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Florida's Value-Added Technical Assistance Workshop

Orlando, Florida

August 1 and 2, 2011

Meeting agenda

August 1 and 2, 2011

8:30 a.m.	Registration opens
9:00-9:45 a.m.	Background on student growth work and the Student Growth Implementation Committee (SGIC) process
9:45-11:30 a.m.	Description of value-added models and selected model with questions and answers
11:30-12:30 p.m.	Lunch
12:30-2:00 p.m.	Description of summary report and data file layout and guidance on variable meaning/usage
2:00-3:00 p.m.	Guidance on using data
3:00-3:15 p.m.	Break
3:15-5:00 p.m.	District data review

Meeting goals

- Understand what a value-added model is and the process by which Florida selected the value-added model
- Understand Florida's value-added model and how the value-added scores are computed
- Understand data files they received and how to use data in the files (variables, classification, aggregation)

New standard for teacher evaluations

As set forth in the *Student Success Act* and *Race to the Top*, teacher evaluations are:

- Designed to support effective instruction and student learning growth
- Results used when developing district- and school-level improvement plans
- Results used to identify professional development and other human capital decisions for instructional personnel and school administrators

New standard for teacher evaluations

To support those objectives, the law sets forth that teacher evaluations are to be based on sound educational principles and contemporary research in effective practices in three major areas:

1. The performance of students
2. Instructional practice
3. Professional and job responsibilities

New standard for teacher evaluations

Performance of Students. At least 50% of a performance evaluation must be based upon data and indicators of student learning growth assessed annually and measured by statewide assessments or, for subjects and grade levels not measured by statewide assessments, by district assessments as provided in s. 1008.22(8), F.S.

- Section 1012.34(3)(a)1., Florida Statutes

New standard for teacher evaluations

- The performance of students represents 50% of a teacher's evaluation, with performance based on student learning growth.
- To meet the above requirement, the development of a fair and transparent measure of student growth is essential.
- This portion of the presentation focuses on the process by which a measure was developed for Florida.

Meeting goals

- Understand what a value-added model is and the process by which Florida selected the value-added model

Florida's value-added model developed by Florida educators

- The Department convened a committee of stakeholders (Student Growth Implementation Committee, or SGIC) to identify the type of model and the factors that should be accounted for in Florida's value-added models.
- **The SGIC's recommended model was fully adopted by the Commissioner with no additions, deletions, or changes.**
- To provide technical expertise, the Department contracted with the American Institutes for Research (AIR) to help the SGIC develop the recommended model that was adopted.

Process

Florida's value-added model developed by Florida educators

- The Student Growth Implementation Committee (SGIC) is composed of 27 members from across the state. The group includes:
  - Teachers (across various subjects and grade levels, including exceptional student education)
  - School administrators
  - District-level administrators (assessment and HR)
  - Postsecondary teacher educators
  - Representative from the business community
  - Parents
- The SGIC met from March through June 2011.
  - Two 2-day in-person meetings
  - Four conference call meetings

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Process

Florida's value-added model developed by Florida educators

- After exploring eight different types of value-added models, the SGIC recommended a model from the class of *covariate adjustment models.*
- The Commissioner-approved model was developed by the SGIC.
- Model was not pre-selected by the Department or a vendor.
- SGIC process (including the presence of national expertise) allowed for questions, in-depth discussions, and perspectives to be shared from many points of view.
- Nearly all votes of the SGIC were unanimous.

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Meeting goals

- Understand Florida's value-added model and how the value-added scores are computed

Objectives

- Discuss value-added models in general
- Describe technical aspects of the Florida FCAT value-added model for reading and math
- Offer possible ways to use the value-added results, including:
  - How to aggregate teacher results over grades, subjects, and time
  - Possible ways to classify teacher performance as it relates to student learning growth
- Provide summary results of the model

What is a value-added model

- A value-added model is a statistical model that uses student-level growth scores to differentiate teacher performance in the area of student learning growth.
- There are many different kinds of value-added models (VAMs) in practice and in the literature:
  - Tennessee State model
  - Washington, DC; New York City; Los Angeles Unified School District (LAUSD)

What is a value-added model

- While there are different statistical models, they all have the same objective:
  - To identify what is commonly referred to as a *teacher effect*
- The teacher effect is the portion of student growth attributed to the classroom teacher.
- We will define the teacher effect statistically later.

Value-added estimates

- Identify teacher contribution to student learning
- Measure student learning using student-level test scores collected over a period of time
- “Level the playing field” by accounting for differences in the proficiency and characteristics of students assigned to teachers

Differences in test score analysis methods

Status Methods

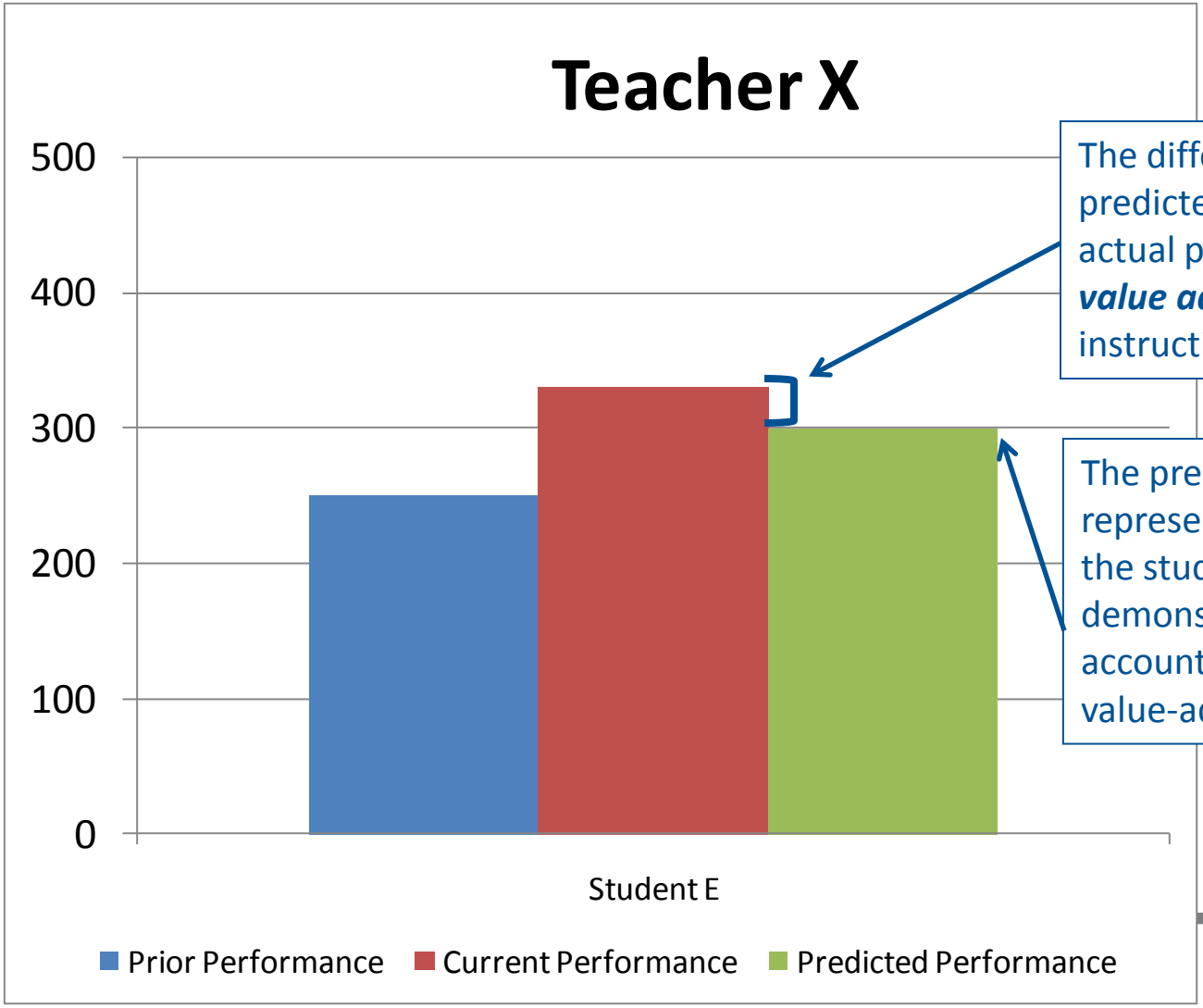
- Simply compute averages or percent proficient using a single year of test score data
- Sometimes make comparisons from one year to the next, but these are based on different groups of students

