

Learning Instructions

1. **Getting Started:** The table of contents page serves as your guide to the course content and an indicator of lessons you have reviewed or completed. To start reviewing a page, click the **"Begin"** link next to the page. Once you have accessed a page's content, you can always revisit the content by clicking **"Revisit."**
2. **Navigating the Course:** Upon reading the first page of the course's units, you can access the next page of the content by clicking the **"Next"** button. If you need to re-read a unit's content, you can click the **"Previous"** button to return to the previous page. Or, you can return to the course syllabus to select the unit you wish to re-read. Repeat these steps until you have finished the course.
3. **Taking the Posttest:** At the end of the course, you will be given a posttest. Answer each question and click **"Submit, I'm Done."** You will immediately see your test results and each question's correct answer. To receive credit for a course, you must answer at least 7 of the 10 questions correctly. If you don't pass the first time, review the course content again and re-attempt the posttest. If you start the posttest, but cannot complete it during a session, click **"Save and Return Later"** at the bottom of the page.
4. **Completing the Application & Knowledge Activities:** Each course includes five extended response questions that allow for reflection and help you consider how you will apply this learning to your work. Your administrators can review responses to these questions and provide feedback as well. After you have entered your responses, click **"Submit, I'm Done."** Once you submit your answers, you will no longer be able to edit them. If you wish to save your work, but cannot complete it during a session, click **"Save & Return Later"** at the bottom of the page.
5. **Deciding to Withdraw from a Course:** If you select a course that you decide you do not want to take, click **"Withdraw"** under the **"Action"** column.
6. **Resuming a Course:** If you start taking a course, but do not complete it in your current session, you can continue the course when you return to the portal to access Learn. Simply click on **"Resume Course"** under the **"Action"** column when you return.
7. **Completing a Course:** Once you have completed a course and passed the posttest, the course will appear at the bottom of the screen under **"My Completed Courses."** Click **"Print Certificate"** under the **"Action"** column to receive a personalized document confirming that you have completed this course. If you wish to review the content of a completed course, click **"Review."**
8. **Accessing Your Transcript:** Click **"View Transcript"** link at the top right corner of the screen to review a list of courses you have completed, including the Course Completed Date, Course Name and Course Code.
9. **Ending Your Session:** Be sure to click **"Log Out"** at the bottom of the page when you are finished using the portal.

Learning Description & Objectives

Learning Description

In this course, you will learn how to access and interpret School and System Diagnostic Reports. These reports display student gains relative to their prior achievement levels. This course includes visual representations of copyrighted EVAAS® Web reporting software from SAS Institute Inc. for instructional purposes.

Learning Objectives

1. Navigate through the School Diagnostic Report.
2. Learn about the contents and special functions of a School Diagnostic Report.
3. View a System Diagnostic Report and compare its contents to the School Diagnostic Report.

Pretest

Before you begin a course, you must take the pretest. The pretest will help you gauge your current knowledge of the course content and preview what you will learn. Upon completing the pretest, click **"Submit, I'm Done"** at the bottom. Then, you will see your test results and the correct answers for each question. Click **"Next"** to enter the course content. If you start the pretest, but cannot complete it during a session, click **"Save & Return Later"** at the bottom of the page.

Question 1

In the school diagnostic report represented in this course, how is the large pool of students divided? Required

- a. Students are divided into quintiles.
- b. Students are divided alphabetically.
- c. Students are divided into tertiles.
- d. Both b and c.
- e. None of the above.

Question 2

In the following report, how did students in the second quintile score in 2005 compared to other students in the state in the same quintile?

		Observed minus Predicted Score by Predicted Score Quintile					
		1 (Lowest)	2	3 (Middle)	4	5 (Highest)	
Reading	2005	Mean	<u>29.6</u>	<u>12.1</u>	<u>6.9</u>	<u>-4.3</u>	<u>2.3</u>
		Std Err	11.5	5.8	4.1	5.9	3.5
		Nr of Students	<u>5</u>	<u>15</u>	<u>12</u>	<u>8</u>	<u>8</u>
		% of Students	10.4	31.2	25.0	16.7	16.7
	Previous Year(s)	Mean					
	Std Err						
	Nr of Students						
	% of Students						

[View Performance Diagnostics Report](#)

To view detailed reports, click on underlined numbers or words.

