Beating the Odds, Value-Added Model, and Charter School Accountability

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Georgia Charter Schools Association Conference

February 13th – February 15th, 2019

Objectives

- Participants will:
  - Know the metrics used for charter school accountability.
  - Understand the recent changes made to the charter school accountability framework.
  - Comprehend the Value-Added (VAM) and Beating the Odds (BTO) models.
  - Learn about available resources for additional assistance.

Defining Features of Flexibility Models

- Charter School
  - Autonomous nonprofit board
  - Two- or three-party flexibility contract
  - Expectation of high performance
- Charter System
  - Two-party flexibility contract
  - Local school governance teams, decentralization
  - Innovative features
  - Expectation of high performance
- Strategic Waivers School Systems (SWSS)
  - Two-party limited flexibility contract
  - Targeted Use of Waivers
  - Expectation of high performance

Old SBOE Contracts

- Locally-Approved Charter Schools
  - BTO
  - CCRPI scores greater than local district and state

- Charter Systems
  - All system schools BTO by Year Four
  - CCRPI equal or greater than state in Year Two, greater than state thereafter

- SWSS
  - CCRPI Target Score (closing the gap between baseline and 100%)
  - BTO as second look

New SBOE Contracts (as of 01/01/19)

- Locally-Approved Charter Schools
  - Year One - At least one of the following:
    - BTO
    - CCRPI Content Mastery score equal to or greater than the district
    - Overall CCRPI score equal or greater than the district
  - Years Two and Three - Two of the following:
    - BTO
    - VAM
    - Close 4% CCRPI gap
    - Close 10% CCRPI Content Mastery Gap
    - Close 10% Progress Gap
  - Years Four and Five - All of the above for Year Two, and not Turnaround Eligible

New SBOE Contracts (as of January 1st, 2019)

- Charter Systems
  - During each year of its charter term, the percentage of Charter System Schools that achieve at least one of the following five measures shall increase by at least 10% of the gap between 100% and the previous year's percentage of Charter System Schools that achieve at least one of the following five measures:
    - Increase the CCRPI Content Mastery score each year
    - Increase the CCRPI Progress score each year
    - Achieve a positive Value-Added Impact score
    - Beat the Odds
    - Increase CCRPI by 4% of the gap between 100 and the previous year's CCRPI
  - SWSS
    - CCRPI Target Score each year
    - BTO as second look

State Charter Schools

- State Charter Schools are approved by the State Charter Schools Commission (SCSC) and can have one of three variations of attendance zone structures:
  - Single district:
    - Application must be denied by the local district
      - If SCSC sees merit in the application, then SCSC can authorize the school to open
  - Multiple districts:
    - Application must be denied by the district in which the school plans to locate
  - Statewide:
    - Application only needs to be approved by the SCSC

SCSC Mission

The mission of the State Charter Schools Commission of Georgia is to improve public education throughout the state by approving high quality charter schools that provide students with *better* educational opportunities than they would otherwise be afforded in traditional schools.

SCSC Evaluation Tool: Comprehensive Performance Framework (CPF)

In 2016, the SCSC adopted a Comprehensive Performance Framework (CPF) to set forth clear, quantifiable, rigorous, and attainable goals in the areas of academic achievement, financial viability, and organizational compliance.

A school's performance on the CPF informs SCSC decision making over the course of the charter term and at renewal.

The framework asks three fundamental questions:

1. Academic Performance: Is the educational program offering students a better educational opportunity than they would otherwise receive at a traditional public school?
2. Financial Performance: Is the school fiscally responsible and financially viable?
3. Organizational Performance: Is the organization effective, compliant, and well-run?

