Robust Learning: Personalized and Prioritized

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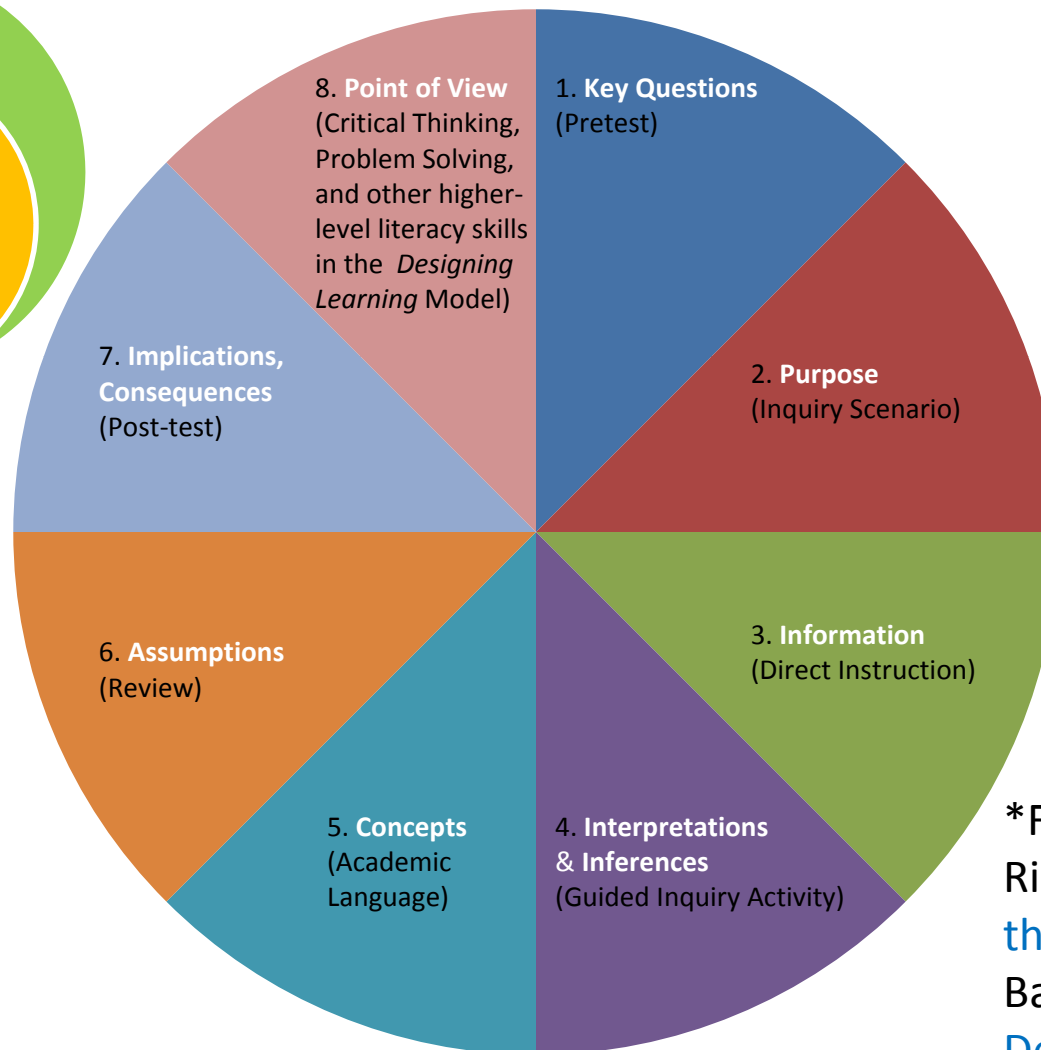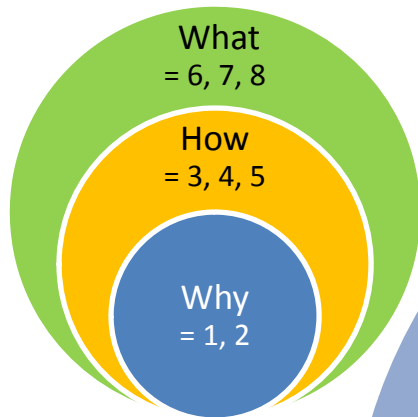(Discussant)

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Director of Statewide Assessment, NE
(Moderator)

Theory of Action

The theory of action in systems of standards, assessment, and accountability is that educators will use data for instructional improvement to benefit all students.
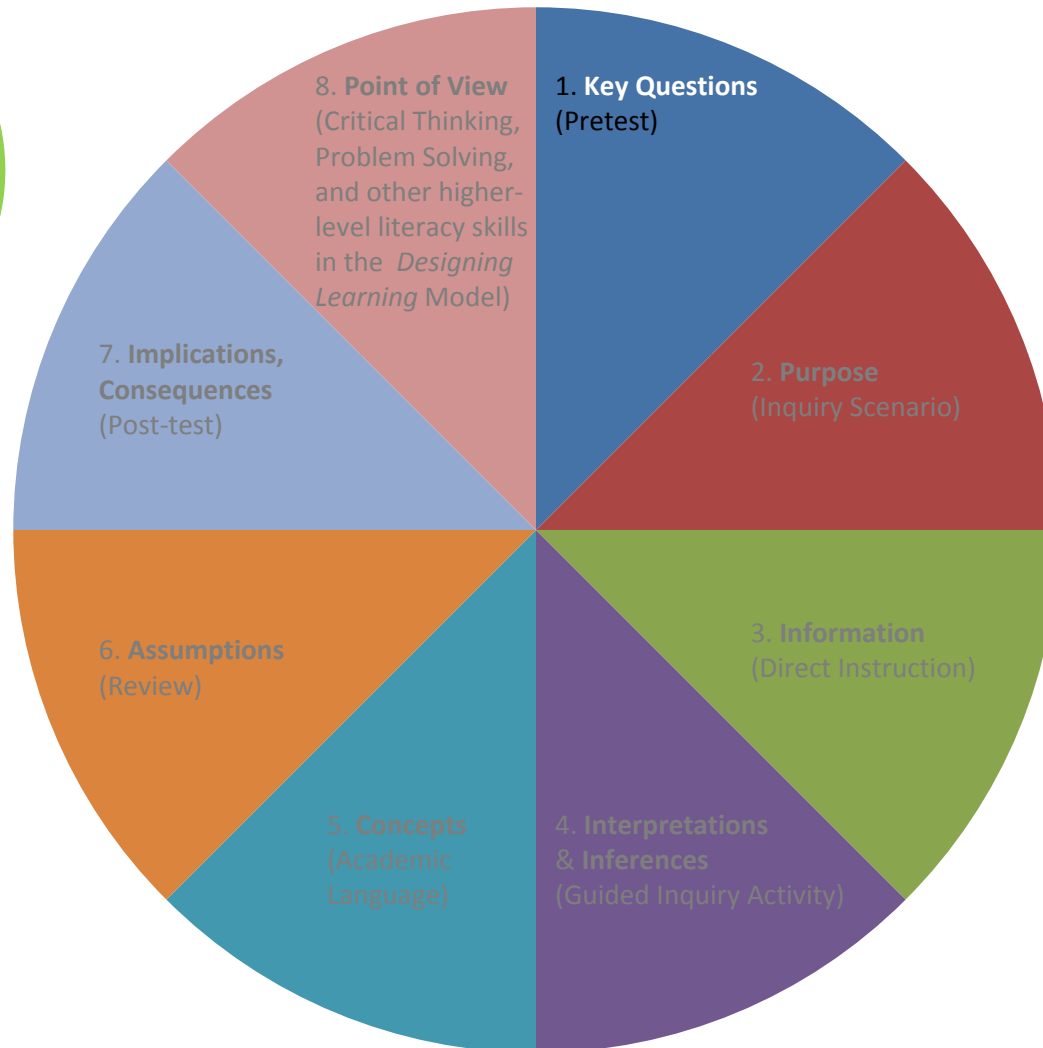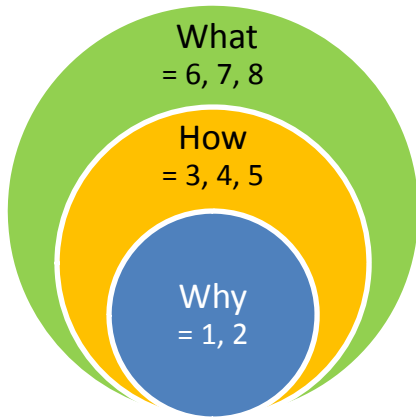
1. Is that happening?
2. What are the obstacles preventing that from happening in some settings?
3. How can those obstacles be removed?

Presentation Framework*

What
= 6, 7, 8

How
= 3, 4, 5

Why
= 1, 2

8. **Point of View** (Critical Thinking, Problem Solving, and other higher-level literacy skills in the *Designing Learning* Model)

1. **Key Questions** (Pretest)

2. **Purpose** (Inquiry Scenario)

7. **Implications, Consequences** (Post-test)

3. **Information** (Direct Instruction)

6. **Assumptions** (Review)

5. **Concepts** (Academic Language)

4. **Interpretations & Inferences** (Guided Inquiry Activity)

*Framework based on Dr. Richard Paul's 8 parts of thinking and Dr. Nathan Balasubramanian's Designing Learning Model

