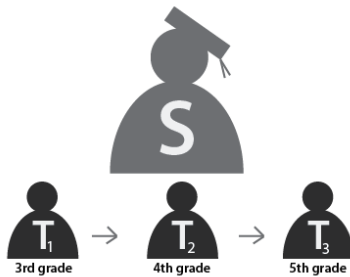
- **ORGANIZE** your student data, making sure you consider student vital signs from multiple sources.
- **PROBE** your student data in depth, using a series of 4-Lens guiding questions.
- **MAKE** inferences about “what the data says”.
- **IDENTIFY** your highest priority Areas of Strength and Areas of Concern based solely on student data.



# 4-Lens Analysis of Student Data

Lens 1

GROWTH



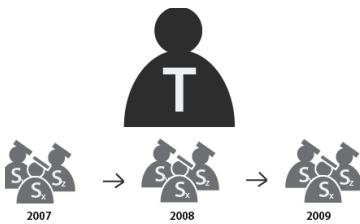
Did achievement improve for identical groups of students (i.e., cohort) from one assessment period to the next?

Example: 2008 4th grade vs. 2009 5th grade vs 2010 6th grade or 2010 1st vs. 2nd benchmark assessments

Example: 2004 5th grade IEP students vs 2007 8th grade vs. 2010 11th grade

Lens 2

CONSISTENCY



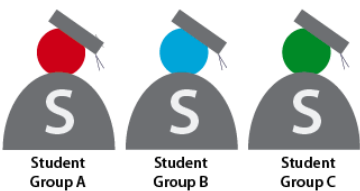
Are results consistent for different groups of students at the same grade-level or same subject from one assessment period to the next?

Example: 2007 3rd grade vs. 2008 3rd grade vs. 2009 3rd grade or 2009 vs. 2010 9th grade attendance rates

Example: 2010 results for Teacher A vs. Teacher B vs. Teacher C or 2009 6th vs. 7th vs. 8th grade results

Lens 3

EQUITY



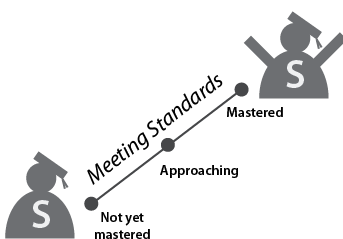
Is the “achievement gap” closing among student groups, regardless of background, condition or circumstance?

Example: 2009 vs. 2010 data by student subgroup

Example: Proficiency rates for Male vs. Female; White student vs. other subgroups; IEP vs. “regular ed” students

Lens 4

STANDARDS



How are students progressing with the essential skills and concepts (i.e., standards) necessary for success at the next level?

Example: Percentage of students scoring 70% or higher on at least 85% of the Standards on benchmark test #1

Example: Percentage of students scoring 70% or higher on the Standards on benchmark tests #1 vs. #2