Academic Metrics Within the CPF

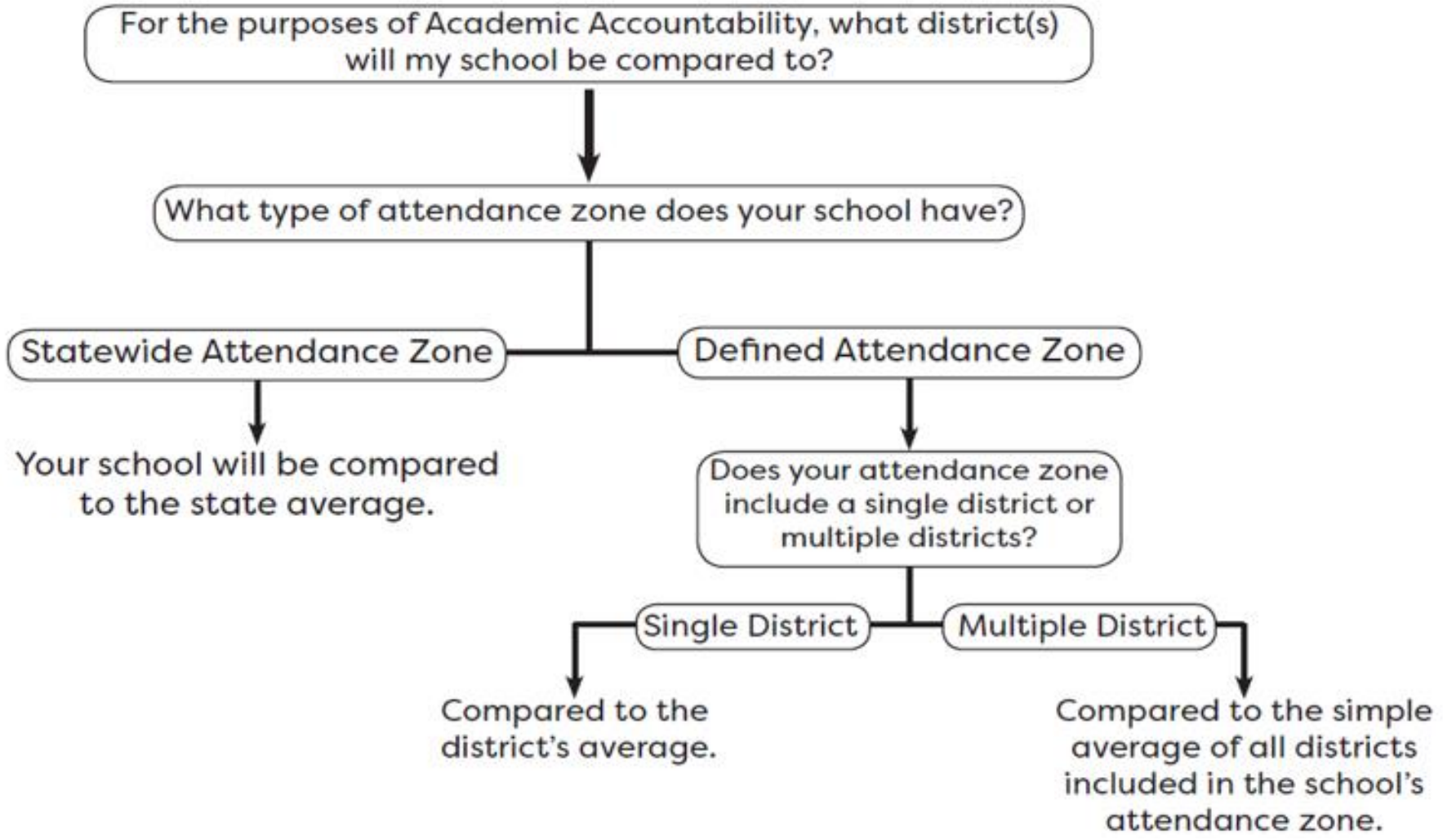
Schools may satisfy annual academic requirements by:

Outperforming their comparison district(s) on at least one of the following measures in all relevant grade bands:

- CCRPI Content Mastery,
- CCRPI Progress,
- CCRPI Grade Band Score,
- CCRPI Single Score
- Value-Added Impact on student achievement

OR by earning a “Beating The Odds” designation

SCSC Academic Accountability and Attendance Zones



Comparison Districts

Starting with 2018 CCRPI scores, the SCSC will use two different methods to generate comparison scores:

The first comparison is the same as in previous years. The school's score is compared to the score of the district(s) included in its attendance zone (as described on previous slide).