Key Questions

What
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= 3, 4, 5

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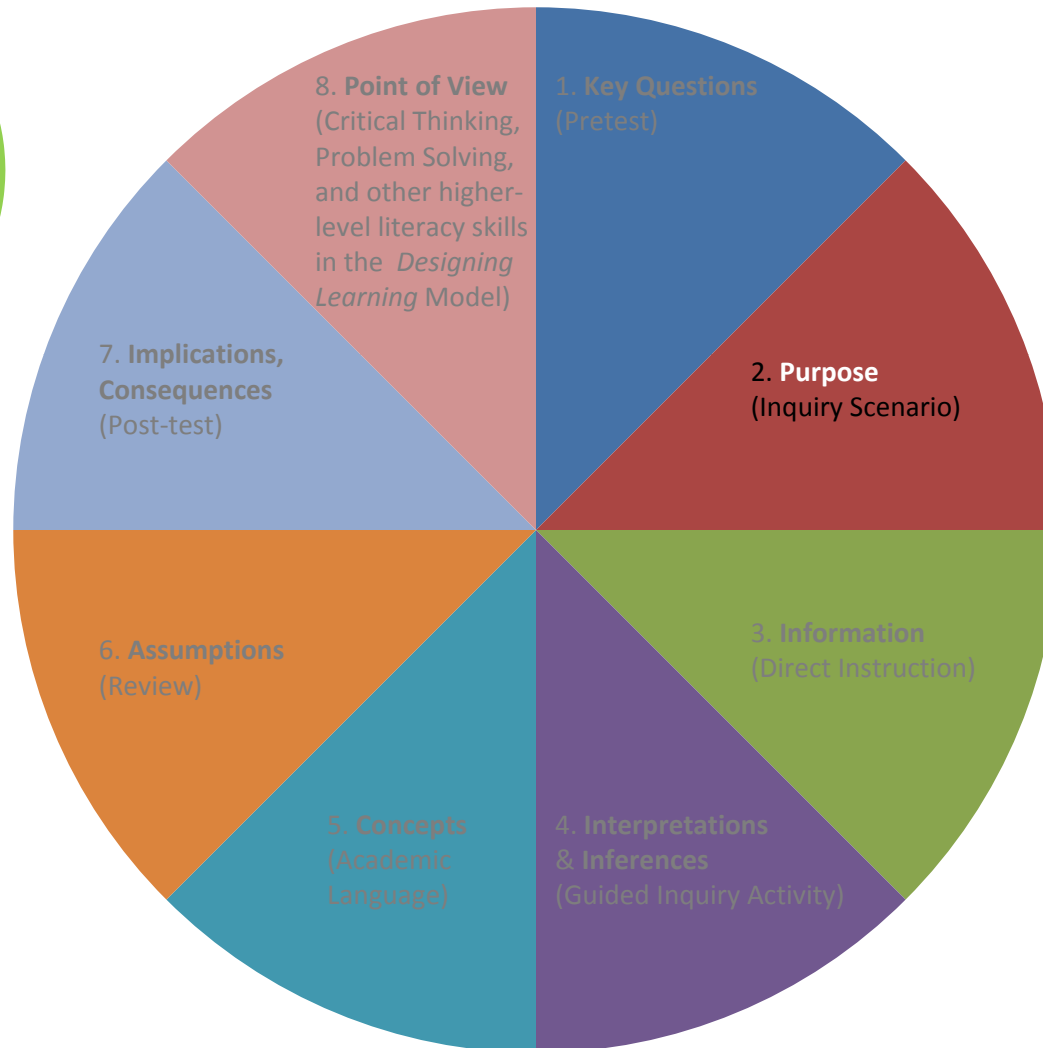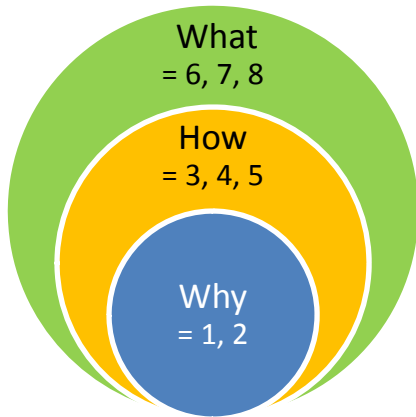
3. **Information** (Direct Instruction)

Key Questions — Why?

- Can we **link** student learning gains to the work of teachers and principals? On a **large-scale**, is **informing** and **improving** instructional practices attainable **system-wide**?

- Can we have our students meet or exceed the new Common Core State Standards without teachers actively **engaging** both students and parents in the **learning process** (from student and parent **perspectives**)?

Purpose

What
= 6, 7, 8

How
= 3, 4, 5

Why
= 1, 2

8. **Point of View** (Critical Thinking, Problem Solving, and other higher-level literacy skills in the *Designing Learning* Model)

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Purpose & Objectives — Why?

- Ensure participants experience – "hands-on and minds-on" – some of the tools for furthering **meaningful conversations** around teaching and learning as we tell our story on capacity building by connecting instruction to student growth and achievement results on state and district assessments

- Show how teachers, students, and parents were motivated on **core competencies** by being transparent about student learning along novice-expert continuums on standards and sub-content areas

Skeptic — State assessments, not "formative"

Why should I "dig" into the TCAP data Item Maps when our district uses MAPS/Acuity testing? Our district doesn't focus on TCAP, but we are required to talk to parents about district's NWEA MAPS / CTB's Acuity testing results during parent teacher conferences.

Purpose — Pre-write & Conversation

What are some significant obstacles you have encountered that prevent teachers and principals from having meaningful conversations o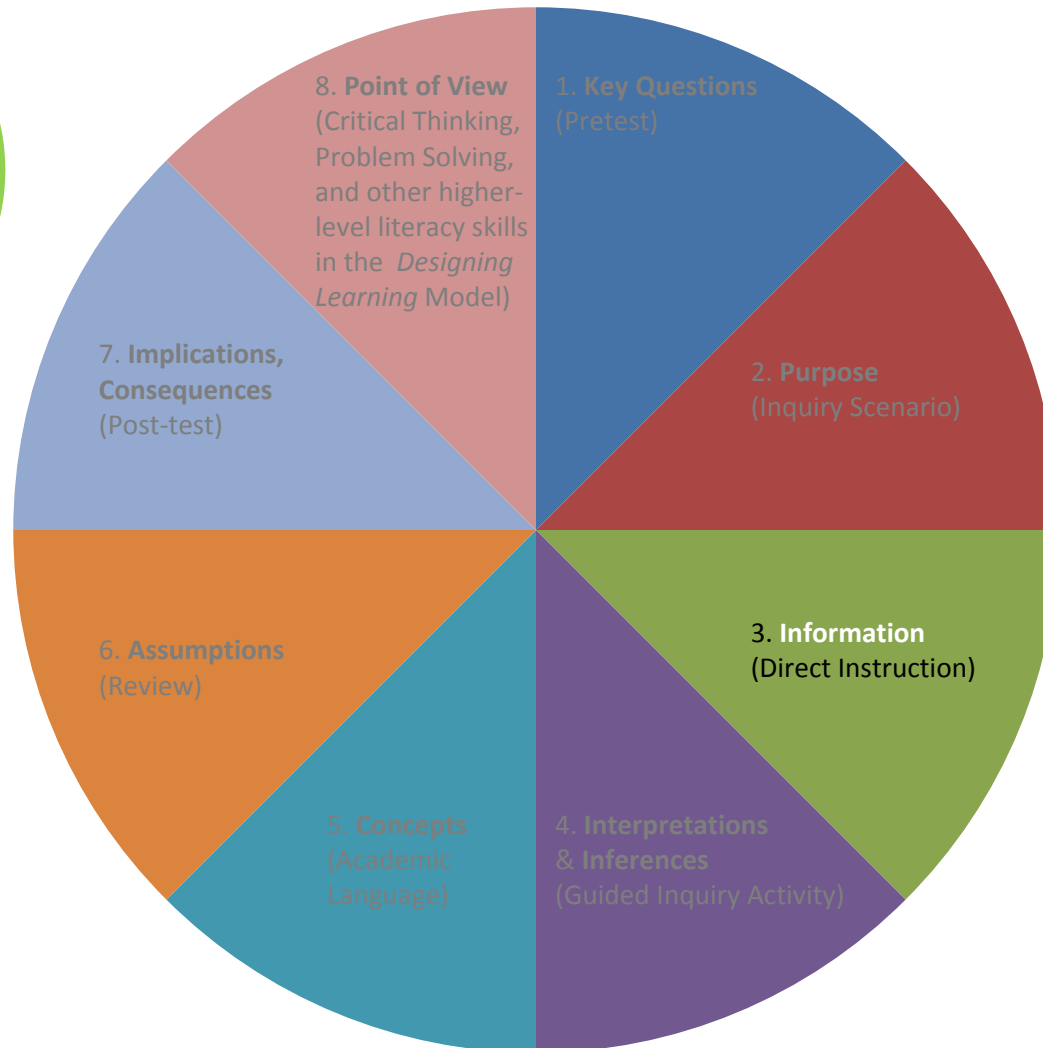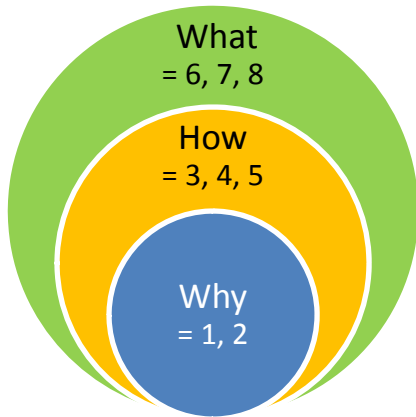n teaching and learning using data . . . . And what are some strategies you have employed to mitigate these obstacles? . . . .

Information

What = 6, 7, 8
How = 3, 4, 5
Why = 1, 2

8. **Point of View** (Critical Thinking, Problem Solving, and other higher-level literacy skills in the *Designing Learning* Model)

1. **Key Questions** (Pretest)

2. **Purpose** (Inquiry Scenario)

3. **Information** (Direct Instruction)

4. **Interpretations & Inferences** (Guided Inquiry Activity)

5. **Concepts** (Academic Language)

6. **Assumptions** (Review)

7. **Implications, Consequences** (Post-test)

Information — How?