Simple Growth Models

- Measure change in a student's performance from test to test (e.g., gain from grade 3 to grade 4)

Florida Model

Value-added models



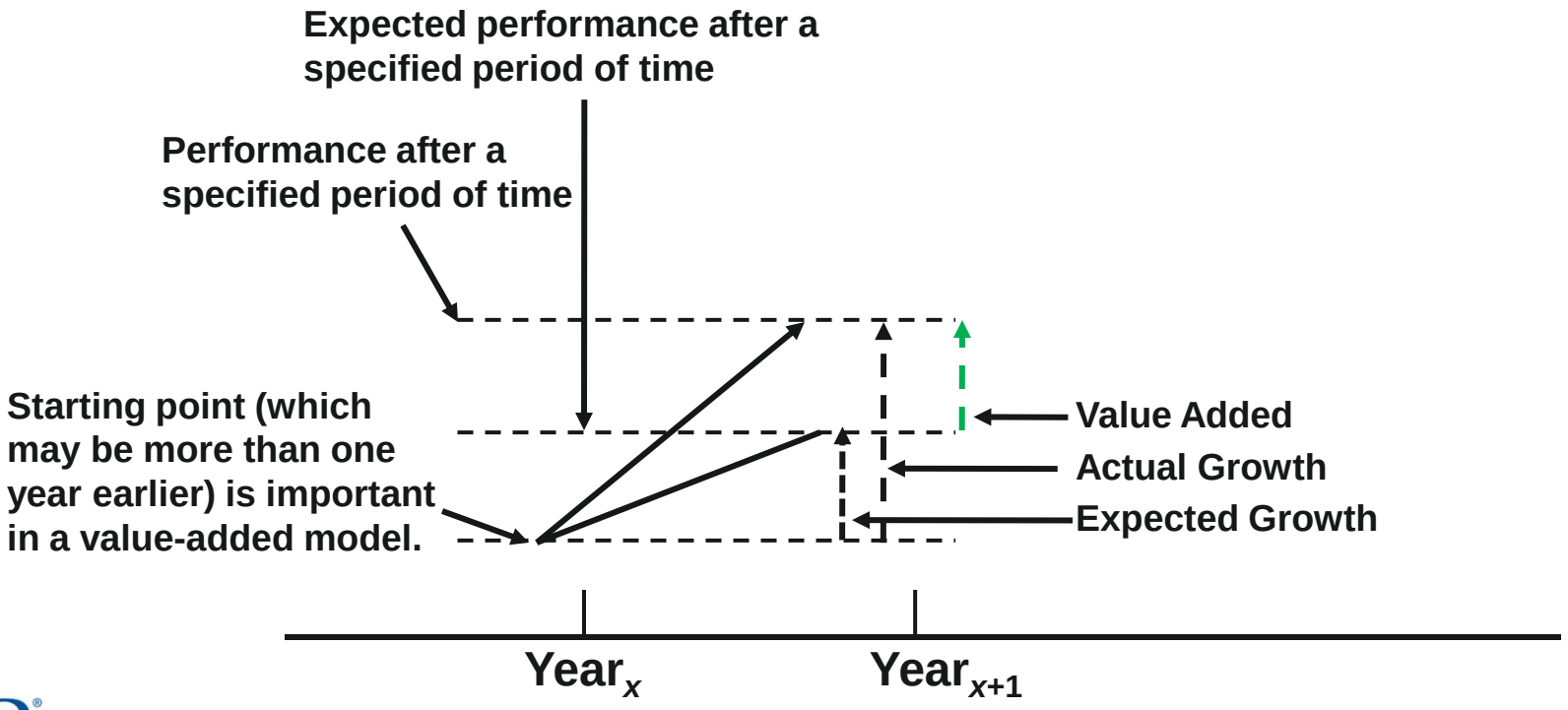
The difference between the predicted performance and the actual performance represents the ***value added*** by the teacher's instruction.

The predicted performance represents the level of performance the student is expected to demonstrate after statistically accounting for factors through a value-added model.

Value-added models

Value-Added Models

(Simplified "generic" example)



Source: CCSSO Policymaker's Guide to Growth Models

Advantages of a value-added model

- Teachers teach classes of students who enter with different levels of proficiency and possibly different student characteristics.
- Value-added models level the playing field by accounting for differences in the proficiency and characteristics of students assigned to teachers.
- Value-added models are designed to mitigate the influence of differences among the entering classes; teachers do not have advantages or disadvantages simply as a result of the students who attend a school and are assigned to a class.

Technical characteristics of Florida VAM for reading and math FCAT

- The following slides provide a technical overview of the Florida FCAT model.
- A complete technical description of the model and how it is computed is provided in the technical report.