The second comparison looks at the districts from which the school actually enrolls students. Using the FTE System of Residency report, the SCSC weights district CCRPI scores based on the number of students the school enrolls from each district served.

- If a school serves one district, the school's score is compared to the district score.
- If the school serves multiple districts, a weighted comparison score is calculated using the proportion of students the school enrolls from each district they serve. For instance, if a school enrolls 80% of its students from District A and 20% from District B, then the comparison score will be comprised of 80% of District A's CCRPI score and 20% of District B's CCRPI score.
- If the school has a statewide attendance zone, the same process is followed as the multiple districts process.

<u>A school is considered meeting standards if it outperforms using either of the comparison calculations.</u>

Academic Metrics Within the CPF

Schools may satisfy annual academic requirements by:

Outperforming their comparison district(s) on any one or combination of CCRPI metrics in all relevant grade bands:

- CCRPI Content Mastery,
- CCRPI Progress,
- CCRPI Grade Band Score,

Outperform the comparison district on

- CCRPI Single Score
- Value-Added Impact on student achievement, in all relevant grade bands,

OR by earning a “Beating The Odds” designation

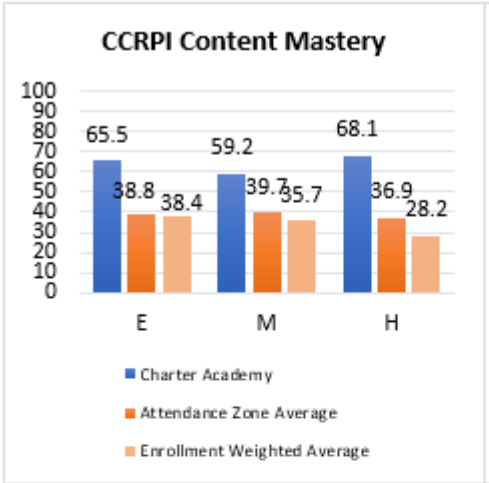
Academic Data Example

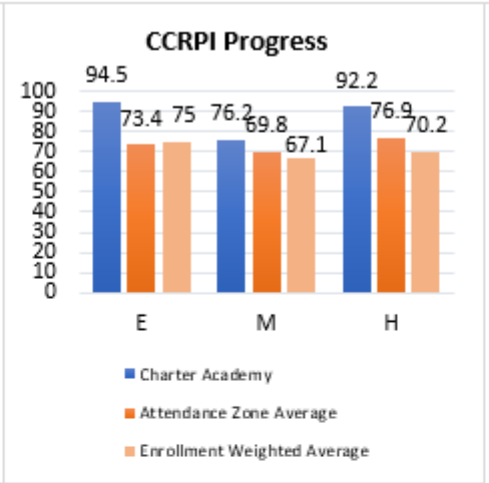
	Grade Cluster	Content Mastery Points	Comparison District Score	Outperform?
School A	E	22	24	No
School A	M	26	23	Yes
	Grade Cluster	**Progress Points**	**Comparison District Score**	**Outperform?**
School A	E	28	27	Yes
School A	M	18	22	No

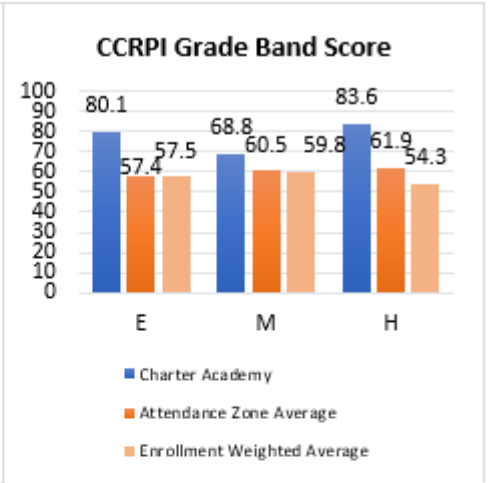
Does School A meet SCSC Academic Standards?