- Using **Means with Meaning**

- Goal Setting – **Real Change** vs. Noise

- **HarnessData®** – Leveraging Web-based Tools

- **Quarterly** Comprehensive **Reports** – Quadrant Plots of Schools and Instructional Implications at School Level

Understanding Variation

The Special Cause/ Common Cause Model

Mean (Average)

95% "CI" Lower Limit

95% "CI" Upper Limit

Common Cause

Special Cause

Special Cause
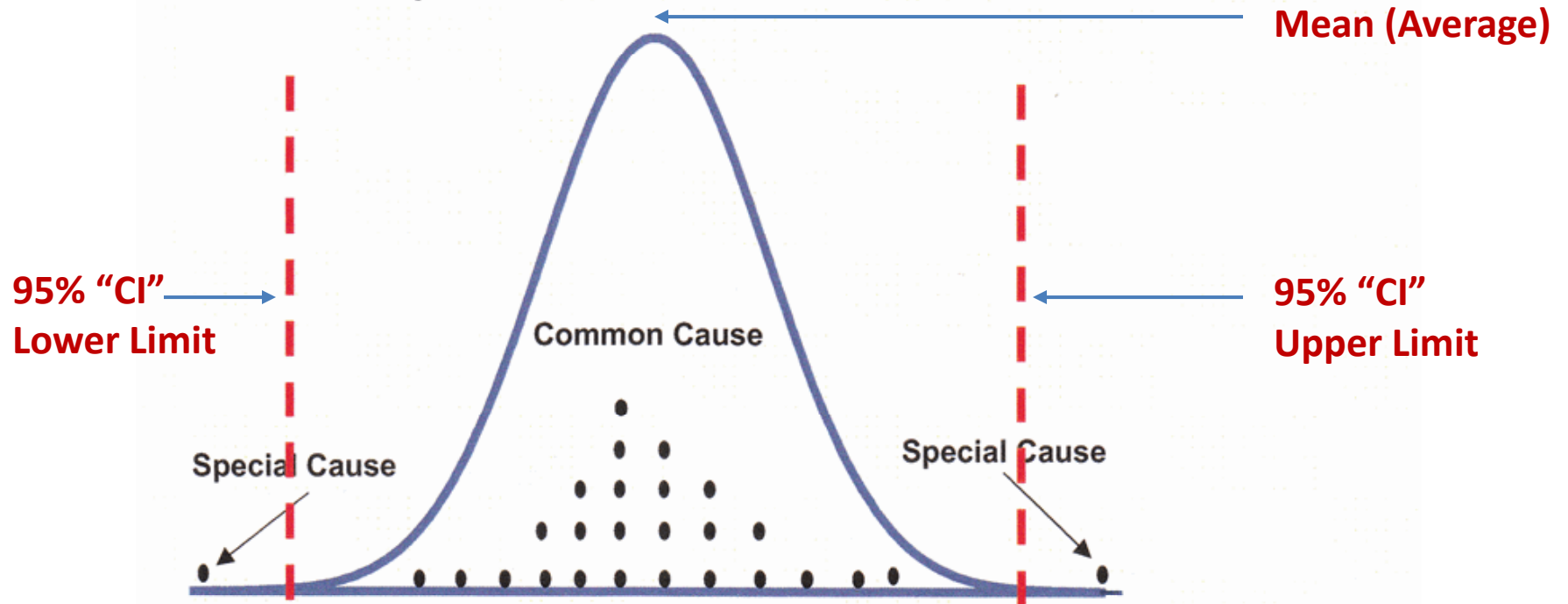
There will always be variability (variation) between people, strategies, learning outcomes, and so on. We need to ask . . .

What is the variation trying to tell us about a **process**, and about the **people** that work within the system?

Two Common Mistakes to Avoid

To **leverage what works** in **instruction**, as leaders, we should know <u>when</u> to ADJUST

➢ Ascribe variation to a special cause, when in fact the cause belongs to a common cause (system) – **False Alarm**

➢ Ascribe variation to a common cause (system), when in fact the cause was special – **Missed Opportunity**

What and how much are students learning?

Norm-Referenced Assessments	Criterion-Referenced Assessments	Value-Added Analyses
Percentile Scores	Scale Scores	Performance Index Scores (one approach)

Some common questions that these scores & analyses might help answer

How does a student's achievement stack up against the achievement of other similar students?

How does a student stack up against the established benchmarks of achievement?

How does a student's current level of achievement stack up against the student's past level of achievement?

What is the relative standing of the student across a broad domain of content?

What content and skills has the student mastered?

What instructional strategies (used by a teacher) might be contributing to student's growth in learning?

Confidence Intervals – Ghosh Method

$$\pi_U = \frac{n}{n+z^2}\left[p + \frac{z^2}{2n} + z\sqrt{\frac{pq}{n} + \frac{z^2}{4n^2}}\right]$$

$$\pi_L = \frac{n}{n+z^2}\left[p + \frac{z^2}{2n} - z\sqrt{\frac{pq}{n} + \frac{z^2}{4n^2}}\right]$$

n = number of students
z = critical value
(**z** = 1.645 for 90%; **z** = 1.96 for 95%; **z** = 2.33 for 98%; **z** = 2.575 for 99%)

p = percentage PROFICIENT
q = difference between 100% and the percent PROFICIENT
π = proportion in the population that falls in the Upper/Lower Limit

Sample "SMART" Growth Goal

Specific, **M**easurable, **A**ttainable, **R**esearch-based, & **T**ime-phased

For example, for a district with a median growth percentile (MGP) of 56 in Math for Hispanic students (and **95% Confidence Interval** value of 3), a SMART goal might be

Improve the median growth percentile (MGP) of Hispanic students in Math by at least 5%* above their last year's MGP (from 56 to ≥ 59)

*(3/56)x100% = 5%

Recently, I created a **Confidence Interval Calculator** for Colorado GT Directors, titled NBs_CI_Calculator. All they had to do was to plug in the number of students (N) and the percentage (%) of students who were Advanced or the Median Growth Percentile in Columns "C" and "D". The 95% Confidence Interval & the % increases were **calculated for them**.

Using the CI Calculator

How do we write achievement goals with TCAP?					
Subject	Gifted/Talented	N	%A	95%CI	% Increase
Math	Yes	919	81.1	2	3%
Reading	Yes	484	42.7	4	9%
Writing	Yes	473	41.7	4	10%
How do we write growth goals with TCAP?					
Subject	Gifted/Talented	N	MGP	95%CI	% Increase
Math	Yes	1017	56	3	5%
Reading	Yes	1021	60	3	5%
Writing	Yes	1020	52	3	6%

Why "SMART" Goals

Specific, **M**easurable, **A**ttainable, **R**esearch-based, & **T**ime-phased

With a "Confidence Interval" ("CI") Calculator, districts and schools should:

- Establish **precise** and **measurable** goals . . .
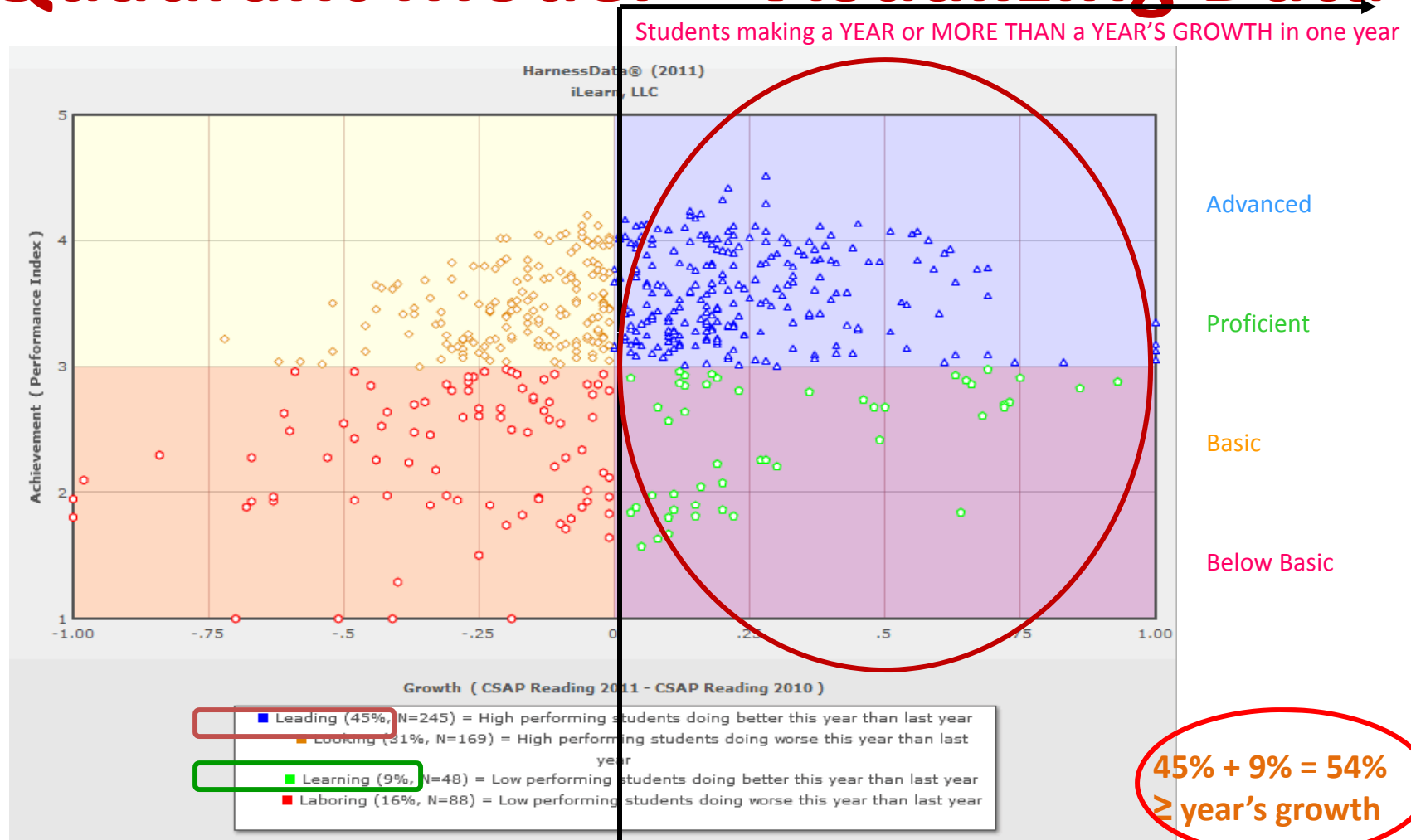
. . . and achieve these goals by:

- Setting **high** learning **expectations** for all students
- Targeting **specific** performance and **thinking skills** for developing **every** student based on their **individual** strengths and needs

Demonstration of HarnessData®

A tool linking **reliable** and **valid** district and state assessment results to teacher and principal work.

https://HarnessData.org

Quadrant Model – Visualizing Data

Students making a YEAR or MORE THAN a YEAR'S GROWTH in one year

HarnessData® (2011)
iLearn, LLC

Advanced

Proficient

Basic

Below Basic

Achievement (Performance Index)

Growth (CSAP Reading 2011 - CSAP Reading 2010)

- ■ Leading (45%, N=245) = High performing students doing better this year than last year
- ■ Looking (31%, N=169) = High performing students doing worse this year than last year
- ■ Learning (9%, N=48) = Low performing students doing better this year than last year
- ■ Laboring (16%, N=88) = Low performing students doing worse this year than last year