Required

- a. Significantly worse than expected.
- b. These students seemed to just meet expectations.
- c. Significantly better than expected.
- d. None of the above.

Question 3

In the following report, how did students in the fourth quintile score in 2005 in comparison to other students in the state in the same quintile?

		Observed minus Predicted Score by Predicted Score Quintile					
		1 (Lowest)	2	3 (Middle)	4	5 (Highest)	
Reading	2005	Mean	<u>29.6</u>	<u>12.1</u>	<u>6.9</u>	<u>-4.3</u>	<u>2.3</u>
		Std Err	11.5	5.8	4.1	5.9	3.5
		Nr of Students	<u>5</u>	<u>15</u>	<u>12</u>	<u>8</u>	<u>8</u>
		% of Students	10.4	31.2	25.0	16.7	16.7
	Previous Year(s)	Mean					
	Std Err						
	Nr of Students						
	% of Students						

[View Performance Diagnostics Report](#)

To view detailed reports, click on underlined numbers or words.

Required

- a. The 8 students' average score was 5.9 points higher than expected.
- b. The 8 students' average score was 2.3 points higher than expected.
- c. The 8 students' average score was 3.5 points below what was expected.
- d. The 8 students' average score was 4.3 points below what was expected.

Question 4

Where on the table portion of the school diagnostic report can you find out how each of the subgroups performed compared to other students across the state in the same quintile? Required

- a. In the "Std Err" row.
- b. In the "Nr of Students" row.
- c. In the "Means" row.
- d. In the "% of Students" row.

Question 5

As a rule for interpreting diagnostic reports, which of the following defines statistically significant growth? Required

- a. Mean growth larger than or equal to two standard error units in size.
- b. Mean growth less than one standard error unit in size.
- c. Mean growth larger than or equal to one standard error unit in size.
- d. Mean growth less than two standard error units in size.

Question 6

What information is shown in the blue bars on the top of a school diagnostic report? Required

- a. The same means shown in the table for the current year.
- b. The growth standard by which the data is calculated.
- c. Means shown in the table for the previous year.
- d. None of the above.

Question 7

How is the information on the top of a school diagnostic report presented? Required

- a. In a graphic display.
- b. In table format.
- c. In words.
- d. In pictures.

Question 8

In this course, the lowest 20 percent of students from the large pool are placed into which quintile subgroup? Required

- a. First quintile.
- b. Second quintile.
- c. Fourth quintile.
- d. Fifth quintile.

Question 9

If you click on the "Predicted Score" header in the list of students in each quintile, how will those student records be organized? Required

- a. From lowest to highest predicted score.
- b. From highest to lowest predicted score.
- c. From most accurate predicted score to least accurate.
- d. From least accurate predicted score to most accurate.

Question 10

What is the magnitude of the standard error influenced by? Required

- a. How much previous data each student has.

- b. The size of the subgroup.
- c. The dispersal of scaled scores around the mean.
- d. Both b and c.
- e. All of the above.

Unit 1: Accessing the School Diagnostic Report

In this course, you will examine the school diagnostic report. This value-added report is accessible through the “Reports” menu on any of the system’s Web pages. You also can navigate to this course from the school value-added report.

Let’s go back to the School Value-Added Report for School 0 in District 0 (our sample district). This value-added report was constructed using the predicted mean approach.