Florida VAM for reading and math FCAT

- The model implemented for the FCAT reading and math is a *covariate adjustment model*.
- This model is similar to VAMs implemented in LAUSD, New York City, and Washington, DC.
- It is called a covariate adjustment model because the model uses prior test scores and some measured characteristics of students as predictors.
- The model accounts for the measurement variance in the FCAT test scores.

Florida VAM for reading and math FCAT

- The outcome variable is always the most current reading or math FCAT score for a student.
- The predictor variables (covariates) include two years (one year, if two years are not available) for all students in the same tested subject.
  - For example, if grade 6 math is the outcome variable, then the grade 4 and grade 5 math scores are used as predictors.

Florida VAM for reading and math FCAT

- The student-level characteristics include:
  - Up to two prior years of achievement scores (the strongest predictor of student growth)
  - Number of subject-relevant courses
  - Disability status
  - English language learner status
  - Gifted status
  - Mobility
  - Attendance
  - Difference from modal age
  - Class size
  - Homogeneity of prior test scores

Complete descriptions of each variable and how it is used are found on pages 3 and 4 of the technical report.

The statistical model

- The statistical model can be represented as:

$$y_{ti} = \mathbf{x}_i\boldsymbol{\beta} + \sum_{r=1}^{L} y_{t-r,i}\gamma_{t-r} + \sum_{q=1}^{Q} \mathbf{z}_{qi}\boldsymbol{\theta}_q + e_i$$

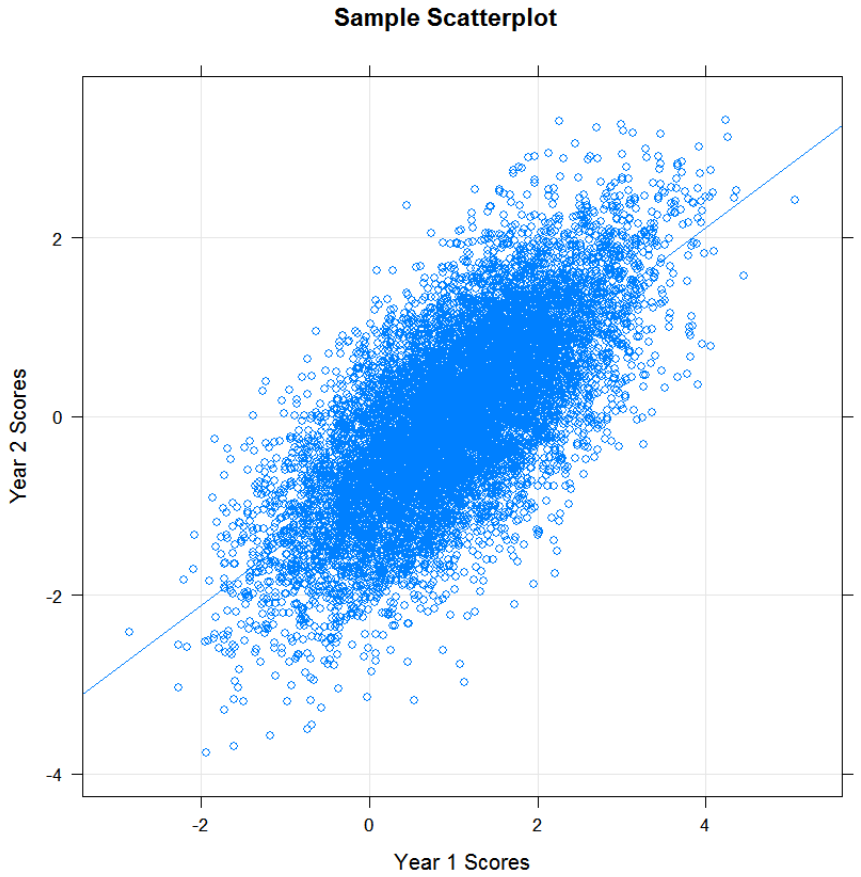
- The left side of the equation is the outcome variable.
- The right side of the equation includes all the predictor variables and the school and teacher random effects.
- See page 6 of the technical report for specifics on what each component of the model represents.

The statistical model

- The model estimates the effect of predictors (such as prior test score) on the current score:
  - These show the amount of growth “typical” for a student group (i.e., the covariate) holding everything else constant.
- The model simultaneously estimates the average learning above (or below) prediction for each school and teacher:
  - These show how much specific teachers and schools deviate from the typical amount of learning in the state.

Statistical predictions

The scatter plot is a sample showing a simple way statistical predictions are formed.



Empirical Bayes estimates

- The empirical Bayes are a weighted average of the *residuals:*

$$\tilde{\Theta}_j = \frac{N_j \sigma_t^2}{N_j(\sigma_s^2 + \sigma_t^2) + \sigma_e^2} \frac{\sum_{i=1}^{N_j} r_{(j)i}}{N_j}$$

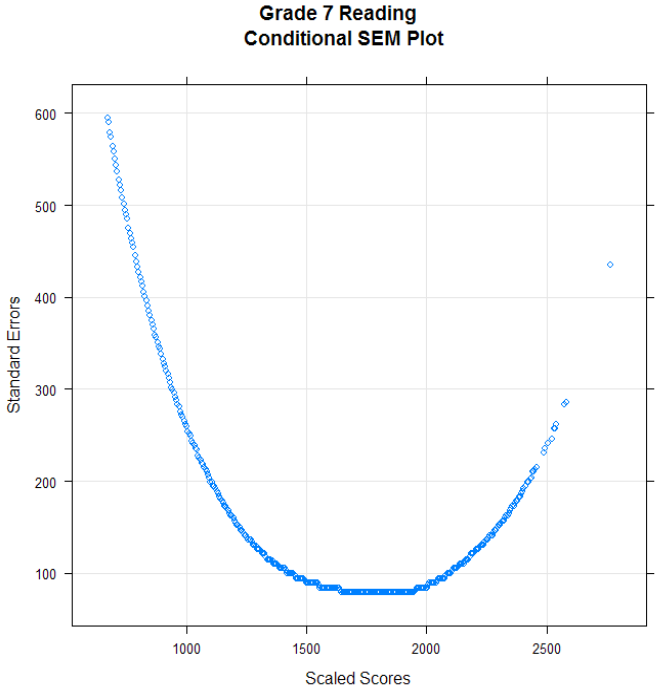
- The residuals are deviations from a statistical prediction:

$$r_{ti} = y_{ti} - \hat{y}_{ti}$$

- See page 7 of the technical report for details on this computation.

Measurement variance

All test scores are measured with some uncertainty.



The graphic shows an example of the standard errors in grade 7 reading on the FCAT.

Measurement variance

- Recall that the VAM uses test scores as predictor variables.
- If those scores were used **and** if we ignored the measurement variance in the scores, the statistical model results would be *biased.*
- However, we do explicitly account for the measurement variance in this model, which resolves the bias.