45% + 9% = 54% ≥ year's growth

Students LOSING GROUND in one year

Strength Charts – Mining Data

Norm-Referenced **Content Standards**

PLC Quadrant, Growth Percentile, and CSAP 2009 Results

Student	DistrictStudentID	Quadrant	Student Growth Percentile	Overall	Reading Comprehension	Thinking Skills	Use of Literary Information	Literature	Fiction	Fiction and Poetry	Nonfiction	Vocabulary	Poetry
Ackerman, Desiree	536166		39.00	2.43	2.58	2.09	2.81	2.28	2.17		1.00	3.01	2.68
Acosta, Xala	520287	Leading	66.00	3.11	3.11	2.95	2.72	3.57		3.30	2.81	3.28	
Aldaz-Cobarrubia, Whitley	507603	Laboring	36.00	2.70	2.81	2.70	2.38	2.91	2.64		3.61	3.00	2.11
Alonzo, Colton	421041	Leading	22.00	3.43	3.88	3.11	3.32	3.30		3.21	3.67	4.07	
Alvarado, Jerry	520017			3.14	3.24	3.21	2.49	3.20		3.15	2.88	4.99	
Alvarado, Lauren	474756	Looking	55.00	3.28	3.30	3.18	3.20	3.49	3.56		2.15	3.42	3.20
Alvarez, Alexander	334914	Looking	12.00	3.22	3.36	3.25	3.13	3.05		3.09	3.35	2.68	
Amos, Cesar	490761	Learning	79.00	1.70	1.74	1.62	1.00	1.88	1.67		1.00	1.85	1.81
Andersen, Omar	431775	Learning	85.00	2.26	1.97	2.34	2.51	2.53	2.43		1.00	1.94	2.85
Anderson, Fely	360615	Looking	12.00	3.45	3.36	3.31	3.83	3.49		3.54	3.39	2.86	
Anderson, Jorge	396048	Learning	24.00	1.24	1.00	1.65	1.00	1.00	1.40		2.34	1.00	1.00
Arellano, Juan	479055	Leading	59.00	3.00	2.75	3.07	3.03	3.15	3.22		3.02	1.97	3.41
Arritola Rios, Austin	384360	Leading	71.00	3.40	3.41	3.60	2.86	3.85		3.54	3.70	3.10	
Arrona de Jesus, Diana	441033	Learning	61.00	1.98	2.34	1.93	2.16	1.87		2.10	1.92	1.93	
Ashing, Elias	515418	Leading	77.00	4.06	4.09	4.12	3.83	4.11		4.22	3.91	4.99	
Astorga, Kelly	409773		15.00	3.30	3.11	3.22	3.58	3.57	3.51		2.60	3.17	3.39
Avitia, Gabriel	397806	Learning	70.00	2.68	2.60	2.65	3.31	2.00		2.63	2.39	2.16	
Babuska, Brandon	377691	Learning	24.00	2.02	1.99	1.90	3.14	1.95		1.78	2.11	2.21	
Baena, Elias	322134	Laboring	7.00	2.95	3.00	2.79	3.39	2.61		2.96	2.40	3.18	
Baldwin, Abbigail	428571	Looking	64.00	3.86	3.78	4.08	3.75	3.82	4.05		4.00	3.54	4.07

Value-Added   **Criterion-Referenced**   **Sub-content Areas**

Sample "Kid Map" for Goal Setting

Performance Index	Performance Skill	Point for CR	Item Type	DOK
4.59	Given a real world problem-solving situation, use addition, subtraction, or multiplication to solve the problem.	2 of 2	CR	2
4.04	Using pictures, diagrams, numbers or words, demonstrate addition and subtraction of whole numbers with 2-digit numbers.	3 of 3	CR	3
3.74	Using money notation, add and subtract commonly used decimals in which sums and differences should not exceed $10.00.		MC	1
3.28	Using pictures, demonstrate addition and subtraction of proper fractions with common denominators of four or less.		MC	2
2.98	Use estimation strategies with whole numbers prior to performing the operation and the operations of addition and subtraction (for example, front-end estimation, estimation by rounding, friendly numbers, flexible rounding, clustering).		MC	2
2.97	Given a real world problem-solving situation, use addition, subtraction, or multiplication to solve the problem.	1 of 2	CR	2
2.97	Using pictures, diagrams, numbers or words, demonstrate addition and subtraction of whole numbers with 2-digit numbers.	2 of 3	CR	3
2.02	Demonstrate understanding of basic multiplication facts of 1's, 2's, 3's, 5's, and 10's.		MC	1
1.85	Demonstrate three basic operations of whole numbers (for example, addition and subtraction of three digits, and multiplication of multiples of ten by 1, 2, 3, 5).		MC	1
1.62	Using pictures, diagrams, numbers or words, demonstrate addition and subtraction of whole numbers with 2-digit numbers.	1 of 3	CR	3

Expert

Novice

Higher-level Thinking & Reasoning

Lower-level Thinking & Reasoning

Feedback from Principals

- Your data analysis and reports helps us **reflect** on what we might do now without compromising on content

- It is helping us find ways to **celebrate** our teachers' work

- It is leading to **great conversations** with our teachers

- This data is also helping us reflect and **evaluate** instructional practices

More Principal Feedback

- Our teachers are **better consumers** of data now

- It is allowing us to have **meaningful** conversations with data and staff for the Unified Improvement Plans

- I have appreciated the **Incremental Proficiency** ("IP") scores. Teachers are embracing it as well

- Your reports give us valuable information and **guides our work** beyond what Acuity provides
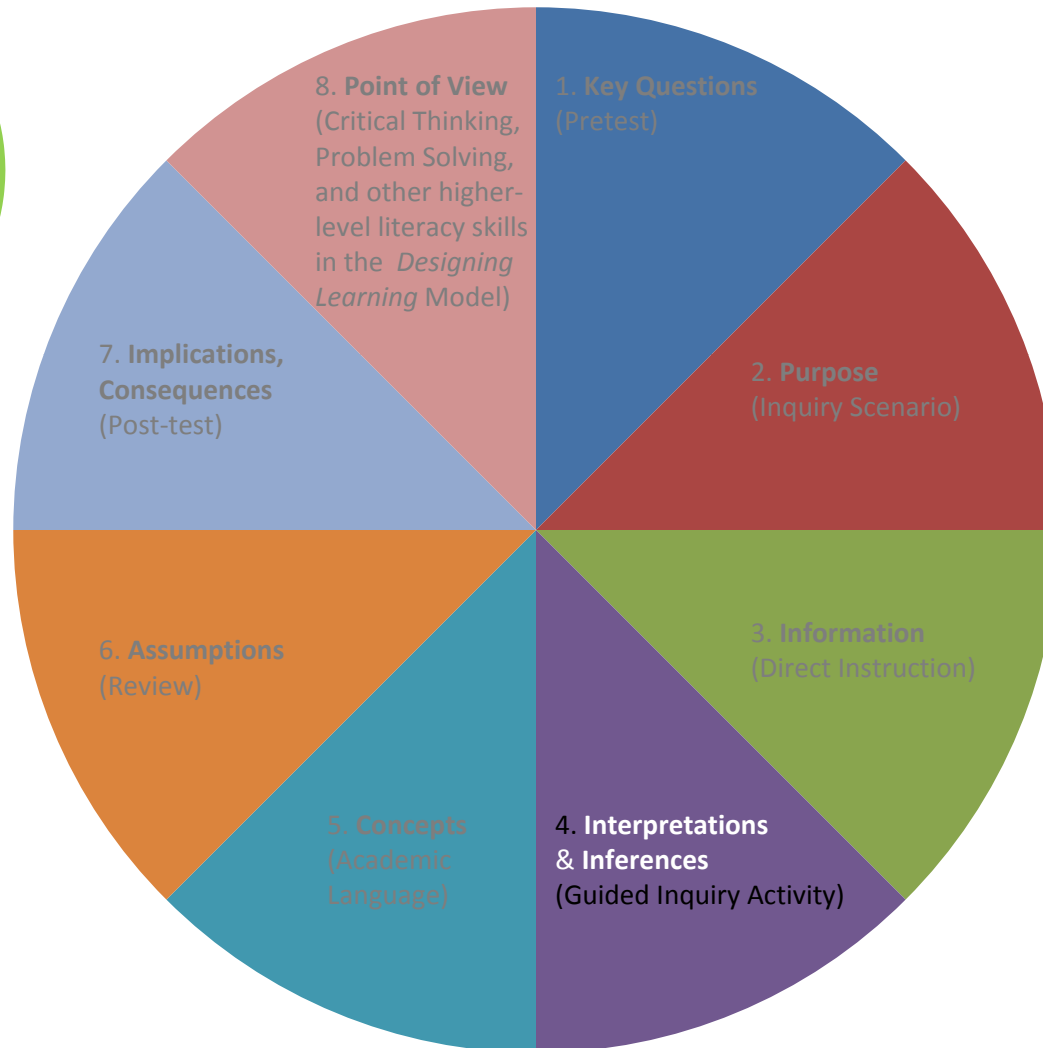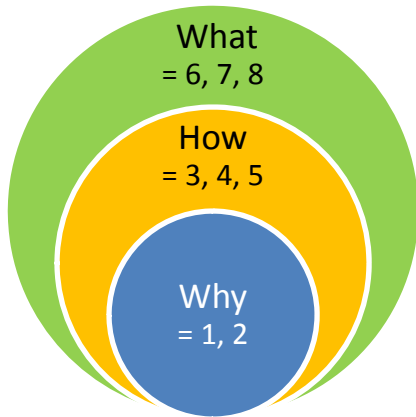
Other Principal and Parent Feedback

- We are beginning to **influence** our teacher **behavior** with the data

- All of us enjoy getting your report

Parents and Board members too have felt they have better understanding of data this past year.

- I learned a lot about **data** and how to **interpret** it. I felt like the District Accountability Committee was really looking at accountability by **using** the data

Interpretations and Inferences

What
= 6, 7, 8

How
= 3, 4, 5

Why
= 1, 2

8. **Point of View** (Critical Thinking, Problem Solving, and other higher-level literacy skills in the *Designing Learning* Model)

1. **Key Questions** (Pretest)

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7. **Implications, Consequences** (Post-test)

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4. **Interpretations & Inferences** (Guided Inquiry Activity)

5. **Concepts** (Academic Language)

Interpretations and Inferences – How?