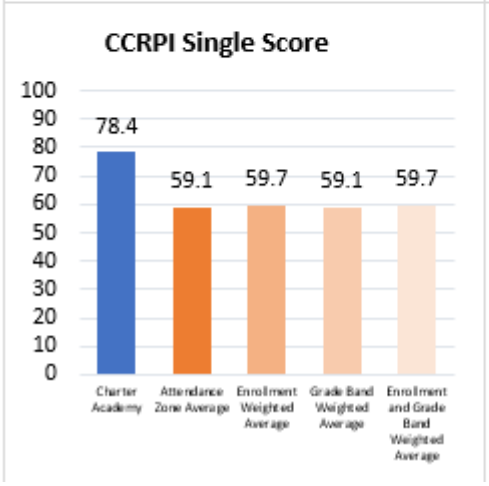
YES!

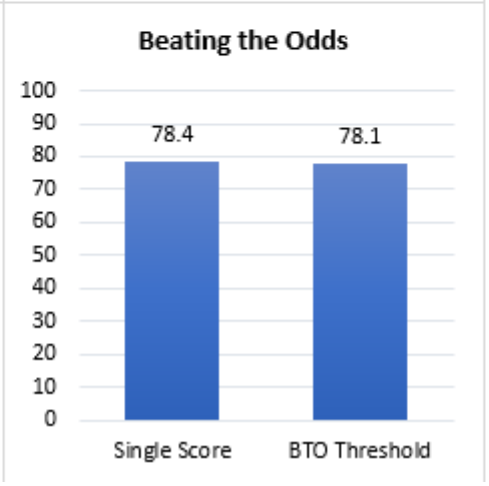
Academic Data Example











Value-Added Impact Scores

Grade Band	Charter	Attendance Zone Average	Statistically Different from District Average
E	0.0283	-0.0409	No
M	-0.0405	0.0040	No
H	0.0020	0.0020	No

What is the Value-Added Impact Score Model?

- The SCSC contracts with the Governor's Office of Student Achievement and Georgia State University to produce value-added impact scores for all state charter schools. Valued-added impact scores estimate the academic impact the school has on student achievement while controlling for the characteristics of the student body.
- The Value-Added Model (VAM) employed by the SCSC is called a "Two-Step VAM" and is designed to compare performance of schools that serve observationally similar students. Individual current year student test scores (on Georgia Milestones) are estimated as a function of individual-level prior year test scores, individual student characteristics, and school-level demographics (e.g.% SWD, % ED students).
- The inclusion of school-level student characteristics is meant to "level the playing field" by not only controlling for the characteristics of each student, but also the general school context. (Without school-level characteristics, the implicit assumption is that a student would be expected to perform the same in a school serving only students from low-income households as in a school serving only students from relatively affluent families.)
- Any differences between the estimated score and the actual score are attributed to differences in school quality- the value-added impact the school has on the student's performance. In the Two-Step VAM, the expected performance of a student depends on both their own characteristics and the average characteristics of the student body in the school they attend.

VAM Resources: https://scsc.georgia.gov/scsc-academic-accountability

VAM Controls

Student-level controls

- Prior year test scores
- Gender
- Foreign-born indicator
- Race/Ethnicity
- ESOL enrollment
- Free/reduced-price lunch eligibility
- Gifted status
- Primary-language-not-English indicator
- Disability status (fifteen specific disability categories)
- Number of schools attended in the current year
- An indicator for students who changed schools from the prior year
- Number of disciplinary incidents in the prior year
- Attendance in the prior year
- The difference between a student's age (in months) and the modal age of students in the same grade (i.e. "overage" in grade)
- Previously withdrawn for reasons identified as risk factors
- Late enrollees

School-level controls- the proportion of

- Directly Certified students
- Limited English Proficiency students
- Student with Disabilities

Value-Added Model Updates

In previous years, Value-Added impact scores at the high-school level were calculated and reported at the subject-level based on EOC results.

This varied from how scores are calculated and reported at the elementary and middle school levels, where an overall grade band score is calculated from the subject-level scores.

For a school to be considered meeting a high school grade band, it had to outperform the district in the majority of tested EOC courses.