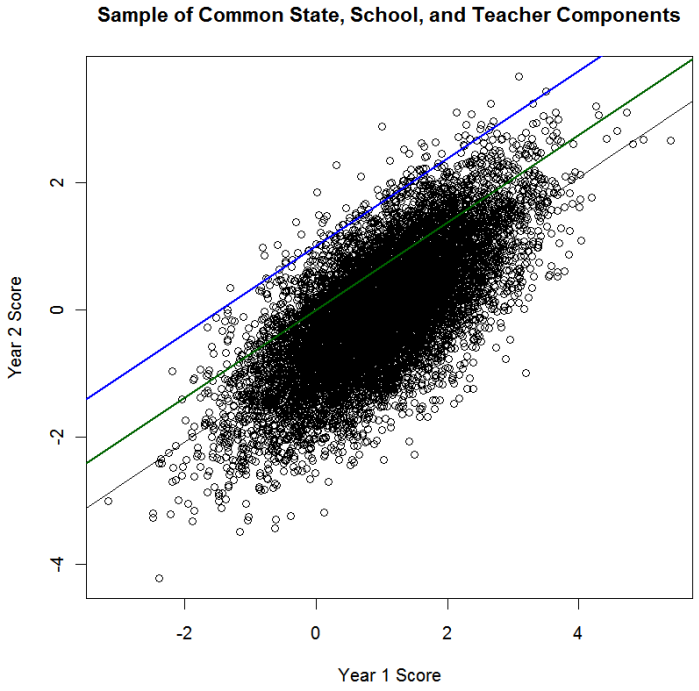
Teacher and school components

- The teacher effect (or VAM score) is the amount that is statistically attributed to the teacher as his or her impact:
  - Teacher component: the (weighted) average performance of students in a class that is different than the statistical expectation
- The school component is the amount of learning that differs from the statistical prediction that is common to all students in a school:
  - School component: the (weighted) average performance of students in a school that is different than the statistical expectation

Florida Model

Common state, school, and teacher components

- The model estimates what is typical growth for students across the state, within a school, and for certain teachers within a school.



Attribution of school effect

- The SGIC felt that some of the school component should be attributed to the teacher:
  - For example, the school component may be partly because of the collective efforts of teachers implementing a school-wide program, etc.
- The “final” teacher value-added score is computed as:
  - *Teacher Value-Added Score = Unique Teacher Component + .50 * Common School Component*

Impact of predictors

- The technical report has extensive appendices showing the impact across all grades and subjects (Appendix B)
- For brevity, we only show reading grade 7
- In the following tables,
  - the first column is the impact of the predictor
  - the second column is its standard error.
  - The third column is a t-statistic (absolute value)
- We rank order these effects by their t-statistic
- This rank ordering will change somewhat grade-by-grade

Statistically significant indicators

Indicator	Coefficient	Standard Error	T-Statistic
Achievement: Prior Year	0.681	0.009	75.667
Achievement: Two Prior Years	0.229	0.006	38.167
Enrolled in 2 or more courses	49.997	2.724	18.354
Difference from Modal Age	-11.344	0.71	15.977
Attendance	0.19	0.014	13.571
Number of students in Class 1	-0.903	0.107	8.439
Homogeneity of Class 2 Prior Year Test Scores	0.079	0.011	7.182
Language Impaired	-21.248	3.963	5.362
Specific Learning Disability	8.767	1.749	5.013
Homogeneity of Class 1 Prior Year Test Scores	-0.038	0.008	4.750
ELL Indicator	32.498	6.955	4.673
Homogeneity of Class 3 Prior Year Test Scores	0.051	0.016	3.188
Number of students in Class 5	1.209	0.507	2.385
Enrolled in 2 or more class periods	8.598	3.757	2.289
Mobility: Number of School Transfers	-6.181	2.722	2.271
Intellectual Disability	-24.14	11.273	2.141

Not statistically significant indicators

Indicator	Coefficient	Standard Error	T-Statistic
Number of students in Class 2	-0.212	0.113	1.876
Traumatic Brain Injured	-59.727	32.79	1.822
Enrolled in 6 or more courses	214.371	126.115	1.700
Other Heath Impaired	-6.695	3.954	1.693
Gifted Student Indicator	3.495	2.21	1.581
Autism Spectrum Disorder	-11.979	9.034	1.326
Deaf or Hard of Hearing	-15.137	11.879	1.274
Emotional/Behavioral Disability	-4.919	4.824	1.020
Enrolled in 3 or more courses	2.939	3.218	0.913
Enrolled in 5 or more class periods	10.462	12.67	0.826
Enrolled in 5 or more courses	-23.29	28.281	0.824
Enrolled in 4 or more class periods	5.522	6.86	0.805
Enrolled in 4 or more courses	-6.337	7.901	0.802
Enrolled in 3 or more class periods	-3.683	4.694	0.785

Not statistically significant indicators

Indicator	Coefficient	Standard Error	T-Statistic
Homogeneity of Class 6 Prior Year Test Scores	0.052	0.067	0.776
Dual-Sensory Impaired	-141.679	189.997	0.746
Visually Impaired	13.241	19.628	0.675
Number of students in Class 4	0.164	0.252	0.651
Homogeneity of Class 4 Prior Year Test Scores	0.009	0.026	0.346
Number of students in Class 3	-0.057	0.168	0.339
Homogeneity of Class 5 Prior Year Test Scores	0.015	0.045	0.333
Number of students in Class 6	-0.255	0.771	0.331
Missing Mobility Data Indicator	2.059	17.778	0.116
Enrolled in 6 or more class periods	-0.768	19.034	0.040

Impact of other variables

Predictor variable	Impact	Standard Error
Difference from Modal Age	-11.344	**0.71**
Mobility: Number of School Transfers	-6.181	**2.722**
Attendance	0.19	**0.014**
Gifted Student Indicator	3.495	2.21
English Language Learner Indicator	32.498	**6.955**
Achievement: Prior Year	0.681	**0.009**

Ways To use the VAM results

- The following slides present different ways the VAM scores can be used in evaluation.
- Two issues have significance in evaluation:
  - Aggregation (over time, over grades, over subjects)
  - Classification

Standard errors

- The teacher and school components all have *standard errors.*
- We don’t measure those effects perfectly; there is some variability in those estimates.
- The standard error describes the variability.
- The standard errors can be used to construct *confidence intervals* around the teacher value-added score.

Standard errors

- We can use the following to show how to compute a 95% confidence interval:
  - *Teacher effect +/- 1.96 * se*
- Or we can compute a 68% confidence interval:
  - *Teacher effect +/- 1 * se*
- Where *se* is the standard error of the teacher effect.
- The confidence intervals can be used when classifying teachers (discussed later in the presentation).