Understanding Scale Scores

Growth and Achievement Definitions

Guiding Questions for our Conversation

- PLC Quadrants

- Strength Charts

- Kid Maps

- Quadrant Plots and Incremental Proficiency

Understanding scale scores*

A scale score is a transformation of a raw score (number of items answered correctly) into an equal-interval scale, using **cut scores** determined through the process of standard setting. For e.g.,

Table 7.2 Proficiency Level Ranges for Grades 3 – 8, and 11 Reading

Grade	Below Basic	Basic	Proficient	Advanced
3	300 - 519	520 - 583	584 - 660	661 - 975
4	300 - 569	570 - 633	634 - 699	700 - 975
5	300 - 586	587 - 638	639 - 706	707 - 975
6	300 - 593	594 - 649	650 - 717	718 - 975
7	300 - 609	610 - 667	668 - 745	746 - 975
8	300 - 623	624 - 675	676 - 748	749 - 975
11	50 - 144	145 - 158	159 - 177	178 - 250

* From 2009 **PAWS Technical Report**. See pp. 89-90 for complete list

Achievement and Growth Definitions

PAWS (Proficiency Assessments For Wyoming Students) **Proficiency Levels** =>
4.00-4.99 = **Advanced**; **3.00**-3.99 = **Proficient**;
2.00-2.99 = **Basic**; **1.00**-1.99 = **Below Basic**

Performance Index = Proficiency Level + Incremental Proficiency
Incremental Proficiency = (Student Scale Score – LOSS)/(HOSS – LOSS)

High Achievement ≥ Proficient = 3.00 or above
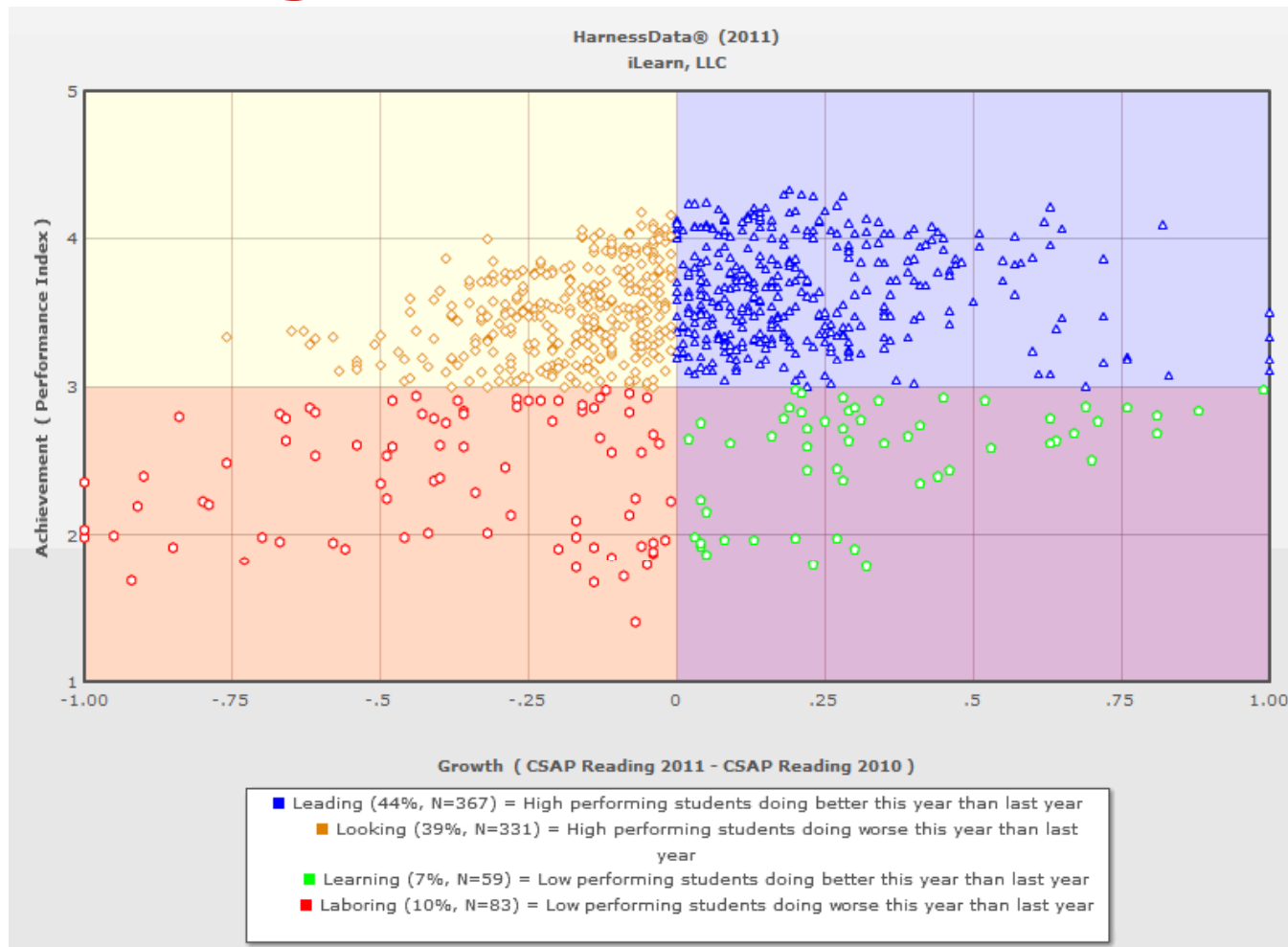Low Achievement < Proficient = 2.99 or below

Value-added Growth = Students' PAWS Performance Index (Year N) - Students' PAWS
    Performance Index (Year N-1)
Low Growth ≤ -0.01 or below
High Growth ≥ +0.01 or above
Typical Growth = 0.00

Visualizing Data with PLC Quadrants

HarnessData® (2011)
iLearn, LLC

Growth (CSAP Reading 2011 - CSAP Reading 2010)

■ Leading (44%, N=367) = High performing students doing better this year than last year
■ Looking (39%, N=331) = High performing students doing worse this year than last year
■ Learning (7%, N=59) = Low performing students doing better this year than last year
■ Laboring (10%, N=83) = Low performing students doing worse this year than last year

Some Questions on PLC Quadrants

- What information and insights can you glean from the graph?

- What are some questions you will be asking (yourself, your colleagues, and your teachers) as a district/building leader?

Mining Data with Strength Charts

PLC Quadrant, Growth Percentile, and CSAP 2011 Results

Quadrant	Acuity A IP	Acuity B IP	Acuity C IP	Acuity Growth	Overall	Reading Comprehension	Thinking Skills	Use of Literary Information	Literature	Fiction	Fiction and Poetry	Nonfiction	Vocabulary	Poetry
Looking					3.25	3.20	3.44	3.21	3.19	3.36		3.12	3.87	2.64
Looking	0.52	0.58	0.54	4.00	3.20	3.17	3.48	2.84	3.31		3.55	3.33	2.22	
Looking	0.46	0.49	0.55	16.00	3.29	3.40	2.93	3.42	3.30	3.11		3.26	3.71	3.11
Leading					3.31	3.49	3.24	3.52	2.96	3.02		3.10	4.08	3.48
Looking	0.76	0.68	0.75		3.96	4.12	3.87	3.65	4.03		4.06	3.95	4.99	
Leading					3.61	3.64	3.60	3.44	3.70	3.64		3.76	3.71	3.36
Laboring					2.84	3.05	2.88	2.95	2.29	2.07		3.35	3.30	2.55
	0.59	0.71	0.81	56.00	4.12	4.99	4.24	4.09	3.84		4.03	4.20	4.99	
	0.49	0.54	0.52	7.00	3.45	3.26	4.00	3.09	3.94		3.74	3.34	3.50	
Looking	0.51	0.48	0.56	9.00	3.33	3.23	3.60	3.72	2.96	3.31		3.45	2.91	3.41
Learning	0.36	0.35	0.43	12.00	2.83	3.13	2.20	3.20	2.33	2.07		2.30	3.58	3.53
	0.38	0.34	0.38		2.58	2.58					2.27	2.30	3.08	
	0.54	0.72	0.58	9.00	3.48	3.58	2.79	3.73	3.78		3.35	3.32	3.66	
	0.63	0.52	0.60		3.60	3.66	3.43	3.87	3.46		3.80	3.47	3.33	
Leading					4.03	4.06	3.95	3.89	4.14	4.05		4.06	4.01	4.10
Looking					4.00	4.03	3.85	3.89	4.03	3.90		4.06	3.95	4.02
	0.44	0.52	0.59	27.00	3.25	3.25					3.16	3.16	3.65	
Looking	0.96	0.65	0.68		3.76	3.82	3.58	3.81	3.80	4.06		3.82	3.41	3.70
Looking					3.26	3.31	4.01	3.00	3.02	3.06		3.31	3.60	4.07
Learning	0.31	0.28	0.51	30.00	1.97	1.92	2.40	1.95	1.99	2.23		1.90	1.94	2.61
Looking	0.61	0.62	0.58		3.50	3.68	3.21	3.55	3.57		3.32	3.42	4.99	
Looking	0.67	0.73	0.99	100.00	4.01	4.06	4.07	3.87	3.97	3.91		4.02	4.16	4.13
Looking	0.59	0.56	0.58		3.55	3.37	3.34	3.79	3.78		3.51	3.38	3.76	
Leading	0.55	0.65	0.80	56.00	3.66	3.69	3.56	3.82	3.62	3.85		3.57	3.28	4.02
Looking	0.58	0.62	0.60	5.00	3.15	3.27	3.13	3.41	2.60	3.01		3.27	3.62	2.32
Learning	0.50	0.49	0.50		2.84	3.01	2.60	2.76	2.88		2.58	3.03	2.74	

Some Questions on Strength Charts

- What information and insights can you glean from the chart?

- What are some questions you will be asking (yourself, your colleagues, and your teachers) as a district/building leader?

Understanding Scale Scores & Growth

However, a .01 change in the Advanced Performance Level is not the same as a .01 change in the Proficient Performance Level or lower. The learning scale in the "Kid Maps" is a **logarithmic scale**.