Test	Grade	Year	N	Mean Student Score	Mean Score %tile	Mean Pred Score	Pred. Score %tile	School Effect	Effect Std Err	School vs Testing Pool Avg	Testing Pool
Reading	3	2004	31	415.1	44	415.1	44	0.0	3.01	NDD	TerraNova
		2005	23	408.2	41	408.9	43	<u>-0.5</u>	3.36	NDD	TerraNova
	4	2005	35	418.1	48	412.7	41	<u>4.3</u>	2.65	NDD	TerraNova
		5	2005	48	421.3	49	413.0	40	<u>7.0</u>	2.25	Above

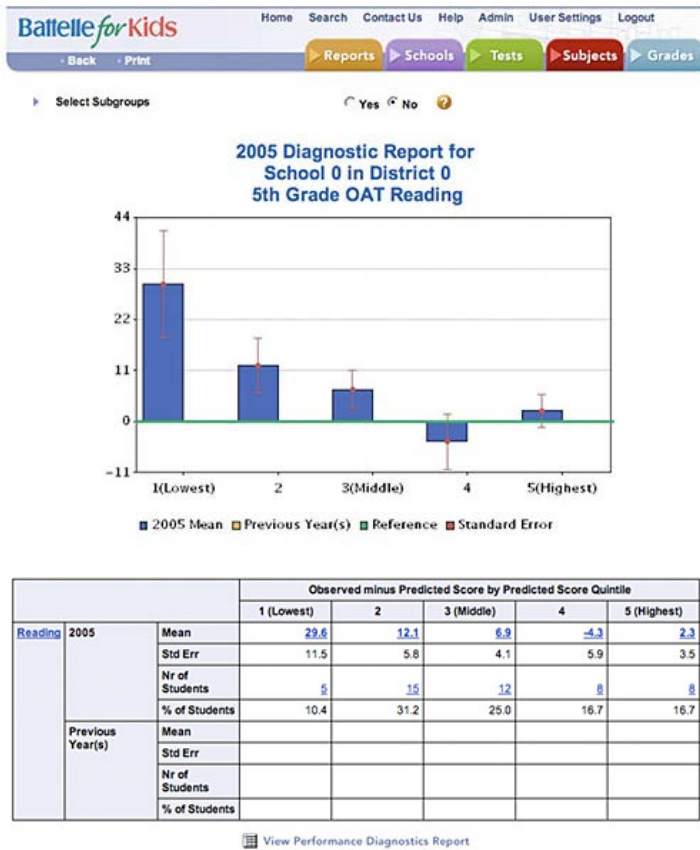
To view detailed reports, click on underlined numbers or words.

Remember from the course, *Interpreting Predicted Mean Approach School Value-Added Reports*, that a school effect of 7.0 in fifth grade reading means that the average score for fifth grade students in this school was 7 points higher than would be expected, given these students’ particular academic histories.

You can go directly from this report to the associated School Diagnostic Report by clicking on the 7.0 school effect. (Note: Any blue, underlined text on the website is a live link.)

Unit 1: Accessing the School Diagnostic Report

You will be taken to the following School Diagnostic Report directly related to the School Value-Added Report you just examined.



To view detailed reports, click on underlined numbers or words.

Notice that the pull-down menus across the top of the screen look similar to the pull-down menus for the school value-added report.

A "Help" screen is available to familiarize you with any new terms that appear in this particular report.

You can see that this report is presented in two different formats. At the top is a graphic display of the diagnostic report. At the bottom, the exact same information is available in a table.

