

BEATING THE ODDS

Overview

September 23, 2015

What Makes a System Charter School “High-Quality”?



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga DOE.org



Academic Standards



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga DOE.org

High quality system charter schools

- Beat the Odds each year
- CCRPI exceeds state average each year

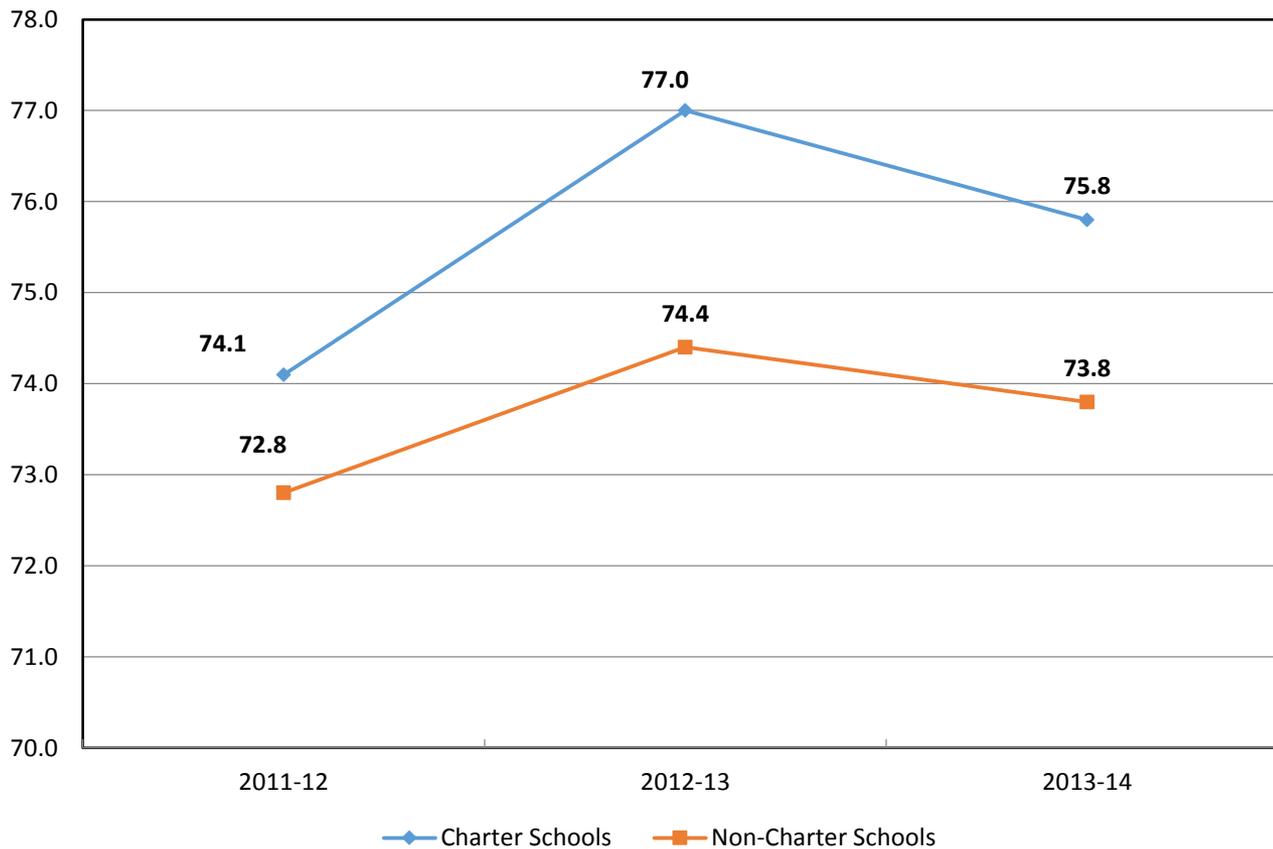
Georgia Department of Education

Accountability: CCRPI Comparison



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gadoe.org

3-Year History of Average CCRPI Scores

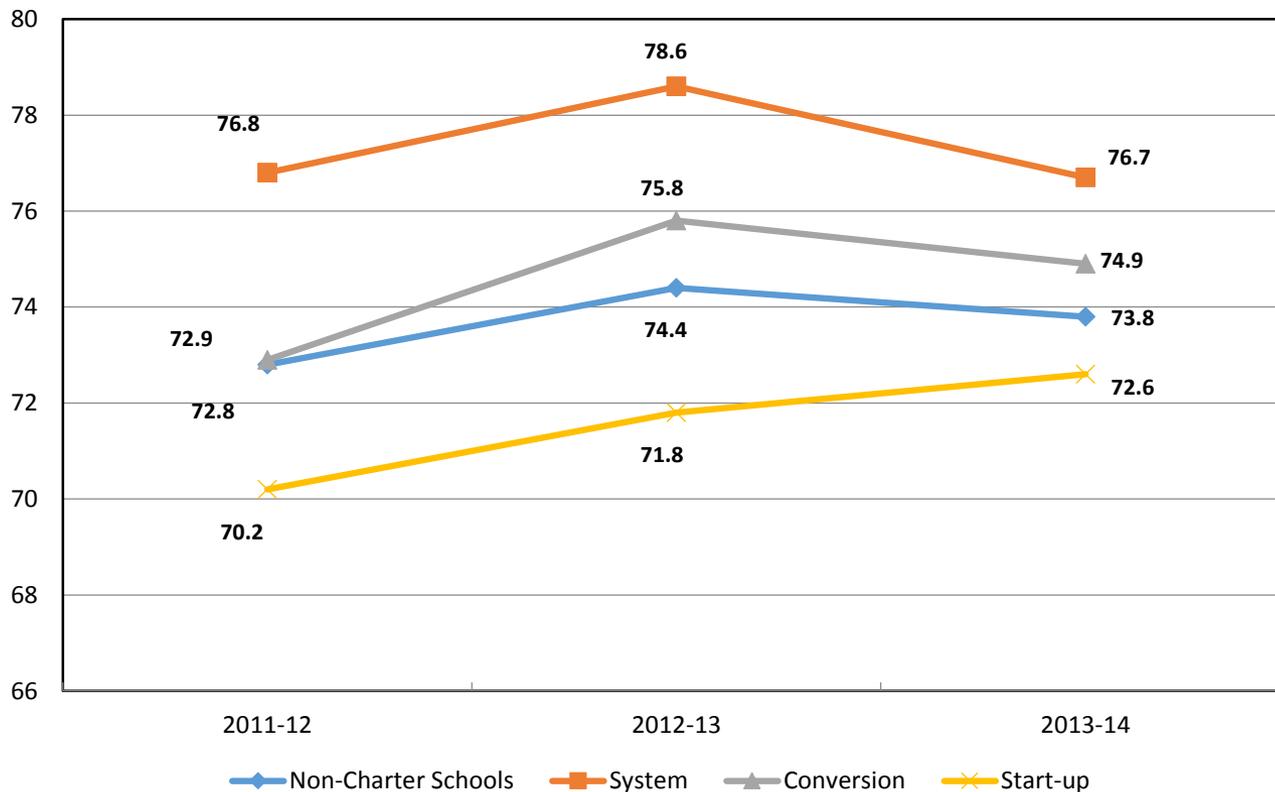


Accountability: CCRPI Comparison by School Type



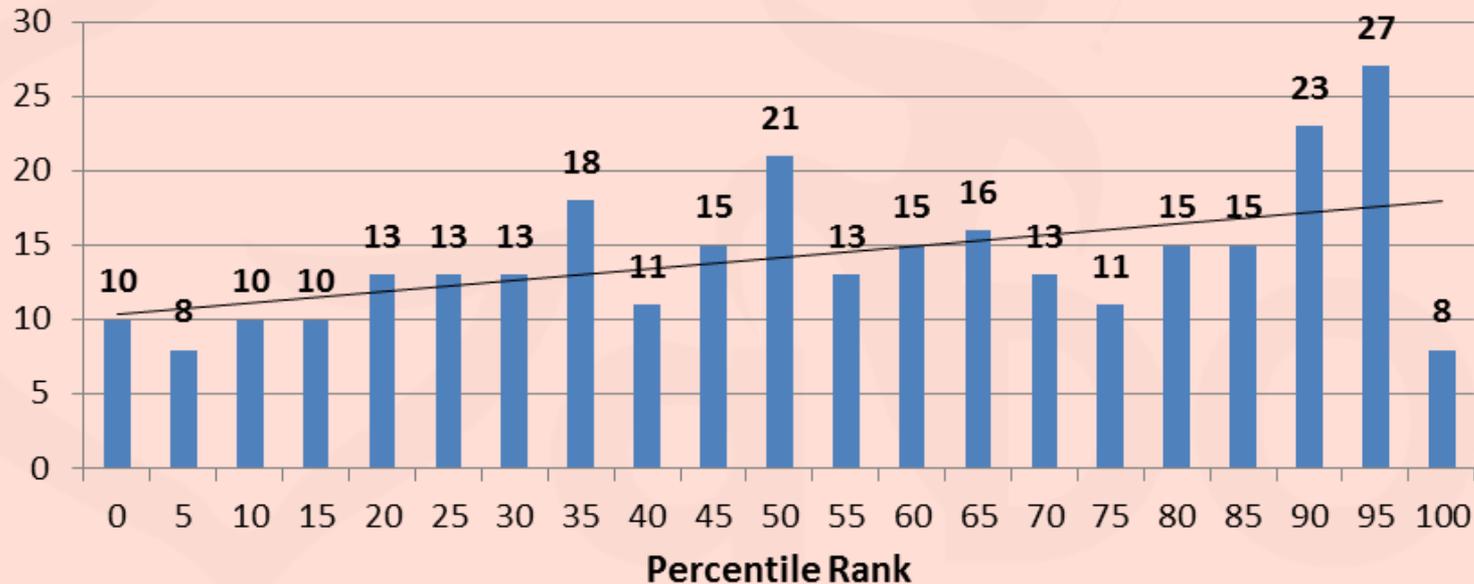
Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga DOE.org

3-Year History of Average CCRPI Scores (By Charter Type)



CCRPI Overall Scores - Actual

2013 CCRPI Overall Score Actual Score Distribution



Note: Charters schools may have more than one score within the distribution. The CCRPI calculates a school level score for grades K-5; 6-8; and 9;12 and schools with grade configurations that span multiple will receive a score for each level.

What is BTO?

- The Beating the Odds analysis is a cross-sectional regression model
 - ❑ Analytical Aim: Use non-malleable factors to predict performance on a school's CCRPI
 - ❑ Data: CCRPI school-level dataset, GaDOE student record file, and GaDOE CPI data