To understand this difference, let's listen to changes in sound intensity in decibels

Acuity Transformed & Aligned to TCAP

LANGUAGE ARTS - PREDICTIVE A

Perf. Index	1.00-1.99	2.00-2.99	3.00-3.99	4.00-4.99
Grade	Unsatisfactory	Partially Proficient	Proficient	Advanced
3	0.00-0.05	0.06-0.28	0.29-0.81	0.82-0.99
4	0.00-0.15	0.16-0.37	0.38-0.99	
5	0.00-0.30	0.31-0.40	0.41-0.79	0.80-0.99
6	0.00-0.25	0.26-0.41	0.42-0.68	0.69-0.99
7	0.00-0.30	0.31-0.44	0.45-0.71	0.72-0.99
8	0.00-0.30	0.31-0.44	0.45-0.75	0.76-0.99
9	0.00-0.03	0.04-0.38	0.39-0.99	
10	0.00-0.18	0.19-0.39	0.40-0.76	0.77-0.99

MATH - PREDICTIVE A

Perf. Index	1.00-1.99	2.00-2.99	3.00-3.99	4.00-4.99
Grade	Unsatisfactory	Partially Proficient	Proficient	Advanced
3	0.00-0.11	0.12-0.36	0.37-0.52	0.53-0.99
4	0.00-0.25	0.26-0.43	0.44-0.59	0.60-0.99
5	0.00-0.16	0.17-0.43	0.44-0.55	0.56-0.99
6	0.00-0.28	0.29-0.42	0.43-0.52	0.53-0.99
7	0.00-0.31	0.32-0.47	0.48-0.58	0.59-0.99
8	0.00-0.33	0.34-0.46	0.47-0.58	0.59-0.99
9	0.00-0.41	0.42-0.50	0.51-0.61	0.62-0.99
10	0.00-0.37	0.38-0.50	0.51-0.77	0.78-0.99

MAP Transformed & Aligned to TCAP

READING

Perf. Index	1.00—1.99	2.00—2.99	3.00—3.99	4.00—4.99
Grade	Unsatisfactory	Partially Proficient	Proficient	Advanced
3	0.00-0.09	0.10-0.36	0.37-0.78	0.79-0.99
4	0.00-0.26	0.27-0.49	0.51-0.78	0.79-0.99
5	0.00-0.31	0.32-0.48	0.49-0.77	0.79-0.99
6	0.00-0.35	0.36-0.52	0.53-0.78	0.79-0.99
7	0.00-0.42	0.43-0.56	0.57-0.82	0.84-0.99
8	0.00-0.41	0.43-0.58	0.59-0.81	0.83-0.99
9	0.00-0.26	0.27-0.51	0.53-0.84	0.85-0.99
10	0.00-0.36	0.37-0.59	0.60-0.86	0.88-0.99

MATH

Perf. Index	1.00—1.99	2.00—2.99	3.00—3.99	4.00—4.99
Grade	Unsatisfactory	Partially Proficient	Proficient	Advanced
3	0.00-0.15	0.16-0.39	0.41-0.59	0.61-0.99
4	0.00-0.23	0.24-0.43	0.44-0.61	0.63-0.99
5	0.00-0.27	0.28-0.44	0.45-0.59	0.60-0.99
6	0.00-0.35	0.37-0.52	0.54-0.67	0.68-0.99
7	0.00-0.38	0.39-0.57	0.59-0.72	0.74-0.99
8	0.00-0.43	0.44-0.60	0.61-0.73	0.74-0.99
9	0.00-0.48	0.49-0.67	0.68-0.80	0.82-0.99
10	0.00-0.50	0.51-0.69	0.70-0.86	0.87-0.99

Standards and Assessments

Standard 1
"PI" = 4.99

Standard 2
Expert

Standard 3, etc.
"IP" = 0.99

"PI" = Performance Index Scores

"IP" = Incremental Proficiency Scores

"PI" = 1.00

Novice

"IP" = 0.00
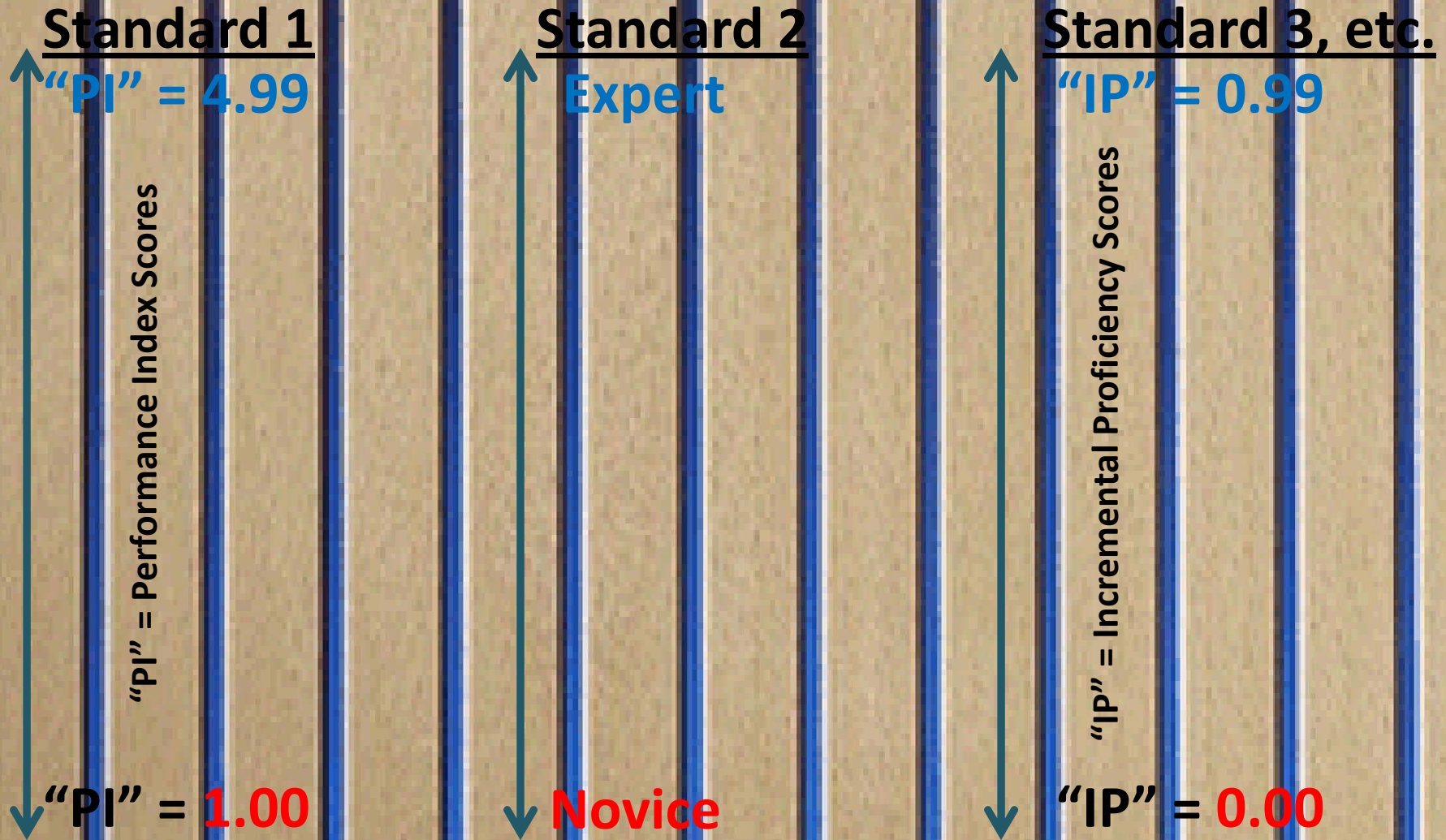
Leveraging Science of Measurement for Teaching and Learning

https://harnessdata.org/Item_Maps/GR3-10_IMbCA_2007_2010.html

Some Questions on "Kid Maps"

- What information and insights can you glean from the "Kid Maps"?

- What are some questions you will be asking (yourself, your colleagues, and your teachers) as a district/building leader?