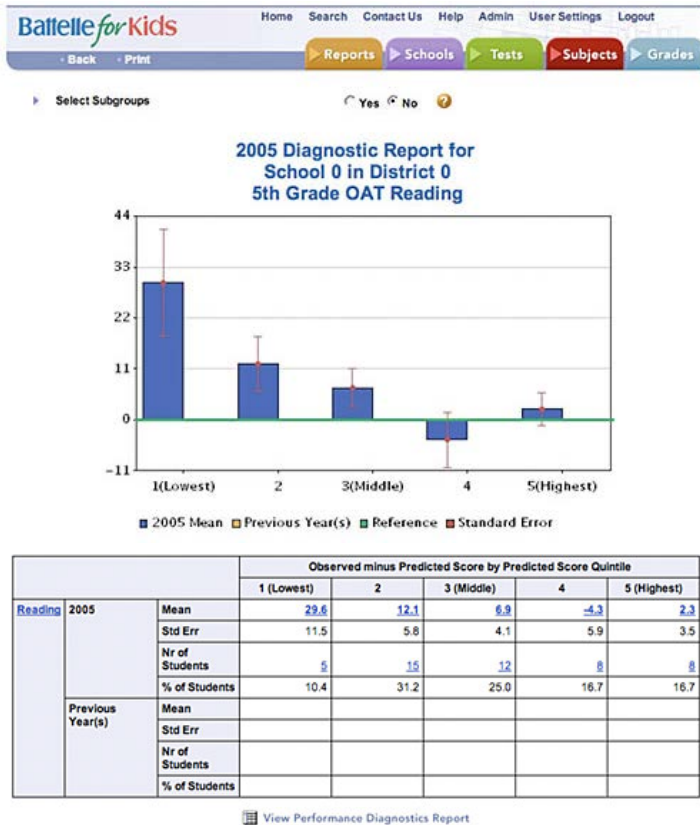
Unit 2: Navigating and Interpreting the School Diagnostic Report

Let's review the school diagnostic report's origin.

Value-added analysis begins with a large pool of students from all the school districts who have the same testing history.

The diagnostic report takes the lowest 20 percent of that large pool, in terms of prior reading achievement levels, and places those students into the lowest or *first quintile*.

Students who are predicted to be in the highest 20 percent are placed into the *fifth quintile*. The rest of the students are placed into the *fourth, third, or second quintiles* based on their predicted scores.

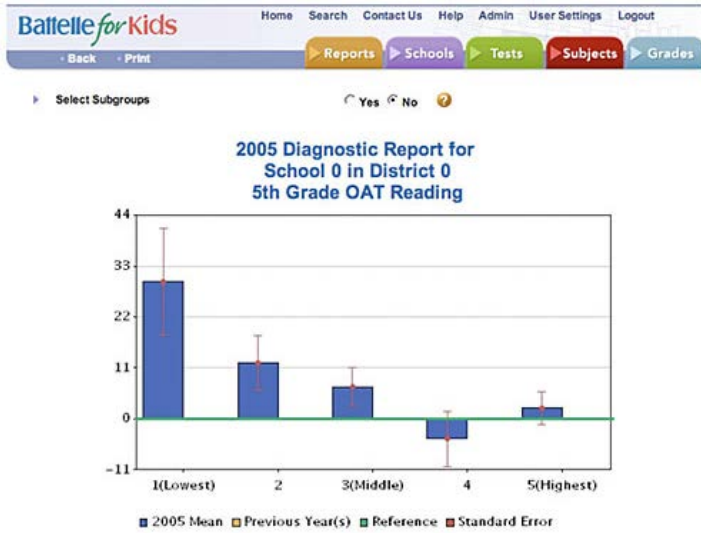


To view detailed reports, click on underlined numbers or words.

Note: In some states with very small school districts, students may be placed in three subgroups rather than five. This course's description of "quintiles" also is true of diagnostic reports that are divided into "tertiles."

Unit 2: Navigating and Interpreting the School Diagnostic Report

The "Means" across the top of the table show how each of these subgroups progressed compared to other students across the state in the same quintile.



		Observed minus Predicted Score by Predicted Score Quintile					
		1 (Lowest)	2	3 (Middle)	4	5 (Highest)	
Reading	2005	Mean	<u>29.6</u>	<u>12.1</u>	<u>6.9</u>	<u>-4.3</u>	<u>2.3</u>
		Std Err	11.5	5.8	4.1	5.9	3.5
		Nr of Students	<u>5</u>	<u>15</u>	<u>12</u>	<u>8</u>	<u>8</u>
		% of Students	10.4	31.2	25.0	16.7	16.7
	Previous Year(s)	Mean					
Std Err							
Nr of Students							
% of Students							