Example of a confidence interval

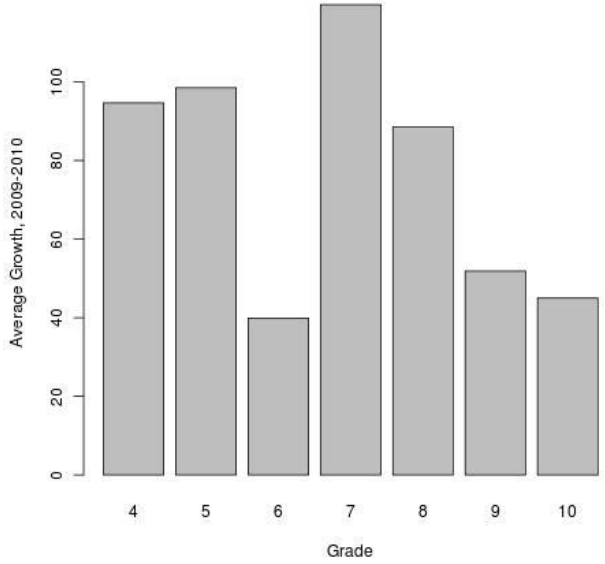
- Assume the teacher value-added score = 23.3
- Assume the standard error = 18.3
- We construct a 95% confidence interval as:
  - 23.3 – (18.3 * 1.96) = -**12.57**
  - 23.3 + (18.3 * 1.96) = **59.17**
- We construct a 68% confidence interval as:
  - 23.3 – (18.3 * 1) = **5**
  - 23.3 + (18.3 * 1) = **41.6**

Florida's developmental scale

- The FCAT reports scores on a common reporting scale (i.e., a vertical scale).
- This is the developmental scale score (DSS).
- This allows for scores from one grade to be compared with scores in another grade.
- We use the DSS in value-added model. However, we observe large differences in gain scores in different grades.

Florida's developmental scale

The graphic shows how gain scores vary between grades in math:



We observe much larger gains in the lower grades than we do in grades 8, 9, and 10. **Why is this**?

Consequences of the developmental scale on teacher effect

- The very different patterns of gains in the different grades suggest scores are not very comparable across grades.
- The VAM teacher effects are on the developmental scale.
- However, because gains may not be comparable across grades, we cannot simply aggregate the teacher effects.
- We need to first convert the teacher effects into a useful metric that can be aggregated.

Meeting goals

- Understand data files they will receive and how to use data in the data files and options for classification and aggregation

Aggregation

- All value-added scores reflect performance within grade and subject each year.
- Coming up with a single score for each teacher will require some *aggregation* of these estimates.
- We will offer two suggestions:
  1. Transform the scores to a common metric and average them.
  2. Use the untransformed scores to classify teachers and incorporate multiple classifications into the evaluation formula.

Approach 1: Create a common metric

- Anything expressed using the same scale score points can be divided, for example:
  - Divide by a year's growth, so the metric becomes a "proportion of an a year's growth above or below expectation." It has the same interpretation across subjects and years.
  - Divide by the standard deviation of student scores, or teacher value-added scores, in the same grade/subject, so the metric becomes "standard deviations."

Approach 1: Details

Steps:

1. Determine the “standard” (e.g., a year’s average growth in points per year)
2. Divide each value-added score by the corresponding “standard”
3. Add or average the scores together (a weighted average is better)
4. Divide the standard errors by the same numbers
5. Calculate the standard error of the average or sum

Approach 1: Gory details

Example: Average reading and math for grade 5

- *M* = number of students taught in math
- *R* = number of students taught in reading

$$V_{math} = \frac{VAM_{math}}{Year's\,Growth_{math}}$$

$$V_{read} = \frac{VAM_{read}}{Year's\,Growth_{read}}$$

$$VAM = \frac{1}{M+R}\left(MV_{math} + RV_{read}\right)$$

Approach 1: Gorier details

Calculate an approximate standard error for the aggregates*:

$$SE_{VAM} = \sqrt{\left(\frac{M}{R+M}\right)^2\left(\frac{SE_{math}}{YearsGrowth_{math}}\right)^2 + \left(\frac{R}{R+M}\right)^2\left(\frac{SE_{read}}{YearsGrowth_{read}}\right)^2}$$

This same approach can be used to aggregate across grades and years.

*Where the same students are taught math and reading, this approximation may overstate the standard error.

Data Use

Approach 2: Use multiple scores in the classification

- Many evaluation systems:
  - Classify teachers
  - Assign a numeric score to the category
  - Add or average those scores with other measures used

Data Use

Approach 2: Use multiple scores in the classification example

- Assign 4 points for a highly effective, 3 points for effective, etc.
- Average the value-added "points" with the "points" from observation and other measures.
- If a teacher earns a 4 on value-added and a 2 on other measures, the final score is:

$$0.5 * 4 + 0.5 * 2 = 3$$

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Approach 2: Use multiple scores in the classification example

- Suppose that the teacher taught in two grades and was classified as a 4 in one grade and 3 in the other. The final score is:

$$(0.25 * 4 + 0.25 * 3) + 0.5 * 2 = 2.75$$

- The relative weight of the value-added components can reflect the number of students taught in each grade and subject.

Classifications

- Classification is the process of applying standards to value-added scores to contribute to the classification of teachers as highly effective, effective, needs improvement, and unsatisfactory.
- Remember, a value-added score is an estimate with a margin of error.
- Classification schemes should maximize accuracy.

Steps to classification

1. Establish standards (For example, “better than average” is highly effective or 1/10th of a year’s growth over expected is highly effective.)
2. Establish a classification process:
   - Is it enough that a score be nominally above a cut score or must it be above by a known confidence interval?
3. Apply the process

Methods to ensure accurate classification

- There are many ways to classify, here are two ways:
  - Use the nominal scores such that any number above the cut is high (or vice-versa)
  - Use the standard errors as part of the classification
- Recall that the teacher VAM scores have some uncertainty.
- Using the standard errors in classification can help increase classification accuracy.

Classification categories

There are four classification categories:

1. Highly effective
2. Effective
3. Needs improvement
4. Unsatisfactory

Let's first examine possible ways to use the data to classify as highly effective and effective

Classification

- The table shows three different teachers from grade 6 math.
- All teachers could be identified as “high” if we use a nominal cut of 0 for classification.
- However, notice the different rates of accurate classification for the different teachers.