 - Be sure your school data in these datasets is accurate!

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gaDOE.org

Data Sources

- To complete the *Beating the Odds* analysis, an annual unique cross-sectional dataset is created using information from the College and Career Ready Performance Index (CCRPI), the Governor's Office of Student Achievement's Report Card, and the Georgia Department of Education's Student Record.
- Data are matched across data sources using the unique concatenation of system ID and school ID variables that are captured within each of the databases.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gadoe.org

Data Sources

- Beating the Odds uses the CCRPI Single Score without Challenge points.
 - For schools that do not span grade clusters, this score is the Single Score minus Challenge points.
 - For schools that span grade clusters, this score is the weighted average based on enrollment of each grade cluster's CCRPI score without Challenge points.
- Enrollment by grade cluster is provided by the Georgia Department of Education's Accountability Division.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gaDOE.org

Data Sources *(continued)*

- Demographic information is provided by the Georgia Department of Education and includes information on full academic year (FAY) students only, as defined by the CCRPI.
- BTO includes the percentage of students by race/ethnicity: Asian/Pacific Islander, Black, Hispanic, Multi-racial, Native American and White. The percentage of students who are White serve as the reference category.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gaDOE.org

Data Sources *(continued)*

- The model also includes the percentage of students with disability, the percentage of English Language Learners, and the percentage of students who qualify for free or reduced-price lunch (FRL).
 - The 2014 model also includes a variable that indicates whether the school participated in Provision 2 of the Special Assistance Alternatives (SAS) or the Community Eligibility Provision (CEP), as provided by the Georgia Department of Education's School Nutrition Program.
 - The percentage FRL is recoded to equal 100% for all CEP and SAS schools.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gaDOE.org

Data Sources *(continued)*

- The churn rate is calculated by the Governor's Office of Student Achievement, based on data from the Georgia Department of Education's Student Record.
- The churn rate measures the number of student entries and exits during the school year divided by the number of students in the school on the Georgia Department of Education's fall count date.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gadoe.org