[View Performance Diagnostics Report](#)

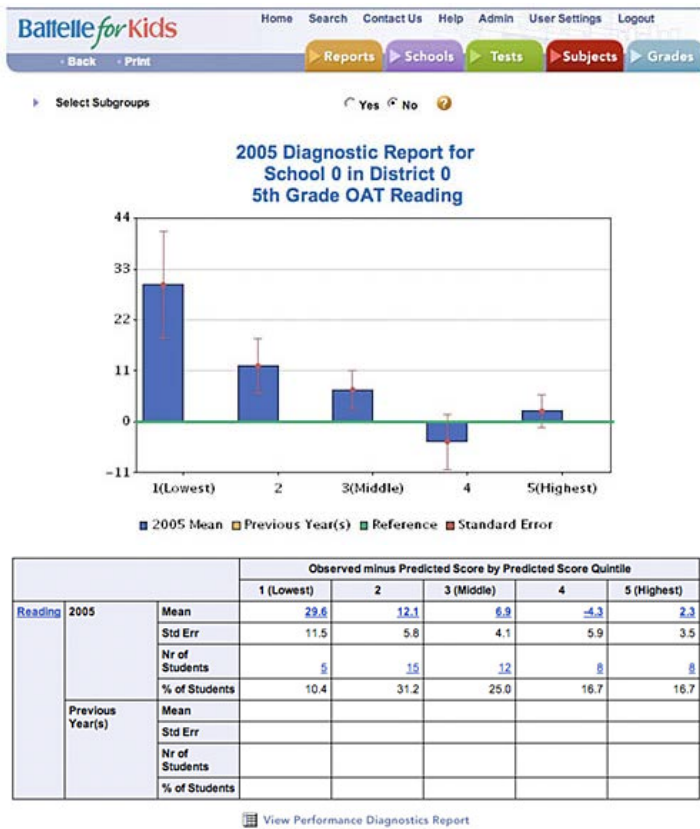
To view detailed reports, click on underlined numbers or words.

than expected. In other words, these five students scored, on average, 29.6 points higher than other students across the state who also were in the first quintile.

In the fifth quintile, the average score of those eight students was 2.3 points higher than expected for similar students.

Unit 2: Navigating and Interpreting the School Diagnostic Report

Below each of these “Means” is the “Standard Error” associated with that calculation. Remember: Standard error is a measure of the uncertainty associated with the estimate of each mean. The magnitude of the standard error is influenced by the subgroup size and by the dispersal of students’ progress around the mean.



To view detailed reports, click on underlined numbers or words.

In general, a mean with a relatively small standard error is more precise than a mean with a larger standard error.

The standard error measure is treated a little differently in the diagnostic report than it is in the school value-added report. As a rule for this report, statistically significant growth is typically defined as *mean growth larger than one standard error unit in size*.

Looking at the report in its entirety, this school is doing a great job with its average- to low-achieving students.

Students in the fourth and fifth quintiles are, within a margin of error, obtaining about the amount of growth that would be expected. The positive finding in this school’s report is that the students who need to make the most progress—students who are in the first two quintiles—are in fact showing the most growth.

Unit 3: Listing Students in Each Subgroup

Another important feature of the diagnostic report is that it allows you to list the individual students in each subgroup.

			Observed minus Predicted Score by Predicted Score Quintile				
			1 (Lowest)	2	3 (Middle)	4	5 (Highest)
Reading	2005	Mean	29.6	12.1	6.9	-4.3	2.3
		Std Err	11.5	5.8	4.1	5.9	3.5
		Nr of Students	5	15	12	8	8
		% of Students	10.4	31.2	25.0	16.7	16.7
Previous Year(s)		Mean					
		Std Err					
		Nr of Students					
		% of Students					

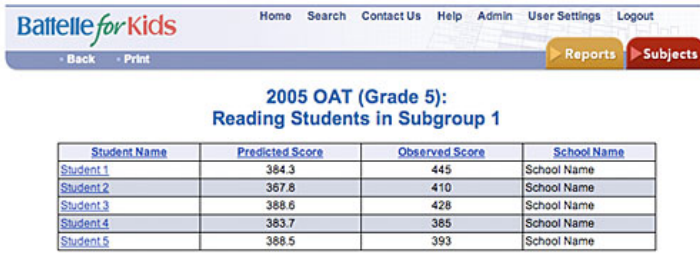
 [View Performance Diagnostics Report](#)

To view detailed reports, click on underlined numbers or words.