Teacher	VAM Score (Standard Error)	Probability of Accurate Classification
1	23.3 (18.3)	90%
2	34.29 (16.2)	98.30%
3	2.45 (15.09)	57%

Classification

- In these classifications we are asking, “is the VAM score higher than the cut score?”
- This is framed mathematically as:
  - *Teacher_effect > cut* (e.g., 10 > 0)
- However, we want to add an element of **certainty** to better ensure accurate classification:
  - That is, is the teacher effect above the cut with some statistical certainty.
- One way to use the standard errors is:
  - *Teacher_effect – k * standard error > cut*
- Where *k* is adjusted to be a certainty parameter.

Classification example

- Assume we use 0 as a hypothetical cut.
- Below we see the teacher scores are all above the cut of 0 nominally.
- However, are they above the cuts with some statistical certainty?

Teacher	Teacher VAM Score	Standard Error
1	23.3	18.3
2	34.29	16.2
3	2.45	15.09

Classification options

- One possible way to classify as highly effective is:
  - If teacher effect is above cut score with a lot of certainty (e.g., $k = 1$).
- One possible way to classify as effective is:
  - If teacher effect is above cut score with some certainty (e.g., $k = .5$).

Classification hypothetical example

- Teacher 1 is above the cut of 0 under all values of *k*. We might classify as highly effective.
- Teacher 2 is above the cut of 0 at *k* = .5 (some certainty) but not at *k* = 1 (a lot of certainty). Maybe classify as effective.
- Teacher 3 is not above the cut of 0 at all when we apply the certainty criteria.

Teacher	Teacher VAM Score	Standard Error	k=.5	k=1	k=1.5
1	34.29	16.2	26.19	18.09	9.99
2	18.2	18.3	9.05	-0.1	-9.25
3	2.45	15.09	-5.095	-12.64	-20.185

Classification

- We can use the same methods to examine if a teacher is *below* the cut.
- The formula is now modified as:
  - *Teacher_effect + k * standard error < cut*
- Again, we have some teachers who are all nominally below the cut.

Teacher	Teacher VAM Score	Standard Error
1	-28.45	15.8
2	-7.02	12.75
3	-1.2	18.1

Classification options

- One possible way to classify as unsatisfactory is:
  - If teacher effect is below cut score with a lot of certainty (e.g., $k = 1$).
- One possible way to classify as needs improvement is:
  - If teacher effect is below cut score with some certainty (e.g., $k = .5$).

Classification, example

- Teacher 1 is below the cut with all values of *k*. Maybe classify as unsatisfactory.
- Teacher 2 is below the cut with some certainty. Maybe classify as needs improvement.
- Teacher 3 is not below the cut with any value of *k*.

Teacher	Teacher VAM Score	Standard Error	k=.5	k=1	k=1.5
1	-28.45	15.8	-20.55	-12.65	-4.75
2	-7.02	12.75	-0.645	5.73	12.105
3	-1.2	18.1	7.85	16.9	25.95

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Data files

State Summary Report

- Excel file: State_Subject.xlsx

District Summary Report

- Excel file: District_ID_District_Name_District_Subject.xlsx

School Summary Report

- Excel file: District_ID_District_Name_School_Subject.xlsx

Teacher File

- Excel file: District_ID_District_Name_Teacher_Subject.xlsx

Student Files

- tab delimited txt: District_ID_District_Name_Student_Subject.txt

Teacher/Student Link File

- Excel file: District_ID_District_Name_Link_Subject.xlsx

State summary report

- Excel file: State_Subject.xlsx.
- Each district received the same state level file for each subject.
- Contains a record for each grade and year of analysis.

Data Files

State summary report

Variable Name	Definition
Year	0809, 0910, 1011
Subject	Reading, Math
Grade	Grade
N_Schools	Number of schools in the grade and subject included in analysis
N_Teachers	Total number of teachers for this grade, in this subject, for whom VAM scores were computed

State summary report

Variable Name	Definition
Mean_teacher_effect	Average unique teacher effect
Mean_SE_teacher_effect	Average standard error of the unique teacher effect
Mean_VAM_estimate	Average information weighted VAM estimate
SE_VAM_estimate	Average standard error of the information weighted VAM estimate
Mean_School_Component	Average school component
Mean_School_Component_SE	Average standard error of the school component

Data Files

State summary report

Variable Name	Definition
VAM_score_5pctile	VAM score at 5th percentile
VAM_Score_25pctile	VAM score at 25th percentile
VAM_Score_50pctile	VAM score at 50th percentile
VAM_Score_75pctile	VAM score at 75th percentile
VAM_Score_95pctile	VAM score at 95th percentile
Mean_VAM_Title_ I	Average VAM among schools with Title I designation
Mean_VAM_non_Title_I	Average VAM among schools not designated Title I

State summary report

Variable Name	Definition
Mean_VAM_FRL_25	Average VAM score for teachers in schools with < 25% free/reduced price lunch students
Mean_VAM_FRL_50	Average VAM score for teachers in schools with 25-50% free/reduced price lunch students
Mean_VAM_FRL_75	Average VAM score for teachers in schools with 51-75% free/reduced price lunch students
Mean_VAM_FRL_100	Average VAM score for teachers in schools with >75% free/reduced price lunch students
Mean_VAM_FRL_UNK	Average VAM score for teachers in schools with unknown or not reported free/reduced price lunch students

Data Files

State summary report

Variable Name	Definition
Mean_VAM_MIN_25	Average VAM score for teachers in schools with <25% minority students
Mean_VAM_MIN_50	Average VAM score for teachers in schools with 25 -50% minority students
Mean_VAM_MIN_75	Average VAM score for teachers in schools with 51-75% minority students
Mean_VAM_MIN_100	Average VAM score for teachers in schools with > 75%minority students
Mean_VAM_MIN_UNK	Average VAM score for teachers in schools with unknown or not reported minority students

State summary report

Variable Name	Definition
N_Students	Total number of students who contributed to VAM analysis
N_Meet_Expectations	Total number of students who contributed to VAM analysis and met expectations
Pct_Meet_Expectations	Percent of students who contributed to VAM analysis and met expectations

District summary report

- Excel file: District_ID_District_Name_District_Subject.xlsx
- Contains the District Summary Report for each subject
- Contains a record for each grade and year of analysis
- Provides summary information across all teachers and schools in the district

District summary report

Variable Name	Definition
Year	0809, 0910, 1011
District_ID	District ID
District_Name	District Name
Subject	Reading, Math
Grade	Grade
N_Schools	Number of schools
N_Teachers	Total number of teachers

District summary report

Variable Name	Definition
Mean_teacher_effect	Average unique teacher effect
Mean_SE_teacher_effect	Average standard error of the unique teacher effect
Mean_VAM_estimate	Average information weighted VAM estimate
SE_VAM_estimate	Average standard error of the information weighted VAM estimate
Mean_School_Component	Average school component
Mean_School_Component_SE	Average standard error of school component