Value-Added Impact Scores			
Grade Band/Course	Charter School	Comparison District	Statistically Different from District Average
ELA	.0338	-0.012	Higher
Math	.0025	-0.001	No
Elementary	0.0283	-0.0409	Higher
ELA	-0.0237	-0.0668	No
Math	-0.0921	0.0234	No
Middle	-0.0405	0.0040	No
9th Grade Literature	0.1212	-0.0460	Higher
American Literature	-0.0237	-0.0668	No
Algebra 1	-0.2951	0.0329	Lower
Biology	0.1962	-0.0269	Higher
Economics	-0.0921	0.0234	No
Geometry	-0.3958	0.0723	Lower
Physical Science	0.1849	-0.0694	Higher
U.S. History	-0.0674	-0.0669	No

Value-Added Model Updates

Starting in the 2016-17 school year, Georgia Milestone exams in science and social studies were no longer administered in every grade from 3-8. Thus, the all-subject value-added score for elementary and middle schools changed to include only ELA and math scores (as they require prior year test scores).

In order to align calculations for high schools with elementary and middle schools, only ELA and math EOC (9th Grade Lit., American Lit., Algebra, and Geometry) scores will be used to compute high school scores.

This change also allows an overall, all-subject score to be computed at the high school level, as every school, no matter what grades they serve, should have ELA and math scores.

What is Beating the Odds?

- Beating the Odds (BTO) is a statistical analysis that provides additional context for a school's CCRPI score.

- BTO compares a school's actual performance on the CCRPI with the performance of schools with similar characteristics across the state.

- Given the 2018 changes to the CCRPI, GOSA revised the BTO model based on feedback from stakeholders and an external evaluator.