If you click on either of the live links for the first quintile—the blue underlined 29.6 or the 5—you will see the list of the five students whose prior achievement placed them in the first quintile.

Unit 3: Listing Students in Each Subgroup

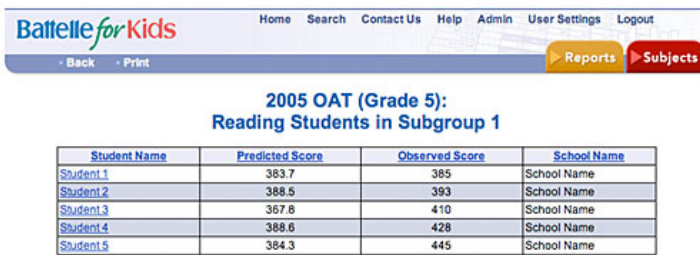
Appearing next to their names in the list is each student's predicted and observed scores on the fifth grade reading test. Note: If your state uses the mean gain approach, the "Predicted Score" column will read either "Prior Score" or "Prior NCE score."



2005 OAT (Grade 5):
Reading Students in Subgroup 1

Student Name	Predicted Score	Observed Score	School Name
Student 1	384.3	445	School Name
Student 2	367.8	410	School Name
Student 3	388.6	428	School Name
Student 4	383.7	385	School Name
Student 5	388.5	393	School Name

This list can be reorganized by clicking on any of the column headers. If, for example, you click on the "Observed Score" column, student records are rank ordered from lowest to highest observed score (shown in the following report).



2005 OAT (Grade 5):
Reading Students in Subgroup 1

Student Name	Predicted Score	Observed Score	School Name
Student 1	383.7	385	School Name
Student 2	388.5	393	School Name
Student 3	367.8	410	School Name
Student 4	388.6	428	School Name
Student 5	384.3	445	School Name

If you find the difference between each student's observed score and his or her predicted score and average those results, you get 29.6—the "Mean Gain" of this subgroup of five students—which is the origin of the "Mean" of 29.6 in the first quintile. This group, on average, scored 29.6 points higher than expected.

You also can see that growth across these five students was not particularly even. The first two students' observed scores were very close to their predicted scores. But, the last three students significantly outperformed their predicted scores. This unevenness in growth, as well as the small size of this subgroup, leads to the fairly large standard error of 11.5.

When you are finished with this subgroup report, click on the "Back" button to go back to the diagnostic report.

Unit 4: Other Important Functions

Battelle for Kids

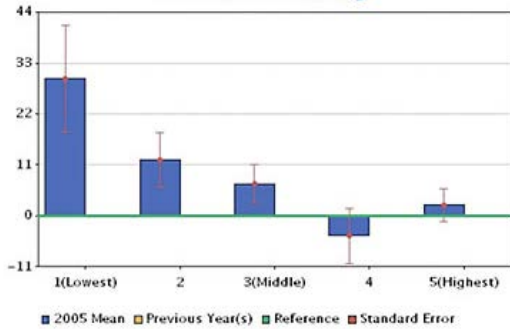
Home Search Contact Us Help Admin User Settings Logout

Back Print Reports Schools Tests Subjects Grades

Select Subgroups

Yes No

2005 Diagnostic Report for School 0 in District 0 5th Grade OAT Reading



		Observed minus Predicted Score by Predicted Score Quintile					
		1 (Lowest)	2	3 (Middle)	4	5 (Highest)	
Reading	2005	Mean	<u>29.6</u>	<u>12.1</u>	<u>6.9</u>	<u>-4.3</u>	<u>2.3</u>
		Std Err	11.5	5.8	4.1	5.9	3.5
		Nr of Students	<u>5</u>	<u>15</u>	<u>12</u>	<u>8</u>	<u>8</u>
		% of Students	10.4	31.2	25.0	16.7	16.7
		Previous Year(s)					

[View Performance Diagnostics Report](#)

To view detailed reports, click on underlined numbers or words.