Data Files

District summary report

Variable Name	Definition
VAM_score_5pctile	VAM score at 5th percentile
VAM_Score_25pctile	VAM score at 25th percentile
VAM_Score_50pctile	VAM score at 50th percentile
VAM_Score_75pctile	VAM score at 75th percentile
VAM_Score_95pctile	VAM score at 95th percentile
Mean_VAM_Title_I	Average VAM among schools in this district with Title I designation
Mean_VAM_non_Title I	Average VAM among schools in this district not designated Title I

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District summary report

Variable Name	Definition
Mean_VAM_FRL_25	Average VAM score for schools with < 25% free and reduced price lunch students
Mean_VAM_FRL_50	Average VAM score for schools with 25 -50% free and reduced price lunch students
Mean_VAM_FRL_75	Average VAM score for schools with 51-75% free and reduced price lunch students
Mean_VAM_FRL_100	Average VAM score for schools with >75% free and reduced price lunch students
Mean_VAM_FRL_UNK	Average VAM score for teachers in schools with unknown or not reported free/reduced price lunch students

District summary report

Variable Name	Definition
Mean_VAM_MIN_25	Average VAM score for schools with <25% minority students
Mean_VAM_MIN_50	Average VAM score for schools with 25 -50% minority students
Mean_VAM_MIN_75	Average VAM score for schools with 51-75% minority students
Mean_VAM_MIN_100	Average VAM score for teachers in schools with > 75%minority students
Mean_VAM_MIN_UNK	Average VAM score for teachers in schools with unknown or not reported minority students

District summary report

Variable Name	Definition
N_Students	Total number of students in this district upon which VAM estimates are based
N_Meet_Expectations	Total number of students in this district upon which VAM estimates are based who met expectations
Pct_Meet_Expectations	Percent of total number of students in this district who met expectations

School summary report

- Excel file: District_ID_District_Name_School_Subject.xlsx.
- A school level file for each district for each subject.
- Contains VAM scores and standard errors, as well as other characteristics, for each school in the district.
- Statistics are based on the teachers from that school/district who earned a VAM score.

School summary report

Variable Name	Definition
Year	0809, 0910, 1011
District_ID	District ID
District_Name	District Name
School_ID	School ID
School_Name	School Name
Subject	Reading, Math
Grade	Grade
N_Teachers	Total number of teachers in the school with VAM scores

School summary report

Variable Name	Definition
Mean_teacher_effect	Average unique teacher effect
Mean_SE_teacher_effect	Average standard error of the unique teacher effect
Mean_VAM_estimate	Average VAM estimate
SE_VAM_estimate	Average standard error of VAM estimate
School_Component	School component
School_Component_SE	Standard error of the school component

School summary report

Variable Name	Definition
VAM_score_5pctile	VAM score at the 5th percentile
VAM_Score_25pctile	VAM score at the 25th percentile
VAM_Score_50pctile	VAM score at the 50th percentile
VAM_Score_75pctile	VAM score at the 75th percentile
VAM_Score_95pctile	VAM score at the 95th percentile

School summary report

Variable Name	Definition
N_Students	Total number of students who contributed to the analysis
N_Meet_Expectations	Total number of students who contributed to the analysis and met expectations
Pct_Meet_Expectations	Percent of students who met expectations
Title_I	Identifies the school as Title I (Y or blank)
FRL_PCT	Free/reduced price lunch percentage category (<25, 25-50, 51-75, >75%)
Minority_PCT	Minority Percentage category (<25, 25-50, 51-75, >75%)

Teacher file

- Excel file: District_ID_District_Name_Teacher_Subject.xlsx
- A Teacher level report/file for each district for each subject
- Contains a record for teachers associated with the district for each year and grade in which the teacher earned a VAM score

Teacher file

Variable Name	Definition
Year	0809, 0910, 1011
District_ID	District ID
District Name	District Name
School_ID	School ID
School Name	School Name
Teacher_ID	Teacher ID
Teacher_Name	Teacher Name (Last name, first name, middle initial)

Teacher file

Variable Name	Definition
T_Race	Teacher Race (A: Asian, B: Black, H: Hispanic, I: Native Am., M: Multiracial, W: White, blank)
T_Ethnicity	Teacher Ethnicity for 2010-11 only (Y, N, blank - Y=Hispanic origin)
T_Race_A	2010-11 only, Asian (Y, N, blank)
T_Race_B	2010-11 only, Black (Y, N, blank)
T_Race_I	2010-11 only, Native Am. (Y, N, blank)
T_Race_M	2010-11 only, Multiracial (Y, N, blank)
T_Race_P	2010-11 only, Pacific Islander (Y, N, blank)
T_Race_W	2010-11 only, White (Y, N, blank)
T_Gender	Teacher Gender (M, F, blank)

Teacher file

Variable Name	Definition
T_Degree	Teacher Degree (A: Associate, B: Bachelor, D: Doctorate, M: Master, S: Specialist, Z: not applicable)
T_experience	Teacher Years Experience
NBCT_Certified	Holds NBCT certification (Y or blank)
Area_Certified	Certification area if NBCT certified is Y
Date_Certified	Date of NBCT certification issue
Date_Expired	Date of NBCT certification expiration
Subject	Subject (Reading or Math)
Grade	Grade

Teacher file

Variable Name	Definition
Teacher_effect	Unique teacher effect
Teacher_effect_SE	Standard error of the unique teacher effect
Teacher_VAM_estimate	Information weighted teacher VAM score (Teacher_effect + 0.5 * school_effect)
Teacher_VAM_estimate_SE	Standard error of Information weighted teacher VAM score
School_Component	School component
School_Component_SE	School component standard error

Teacher file

Variable Name	Definition
N_students	Number of students upon which teacher effect is computed
N_Meet_Expectations	Number of students for this teacher who met expectations
Pct_Meet_Expectations	Percent of students for this teacher who met expectations

Student files

- tab delimited text: District_ID_District_Name_Student_Subject.txt.
- A student file for each subject, each of three years (2008-09, 2009-10, and 2010-11), and at each grade level (4-10 typically, except for 2010-11, Grade 9 Math).
- Contains the records of any students in courses in the district taught by teachers in the district during the particular academic year.
- The student record contains the fields defined in the student file layout, and reflect data as it was reported by the district to the FLDOE.
- Note: if a student was also associated with a teacher/school in another district, that information will also be reflected on the student record.