Analytical Technique

- *Beating the Odds* is estimated through the following functional form:
- Single Score without Challenge Points =
$$\beta_0 + \beta_1^*(\text{Demographic percentages})$$
$$+ \beta_2^*(\text{Enrollment count})$$
$$+ \beta_3^*(\text{Grade cluster})$$
$$+ \beta_4^*(\text{SAS/CEP}) + \beta_5^*(\text{Churn rate}) + \varepsilon$$
- To control for heterogeneity of error, this analysis utilizes a robust standard error approach.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga.gov

Estimation & Post-estimation Strategy

- To calculate the predicted CCRPI score without Challenge points, the following approach was used. Specifically, a linear prediction from the fitted regression model is specified as:

$$\hat{y}_j = b_1x_{1j} + b_2x_{2j} + \dots + b_kx_{kj}$$

such that $x_{1j}, x_{2j}, \dots, x_{kj}$ are obtained from the actual reported school-level data.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gadoe.org

Estimation & Post-estimation Strategy *(continued)*

- After producing the predicted score, *BTO* estimates a 95% confidence interval to determine whether the predicted CCRPI score is statistically different from the actual CCRPI. The following approach is used to generate the BTO range:
 - Generate the predicted scores using the approach described above.
 - Calculate the standard error of the prediction for each school.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gadoe.org

Estimation & Post-estimation Strategy *(continued)*

- Calculate the lower bound of the confidence interval by subtracting the product of the 1.96 (z-score for the 95th percentile) and the predicted standard error from the predicted score.
 - If the lower bound is less than zero, it is recoded to equal zero.
 - If the lower bound is greater than 100, it is recoded to equal 100.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gaDOE.org

Estimation & Post-estimation Strategy (continued)

- Calculate the upper bound of the confidence interval by adding the product of the 1.96 (z-score for the 95th percentile) and the predicted standard error to the predicted score.
 - If the upper bound is greater than 100, it is recoded to equal 100.

Beating the Odds



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gadoe.org

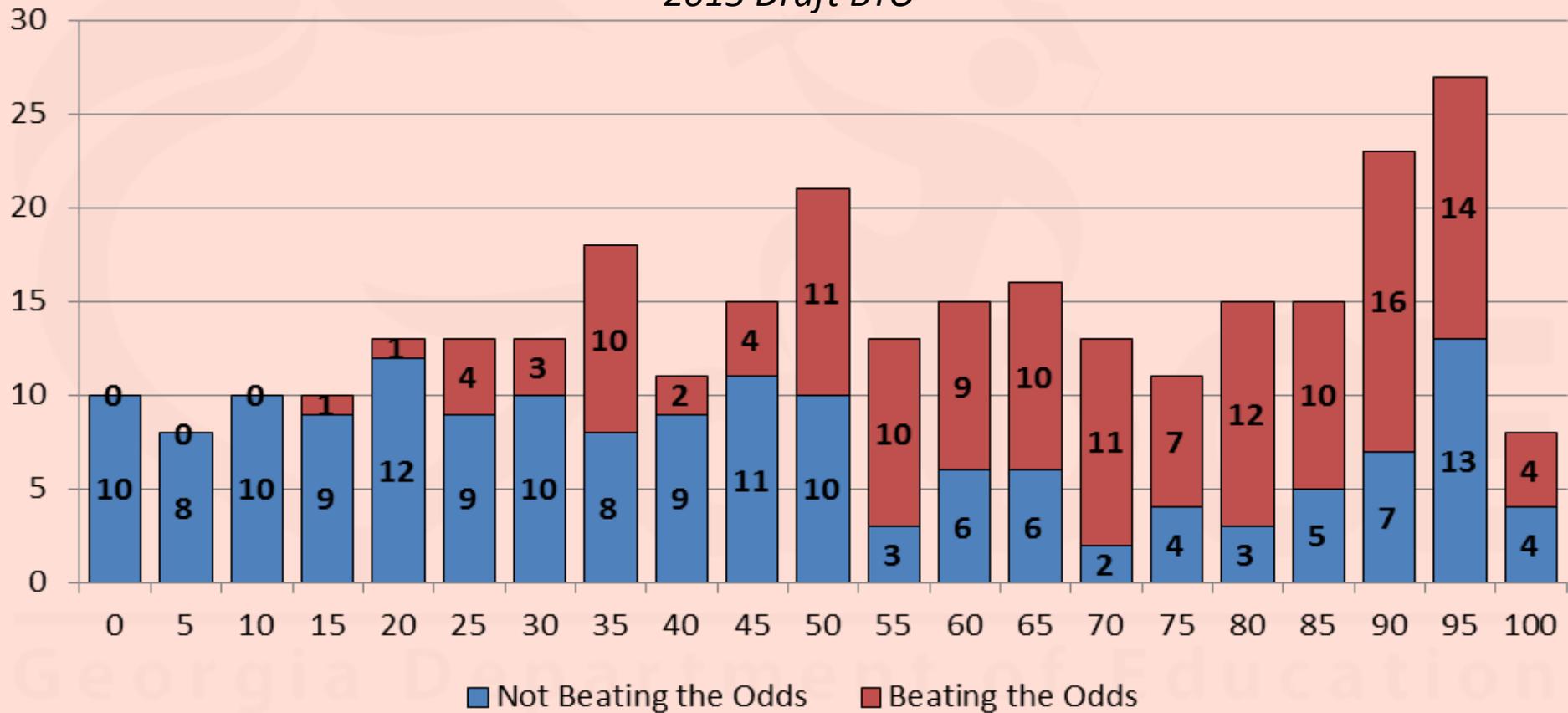
Estimation & Post-estimation Strategy *(continued)*