A few other facets of this report should be mentioned.

Above the table, you see the same information presented graphically.

The **blue** bars represent the same 2005 means that are presented in the table.

Blue bars above the **green line** show that the student quintile group grew more in a year than would be expected. If data were available from a previous year, it would appear on the graph as **gold** bars.

The small red "whisker" lines represent one standard error unit above and below the mean. Bars that are at least one standard error unit in length are statistically significant.

On the top of the report is a button that allows you to produce a diagnostic report for one of the NCLB student subgroups.

Unit 4: Other Important Functions

If you click the “Yes” button, you can produce a diagnostic report for a particular student subgroup.



The screenshot shows the Battelle for Kids interface for selecting subgroups. At the top, there is a navigation bar with links for Home, Search, Contact Us, Help, Admin, User Settings, and Logout. Below this is a secondary navigation bar with buttons for Back, Print, Reports, Schools, Tests, Subjects, and Grades. The main content area is titled "Select Subgroups" and includes a "Yes" button and a "No" button. There are three sections for selecting subgroups: "By selected race(s)" with checkboxes for American Indian, Asian, Black, Hispanic, White, Multi-Racial, Other, and Unknown; "By selected sex" with checkboxes for Male, Female, and Unknown; and "By selected demographic(s)" with checkboxes for Special Education and Limited English Proficiency. At the bottom of the form are "Submit" and "Reset" buttons.

By checking any of these boxes and clicking the “Submit” button, you will produce a diagnostic report that relates only to the subgroup boxes you have checked.

The downside of this feature is that no report is produced unless there are at least five students in a quintile group. If your subgroups are small, you won’t get any useful diagnostic information.

In course SR118, *Interpreting School Diagnostic Reports (Part 2)*, you will deepen your understanding of the school diagnostic report by once again examining data from the fourth grade students in School 5.

Unit 5: References

The information in this course also is available in the "How to Navigate & Interpret Value-Added Reports" presentation and in the Quick Start Guide contained in Module IV of Battelle for Kids' value-added toolkit.

Posttest

The following posttest will help you gauge your understanding of the objectives and content addressed in this course. Please answer each question and click **"Submit, I'm Done."** If you start the posttest, but cannot complete it during a session, click **"Save & Return Later"** at the bottom of the page.

To receive credit for this course, you must answer at least 7 of the 10 questions correctly. Upon submitting your answers, you will immediately see your test results and each question's correct answer. If you don't pass the first time, review the course content and attempt the test again. These questions are randomly selected from a larger pool to increase comprehension when you take the test more than once.

Question 1

If you click on the "Predicted Score" header in the list of students in each quintile, how will those student records be organized?

Required

- a. From lowest to highest predicted score.
- b. From highest to lowest predicted score.
- c. From most accurate predicted score to least accurate.
- d. From least accurate predicted score to most accurate.

Question 2

As a rule for interpreting diagnostic reports, which of the following defines statistically significant growth?

Required

- a. Mean growth larger than or equal to two standard error units in size.
- b. Mean growth less than one standard error unit in size.
- c. Mean growth larger than or equal to one standard error unit in size.
- d. Mean growth less than two standard error units in size.

Question 3

Generally speaking, which of the following situations indicates a more precise mean?

Required

- a. A mean with a relatively small standard error.
- b. A mean that's exactly equal to the standard error.
- c. A mean with a relatively large standard error.
- d. All of the above are precise estimates.