Balasubramanian & Bankes, 2012

Transparency Rules with Quadrant Plots

Balasubramanian & Bankes, 2012
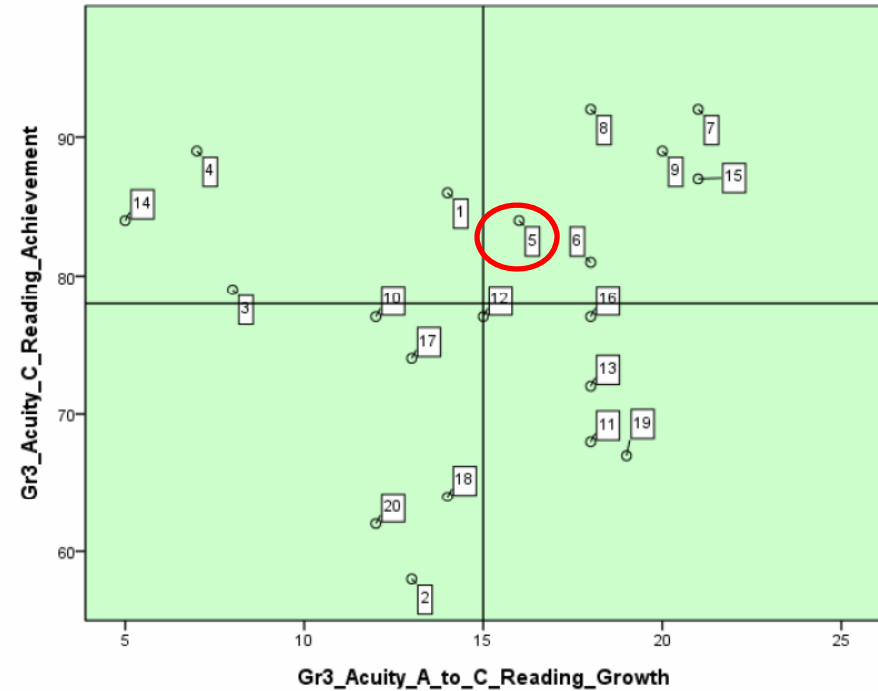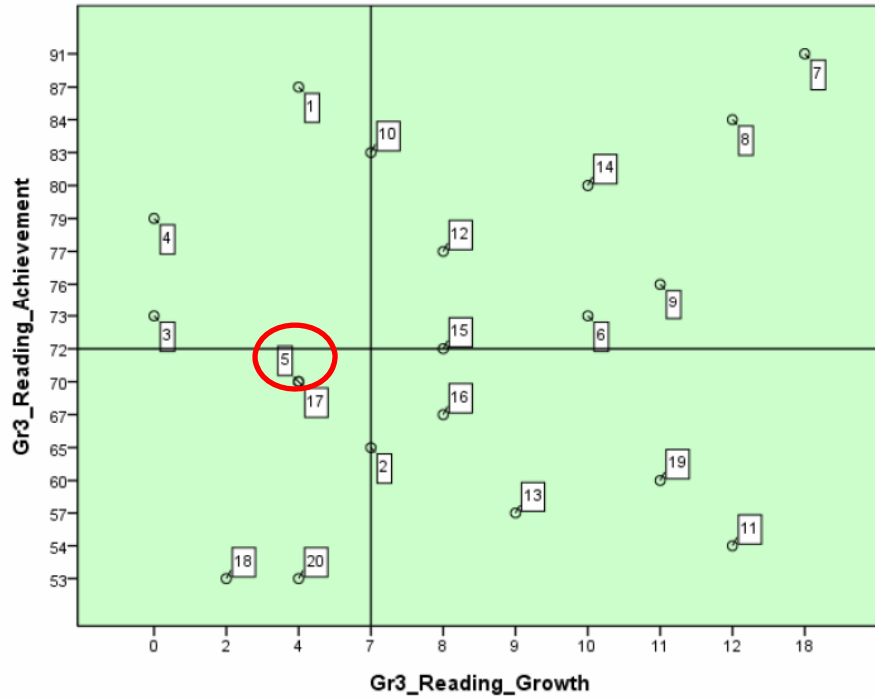
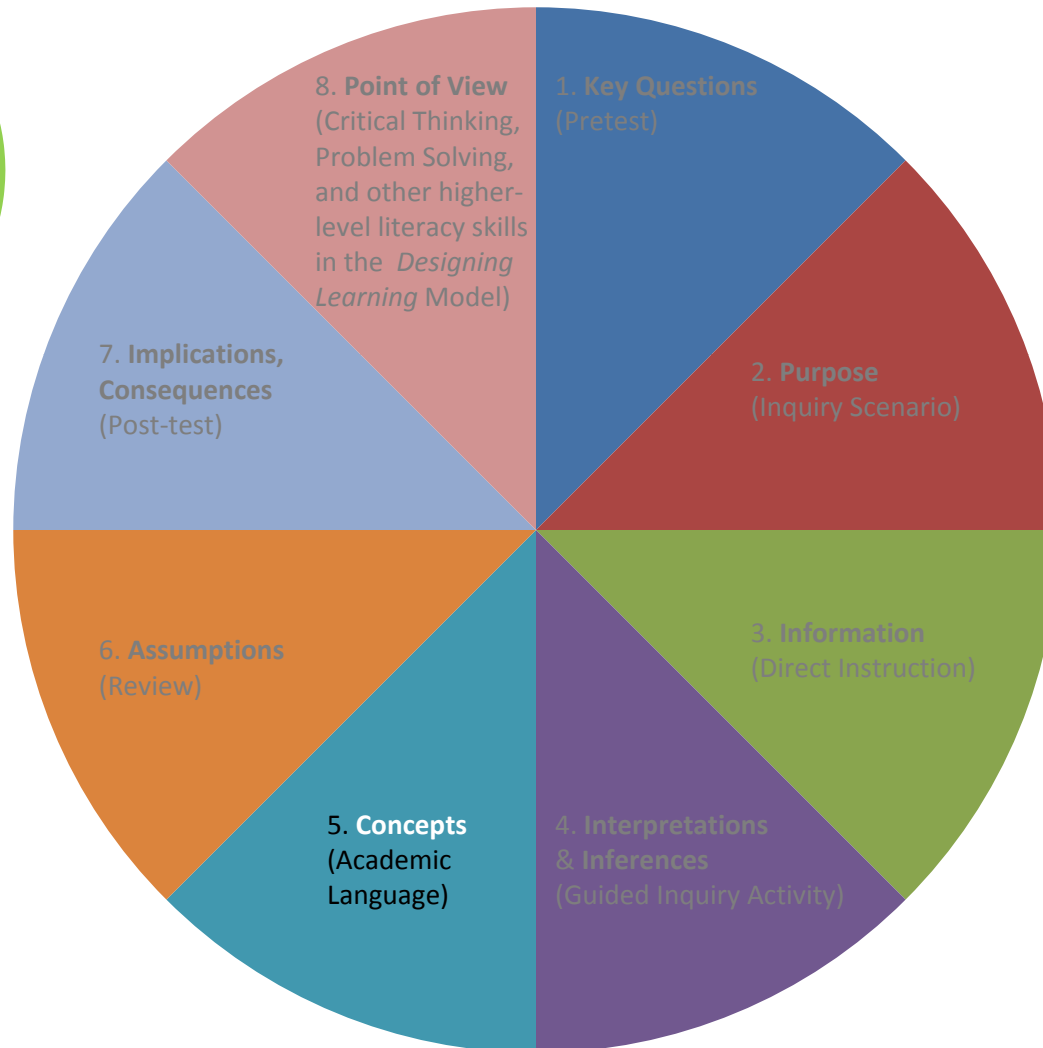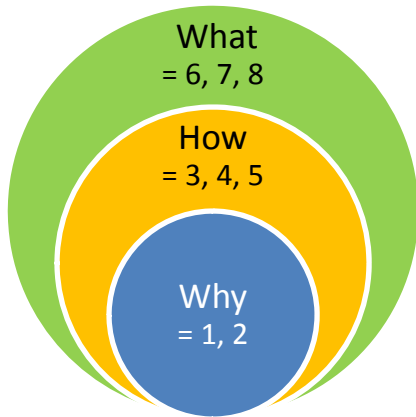# Instructional Implications of "IP" Scores

GRADE 3 Acuity A Results			GRADE 3 English LA (READING) Acuity B Results and Predictions for 2012 TCAP						GRADE 3 Growth from Acuity A to Acuity B (Normalized)		
All Students			All Students			TCAP Proficient & Advanced Students					
N	Mean A IP	SEM	N	Mean B IP	SEM	N	Mean B IP	SEM	%P&A	N	Growth Mean	SEM
70	0.46	0.02	70	0.48	0.02	61	0.52	0.01	87%	68	4%	2%
37	0.36	0.03	37	0.42	0.03	24	0.51	0.01	65%	37	7%	3%
30	0.43	0.03	30	0.43	0.03	22	0.51	0.01	73%	30	0%	5%
47	0.48	0.02	47	0.49	0.03	37	0.56	0.02	79%	46	0%	4%
61	0.40	0.02	61	0.43	0.02	43	0.52	0.02	70%	61	4%	3%

GRADE 3 Acuity A Results			GRADE 3 English LA (READING) Acuity C Results and Predictions for 2012 TCAP						GRADE 3 Growth from Acuity A to Acuity C (Normalized)		
All Students			All Students			TCAP Proficient & Advanced Students					
N	Mean A IP	SEM	N	Mean C IP	SEM	N	Mean C IP	SEM	%P&A	N	Growth Mean	SEM
71	.46	.02	71	.53	.01	61	.56	.01	86%	69	14%	.02
36	.36	.03	36	.45	.03	21	.56	.02	58%	36	13%	.02
29	.43	.03	29	.50	.02	23	.55	.01	79%	29	8%	.04
45	.50	.02	45	.54	.02	40	.56	.01	89%	43	7%	.03
57	.39	.02	57	.50	.02	48	.55	.01	84%	57	16%	.03

Some Questions on QPs & IPs

- What information and insights can you glean from the graphs and charts?

- What are some questions you will be asking (yourself, your colleagues, and your teachers) as a district/building leader?

Concepts

What
= 6, 7, 8

How
= 3, 4, 5

Why
= 1, 2

8. **Point of View** (Critical Thinking, Problem Solving, and other higher-level literacy skills in the *Designing Learning* Model)

1. **Key Questions** (Pretest)

2. **Purpose** (Inquiry Scenario)

3. **Information** (Direct Instruction)

4. **Interpretations & Inferences** (Guided Inquiry Activity)

5. **Concepts** (Academic Language)

6. **Assumptions** (Review)

7. **Implications, Consequences** (Post-test)

Balasubramanian & Bankes, 2012

Concepts — How? Ideas First, Words Next

"One has to already to know something in order to be capable of asking a thing's name" — Ludwig Wittgenstein (1958)

1. Confidence Interval Calculator

2. Criterion-Referenced Achievement

3. False Alarm

4. Logarithmic "Kid Map" Scale

5. Missed Opportunity

6. Normative Growth

7. Performance Levels (Below Basic/Unsatisfactory; Basic/Partially Proficient; Proficient; Advanced)

8. Quadrant Labels

9. Laboring; Leading; Learning; Looking
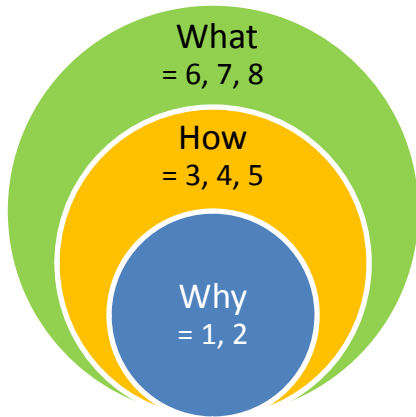
10. Value-added Growth

Goal Setting

- Use "Strength Charts" and "Kid Maps" with parents and students to **co-opt them** in the learning process during goal setting in "Plans"

- Student can see and pace themselves on this "**universal measuring stick**" for learning (1.00-4.99 scale on state assessments and 0.00-0.99 scale on interim assessments)

Motivate and Connect with Purpose

By students tracking their learning progress on "**novice—expert**" continuums, they

- Connect learning with a **purpose**
- Develop **confidence** in their own learning ability
- **Think** harder and smarter
- Learn **faster** and better
- Find **learning fun** and enjoyable

Assumptions

What
= 6, 7, 8

How
= 3, 4, 5

Why
= 1, 2

8. **Point of View** (Critical Thinking, Problem Solving, and other higher-level literacy skills in the *Designing Learning* Model)

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Assumptions — What?

1. (Current) Limitations of Standardized Assessments

2. Power of Meaningful Conversations

3. Understanding "What and How Much Students are Learning"

- Norm-Referenced
- Criterion-Referenced
- Value-Added

Recap of meaningful conversations

- Understand existing state

- Plan for desired state

- Identify barriers and constraints

- Find solutions to barriers and constraints

- Use data to ask questions and tell the story

- Bring focus and intentionality to the work – Learning *is* the work

- Use data to evaluate progress

What and how much are students learning?