- Schools then receive one of the three following designations:
 - Beat the Odds:** If a school's actual CCRPI single score is greater than the upper bound of the 95% confidence interval
 - Met Expectations:** If a school's actual CCRPI single score is within the 95% confidence interval
 - Did Not Beat the Odds:** If a school's actual CCRPI single score is less than the lower bound of the 95% confidence interval

CCRPI Overall Score: Actual Scores

All Charter Schools

2013 Draft BTO



BTO and Charter Renewal

- During each year of its first five-year charter term, each System Charter School shall “beat the odds” as determined by a formula measuring expected student growth.
 - If each System Charter School fails to beat the odds in Year 1 of the charter, the Charter System shall decrease the number of System Charter Schools not beating the odds during Years 2 and 3 at a rate so that all System Charter Schools will beat the odds in Year 4.



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga DOE.org

BTO and Charter Renewal

- Renewal decisions for new charter systems first converting in 2014 or later will be based in part on whether each System Charter School “beat the odds” in each of the first four years of its first charter term (Years 1-4).

Georgia Department of Education

CCRPI and Charter Renewal



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga DOE.org

- For new Charter Systems first converting in 2014 or later, using Year 1 of the charter term to establish a CCRPI baseline, the Charter System's CCRPI score shall be equal to or better than the State in Year 2, and better than the State in Years 3-5 of the charter contract.

Georgia Department of Education

CCRPI and Charter Renewal



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga DOE.org

- If the Charter System's first-year CCRPI score is lower than the State, the Charter System shall have until the end of Year 2 of the charter term to close the gap between the Charter System and the State.
- In Years 3-5 of the charter term, the Charter System's CCRPI score shall be better than the State.

Georgia Department of Education

CCRPI and Charter Renewal



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gadoe.org

- Renewal decisions for new Charter Systems first converting in 2014 or later will be based in part on whether the Charter System's CCRPI score was equal to or better than the State in Year 2, and better than the State Years 3-4 of the charter contract.

Georgia Department of Education

CCRPI, BTO and Charter Renewal



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga DOE.org

- The comparison to state CCRPI averages is only significant for those schools not "beating the odds"
- The key question is whether a school is "beating the odds" -- i.e., doing better than schools across the state serving similar students in similar situations

Georgia Department of Education



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
ga DOE.org

CCRPI, BTO and Charter Renewal

- Charter systems can win renewal if their schools are beating the odds – regardless of where the school's CCRPI stands compared to the state average
- Charter systems will never suffer negative consequences merely for attracting students most in need of help!

Georgia Department of Education

CCRPI, BTO and Charter Renewal



Richard Woods,
Georgia's School Superintendent
"Educating Georgia's Future"
gadoe.org

- Charter systems only risk their charters if they fail to add sufficient measurable value while educating the children that do show up.
 - That's what the BTO measure tells us about a school
- Thus, even though it will take some schools years to catch up with their local district and the state on CCRPI, their system will win charter renewal if they continue to beat the odds each year