Student files

Variable Name	Definition
SSID	Unique Student Identifier
_year__LastName	Student's last name
_year_FirstName	Student's first name
_year_DeltaAge	Student's age in years as of September 1 of school year _year_ **less** the modal age
_year_TestedGrade	Student tested grade for _year_
_year_ELL_LY	_year_ELL_LY=1 if S_LEP = LY for year _year_ 1, 0 (1 = student is ELL, 0 = otherwise)
_year_S_Gifted	Indicator variable indicating classification of student as Gifted if SWD ="L" 1, 0 (1 = student is Gifted, 0 = otherwise)

Student files

Variable Name	Definition
_year_number_courses	Number of courses in which student is enrolled (up to a max of 6) for this school year, _yyyy_
_year_ScaleScore	_yyyy_ Developmental Scale Score
_year_ScaleScore_SEM	SEM associated with _year_ DSS Scale Score

Student files

Up to six sets per year per student

Variable Name	Definition
_year_District_ID_i	District number *i* where student was enrolled in school year _yyyy_
_year_School_ID_i	School *i* identification number
_year_Course_Number_i	Course number for student's ith course in District_*i*, School_*i* in school year _year_
_year_Period_i	Period number for class *i*
_year_Teacher_ID_i	Teacher identification number asociated with course *i* during school year _yyyy_

Student files

Up to six sets per year per student

Variable Name	Definition
_year_Class_Size_i	Number of students enrolled in the same course with the same teacher during the same period. Applies to the *i*th class for this student in _year_
_year_Course_Count_i	Total number of students in course *i* in District_*i* and School_*i* in school year _year_
_year_Homogenity_i	Homogeneity of the prior-year test scores for the students enrolled in Course *i* within District *i* and School *i* in _yyyyy_ school year. Calculated as the interquartile range of student test scores in the prior year

Student files

Up to six sets per year per student

Variable Name	Definition
_year_Num_Teachers_ Course_i	Number of teachers associated with Course *i* in _yyyy_ school year
_year_Class_Size_i	Number of students enrolled in the same course with the same teacher during the same period. Applies to the *i*th class for this student in _year_

Student files

Variable Name	Definition
_year_Teacher_Effect_i	The summation of teacher effects (1-6) for a student will be equal to the total number of courses the student took. The summation of teacher effects for any single course will be equal to 1. The combination of courses, period and teacher for any student is variable.
_year_swd_support_ teacher_flag_i	SWD teacher with support teacher will have the growth expectation for one course and 100.

Student files

Variable Name	Definition
_year_swd1	Indicator variable for Exceptionality=A (Intellectual Disability Collapsed into W in 2008-09), 1 if student ESE=A, 0 otherwise
_year_swd2	Indicator variable for Exceptionality=B (Intellectual Disability - Collapsed into W in 2008-09), 1 if student ESE=B, 0 otherwise
_year_swd3	Indicator variable for Exceptionality=G (Language Impaired), 1 if student ESE=G, 0 otherwise
_year_swd4	Indicator variable for Exceptionality=H (Deaf or Hard of Hearing), 1 if student ESE=H, 0 otherwise
_year_swd5	Indicator variable for Exceptionality=I (Visually Impaired), 1 if student ESE=I, 0 otherwise

Student files

Variable Name	Definition
_year_swd6	Indicator variable for Exceptionality=J (Emotional/Behavioral Disability), 1 if student ESE=J, 0 otherwise
_year_swd7	Indicator variable for Exceptionality=K (Specific Learning Disability), 1 if student ESE=K, 0 otherwise
_year_swd8	Indicator variable for Exceptionality=N (Intellectual Disability - Collapsed into W in 2008-09), 1 if student ESE=N, 0 otherwise
_year_swd9	Indicator variable for Exceptionality=O (Dual Sensory Impaired), 1 if student ESE=O, 0 otherwise
_year_swd10	Indicator variable for Exceptionality=P (Autism Spectrum Disorder), 1 if student ESE=P, 0 otherwise

Student files

Variable Name	Definition
_year_swd11	Indicator variable for Exceptionality=Q (Emotional/Behavioral Disability - Collapsed into Code J in 2008-09), 1 if student ESE=Q, 0 otherwise
_year_swd12	Indicator variable for Exceptionality=S (Traumatic Brain Injured), 1 if student ESE=S, 0 otherwise
_year_swd13	Indicator variable for Exceptionality=V (Other Health Impaired), 1 if student ESE=V, 0 otherwise
_year_swd14	Indicator variable for Exceptionality=W (Intellectual Disability), 1 if student ESE=W, 0 otherwise

Student files

Variable Name	Definition
_PriorYear_TestedGrade	Prior year tested grade
_PriorYear_ScaleScore	Prior year scale score
_PriorYear_ScaleScore_SEM	Prior year scale score standard error of measure
_PriorPriorYear_TestedGrade	Two years prior tested grade
_PriorPriorYear_ScaleScore	Two years prior scale score
_PriorPriorYear_ScaleScore_SEM	Two years prior scale score standard error of measure

Student files

Variable Name	Definition
_Year_Present_Days_NBR	Number of days student was in attendance in school year _yyyy_ (not in 2010-11 data)
_Year_num_trans	Indicator of student mobility; counts number of school transitions during school year _yyyy_ (not in 2010-11 data)

Student files

Variable Name	Definition
_Year_S_DisAdvantaged	0,1,2,3,4,6,9,Z (0, student did not apply for free or reduced price lunch. 1, student applied for free or reduced price lunch but is not eligible. 2, student is eligible for free lunch. 3, student is eligible for reduced-price lunch. 4, student is enrolled in a USDA-approved Provision 2 school. 6, student is eligible for free meals based on direct certification which is the automatic approval for free meals but declines the free meals. 9, student is eligible for free meals based on direct certification which is the automatic approval for free meals. Z, Unknown)

Student files

Variable Name	Definition
_Year_S_Race	A,B,H,I,M,W,blank (A; Asian, B: Black, H: Hispanic, I: Native Am., M: Multiracial, W: White)
_Year_predicted_score	Student predicted score

Teacher/student link file

- tab delimited txt: District_ID_District_Name_Link_Subject.xlsx.
- Teacher student link file contains the teacher IDs and associated student IDs at each school in the district by year and grade.
- File provides a crosswalk between the teachers and students associated with the teachers in the schools in the district.

Teacher/student link file

Variable Name	Definition
SSID	Student ID
School_ID	School ID
District_ID	District ID
Grade	Grade
Subject	Reading, Math
Year	Year (2011, 2010, 2009)
Teacher ID	Teacher ID

District
Work
Time

District work time

- Questions

Student growth materials

Information about the activities, membership, meeting schedule and materials, recording of conference calls and webinar of the SGIC, and this technical assistance meeting are posted at: http://www.fldoe.org/committees/sg.asp.

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