Norm-Referenced Assessments	Criterion-Referenced Assessments	Value-Added Analyses
Percentile Scores	Scale Scores	Performance Index Scores (one approach)

Some common questions that these scores & analyses might help answer

How does a student's achievement stack up against the achievement of other similar students?

What is the relative standing of the student across a broad domain of content?

How does a student stack up against the established benchmarks of achievement?

What content and skills has the student mastered?

How does a student's current level of achievement stack up against the student's past level of achievement?

What instructional strategies (used by a teacher) might be contributing to student's growth in learning?

Balasubramanian & Bankes, 2012

In Conclusion . . . We learned about

- An **intuitive**, **transparent**, **easy to understand**, web-based, outcome-analytic solution,

- That can drive professional learning community (PLC) **conversations**,

- To craft **personalized** instructional strategies and interventions for every student,

- Which can specifically and effectively be documented in students' **Individualized Plans**,

- For collaboratively and continuously **improving instructional practices** with "SMART" goal setting and monitoring them throughout the year.
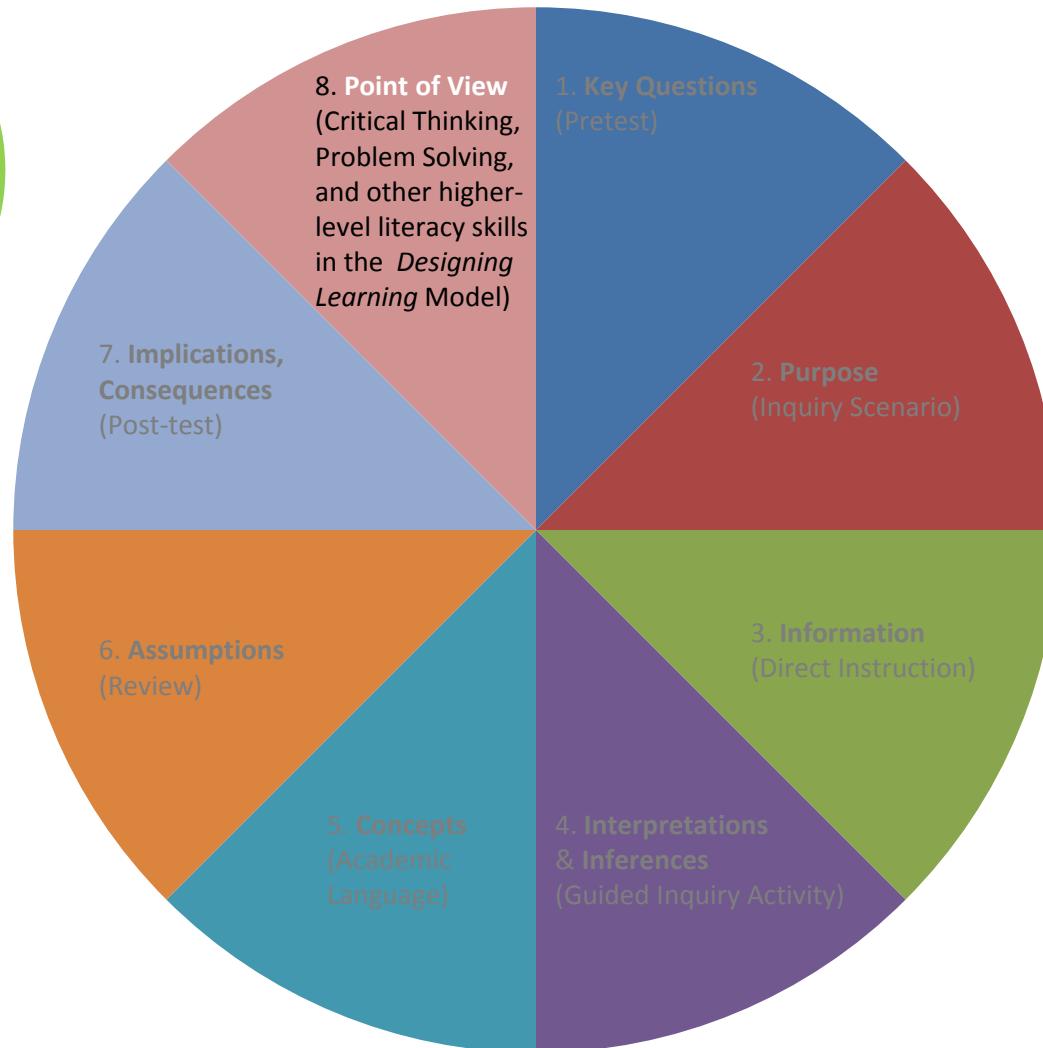
Implications and Consequences

What
= 6, 7, 8

How
= 3, 4, 5

Why
= 1, 2

1. **Key Questions**
(Pretest)

2. **Purpose**
(Inquiry Scenario)

3. **Information**
(Direct Instruction)

4. **Interpretations**
& **Inferences**
(Guided Inquiry Activity)

5. **Concepts**
(Academic
Language)

6. **Assumptions**
(Review)

7. **Implications,
Consequences**
(Post-test)
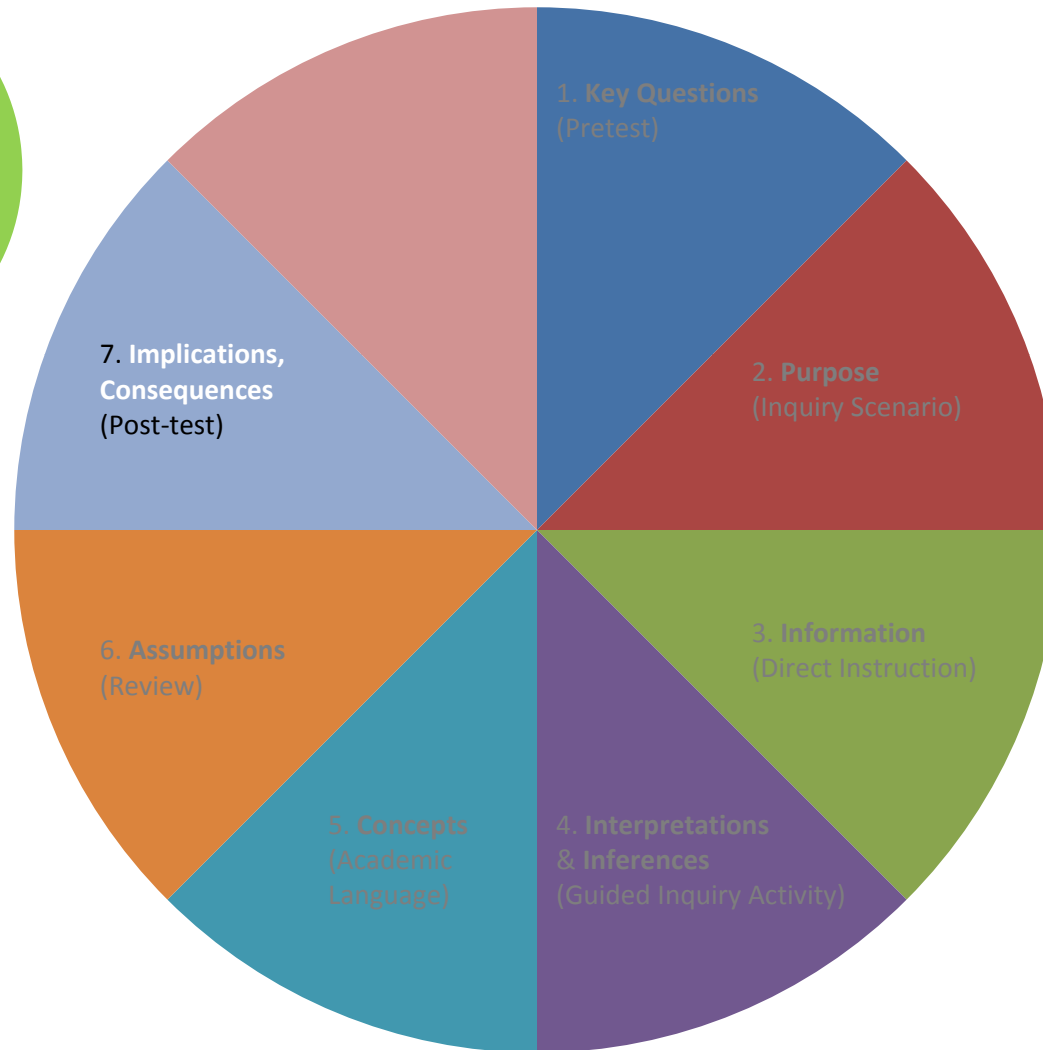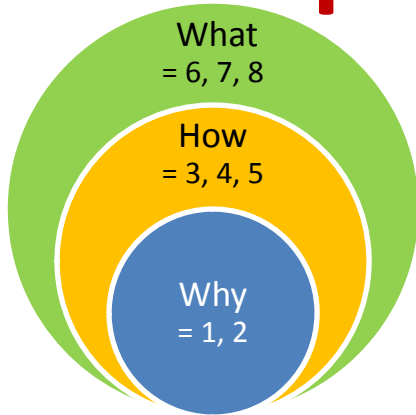
Implications & Consequences — What?

Post-test

Point of View

What = 6, 7, 8

How = 3, 4, 5

Why = 1, 2

8. **Point of View** (Critical Thinking, Problem Solving, and other higher-level literacy skills in the *Designing Learning* Model)

1. Key Questions (Pretest)

2. **Purpose** (Inquiry Scenario)

3. **Information** (Direct Instruction)

4. **Interpretations & Inferences** (Guided Inquiry Activity)

5. **Concepts** (Academic Language)

6. **Assumptions** (Review)

7. **Implications, Consequences** (Post-test)

Point of View — What?

Despite (current) limitations of district and state assessments in measuring 21st century skills, we can still leverage principles from the science of measurement "to **ensure** that **all students learn and grow**" on the novice-expert continuums by continually acting on these assessment results.

Closing with a Teacher Reflection

"I really do try to improve as a teacher, but when you don't know what it is you're not doing you keep doing the same thing because you have no new information to change what you're doing."

You have received **plenty of new information today**. Please take a few minutes to record your Journal Entries, **some of the things I learned today are . . .**

Questions

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