Question 4

If you click on the "Yes" button at the top of the school diagnostic report, what are you able to do?

Required

- a. View a list of the students who are in each quintile.
- b. Produce a diagnostic report for a particular student subgroup.
- c. Compare your diagnostic information to information from other schools.
- d. Both a and b.
- e. None of the above.

Question 5

What options can you choose from when creating a diagnostic report for a particular student subgroup?

Required

- a. Sex.
- b. Race.
- c. Selected demographics.
- d. All of the above.

Question 6

What is the magnitude of the standard error influenced by?

Required

-

- a. How much previous data each student has.
- b. The size of the subgroup.
- c. The dispersal of scaled scores around the mean.
- d. Both b and c.
- e. All of the above.

Question 7

How can you reorganize the list of students in each quintile to find out the range in which these students actually scored? Required

- a. Click on the "Student Name" header.
- b. Click on the "Predicted Score" header.
- c. Click on the "Observed Score" header.
- d. You can only reorganize the list manually.

Question 8

How can you access your school diagnostic report? Required

- a. From the school value-added report, click on the school effect link for the grade level you want.
- b. From the value-added summary report, click on the school link for the school you want.
- c. Go to the "Reports" menu and choose "School Diagnostic" from the list.
- d. Both a and c.
- e. All of the above.

Question 9

Where can you learn about terms on the school diagnostic report that you might not understand? Required

- a. The "Contact Us" menu.
- b. The "Help" menu.
- c. The "Reports" menu.
- d. The "Search" menu.

Question 10

Which of the following quintiles made statistically significant growth in 2005?

		Observed minus Predicted Score by Predicted Score Quintile					
		1 (Lowest)	2	3 (Middle)	4	5 (Highest)	
Reading	2005	Mean	<u>29.6</u>	<u>12.1</u>	<u>6.9</u>	<u>-4.3</u>	<u>2.3</u>
		Std Err	11.5	5.8	4.1	5.9	3.5
		Nr of Students	<u>5</u>	<u>15</u>	<u>12</u>	<u>8</u>	<u>8</u>
		% of Students	10.4	31.2	25.0	16.7	16.7
	Previous Year(s)	Mean					
	Std Err						
	Nr of Students						
	% of Students						

[View Performance Diagnostics Report](#)

To view detailed reports, click on underlined numbers or words.

Required

- a. The fourth and fifth quintiles.
- b. The first, second, and third quintiles.
- c. The first and second quintiles.
- d. The first quintile only.

Application & Knowledge

NOTE: Please read all directions carefully before proceeding to ensure that your responses are properly saved.

The following extended-response questions will allow you to reflect on course content and consider how you will apply this learning to your work.

Type your response into the space provided. Space for responding is unlimited. Please contact your administrator if you are unsure about how long your responses should be. If you want to save your work, but are not yet ready to submit your responses, click "**Save & Return Later.**"

Once ready to submit your final responses, click "**Submit, I'm Done.**" You will no longer be able to edit your answers.

Your administrators may choose to review responses to these questions and provide feedback as part of your learning experience.

Activity 1

Reflect on the following questions relative to this course's content.

Why is it important to be able to navigate directly to the school diagnostic report from the school value-added report? How are these two reports related?

Why might some people like the school diagnostic report's graphic format and others like the tabular form of the report? Is any information missing in either format? Required

Activity 2

Respond to the following scenario and related question based on knowledge gained from this course.

When the sixth grade teachers from Doe Middle School examined their value-added information, they noticed on their school value-added report that their school effect for math was 1. 2. This score placed them solidly into the NDD range on this report. Why is it imperative that this team also review the school diagnostic report associated with this math value-added report? Required

Activity 3

What additional information can you gather from examining the student list included in each of the quintile subgroups? How might you use this information? Required

Activity 4

What value does the school diagnostic report offer to support school improvement efforts? Required

Activity 5

Outline your plans to receive more training and gather further resources or materials for understanding and using value-added analysis. Required