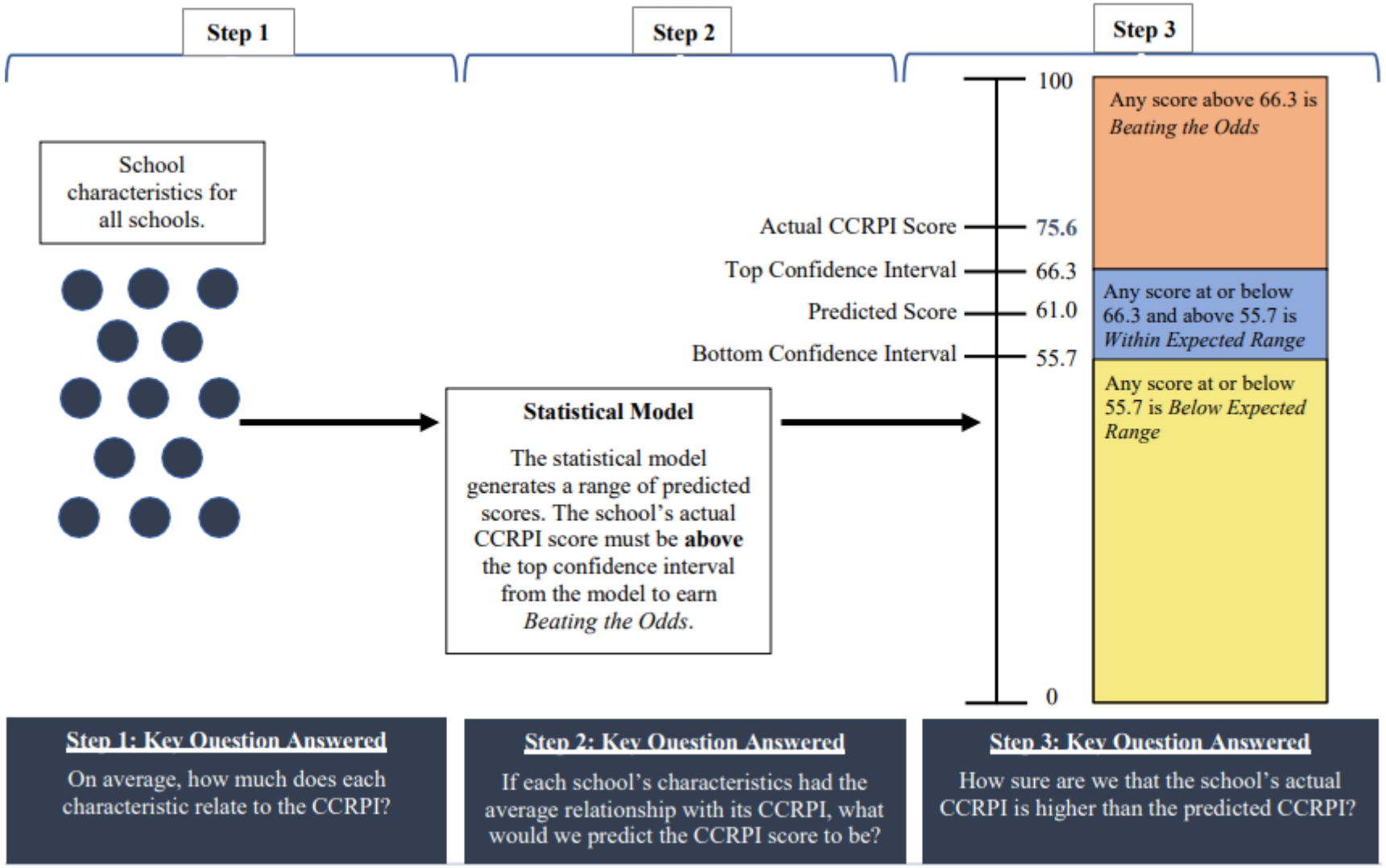
Summary of Changes

- Use standard deviation of the forecast
- Use of half a standard deviation rather than a whole standard deviation to construct confidence intervals
- Include squared and cubic terms
- Stratify by school size
- Include indicator for nontraditional schools
- Use percent direct certification rather than percent free/reduced-price lunch
- Include percent of female students
- Omit percent of Native American students
- Increase BTO designation tiers from two to three

2018 BTO Model Overview

Predictor	Former Model	Revised Model
School Size	October FTE K-12 Enrollment	Stratify model by three size groups
% Female	N/A	Present; also squared/cubic terms
% Asian	Present	Present; also squared/cubic terms
% Hispanic	Present	Present; also squared/cubic terms
% Multi-racial	Present	Present; also squared/cubic terms
% Native American	Present	N/A
% Economically Disadvantaged	FRL and DC (2 models)	Direct Certification; also squared/cubic terms
% English Language Learner	Present	Present; also squared/cubic terms
% Students with Disabilities	Present	Present; also squared/cubic terms
Churn Rate	Present	Present; also squared/cubic terms
Grade Cluster	Present	Present
Nontraditional School	N/A	Present

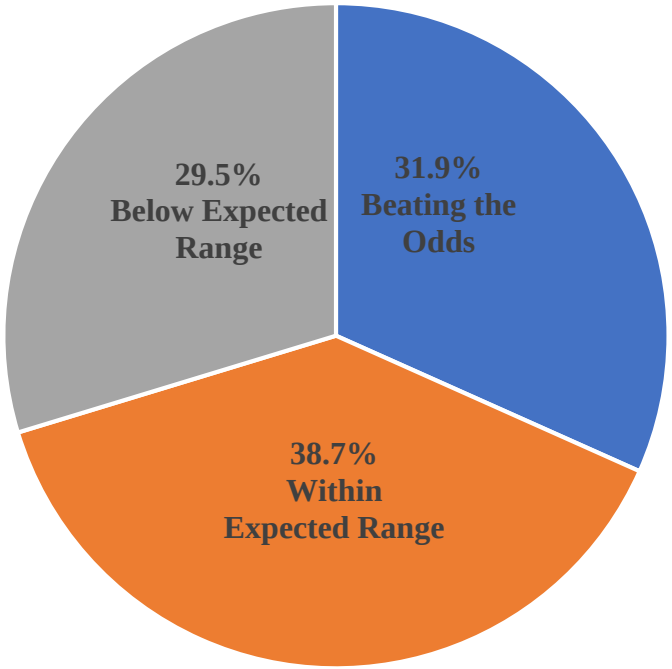
Let's See an Example…



2018 Beating the Odds Results

In 2018, 32% of schools in Georgia “Beat the Odds”.

2018 Beating The Odds Distribution



Questions?

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