Making sense of Smarter Balanced data:

What does it tell us about the pursuit of equity?

Presentation to the State Board of Education

Dr. Amy Fowler, Deputy
September 20, 2016

Board Strategic Plan Goals

1.   ***Ensure that Vermont's public education system operates within the framework of high expectations for every learner and ensure that there is equity in opportunity for all.***

2.   *Ensure that the public education system is stable, efficient, and responsive to changes and ever-changing population needs, economic and 21st century issues.*

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Reading the Charts

- State Average
  - Includes *every student* in the state by category

- School Average
  - Each dot is an individual school or subgroup in a school.
  - Dots are the same size in the graph, but in reality the number of students in each school and subgroup varies.
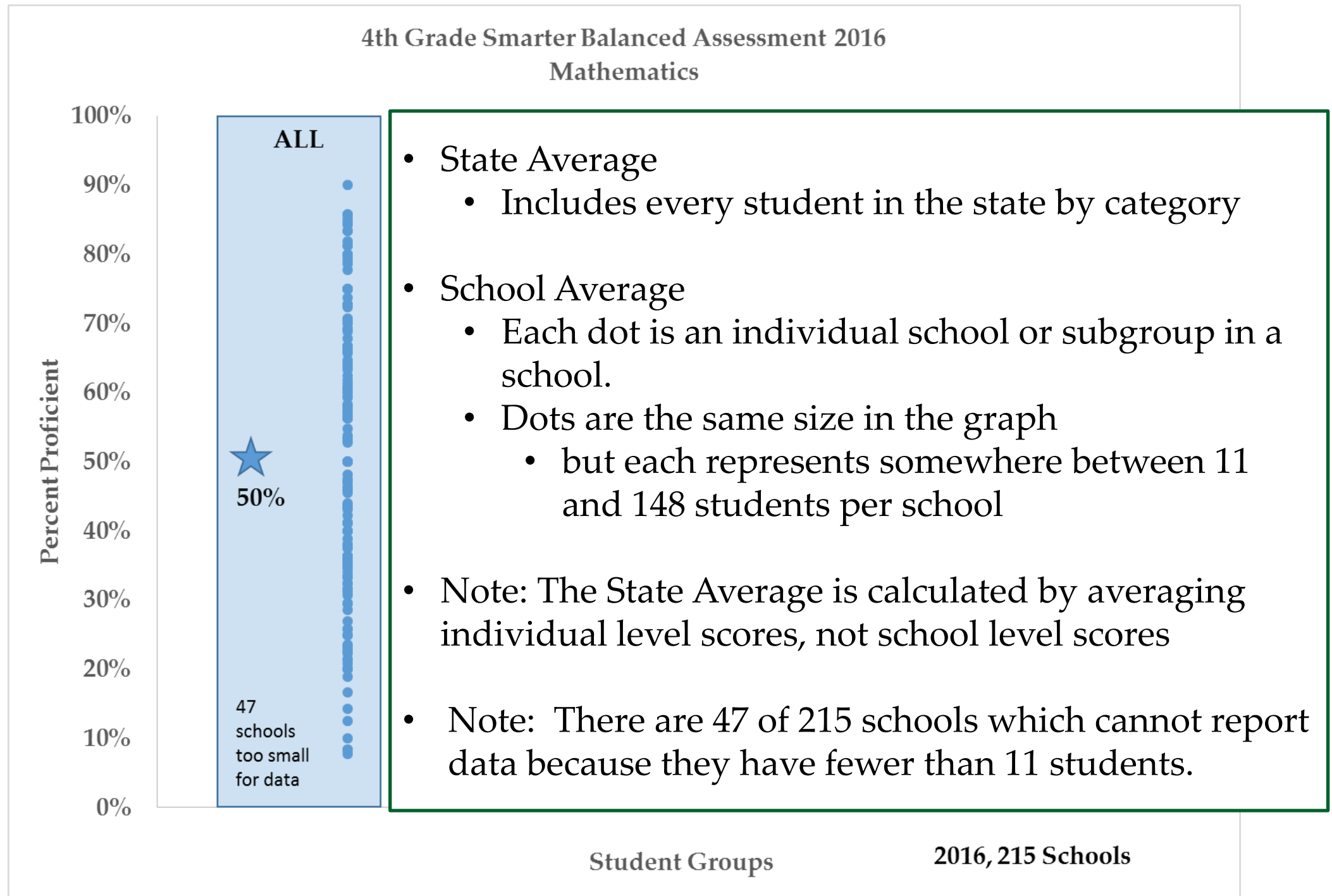 - Charts include the average for schools who have at least 11 students in the group of students being analyzed.
  - *Note:* The State Average cannot be calculated by averaging school level data
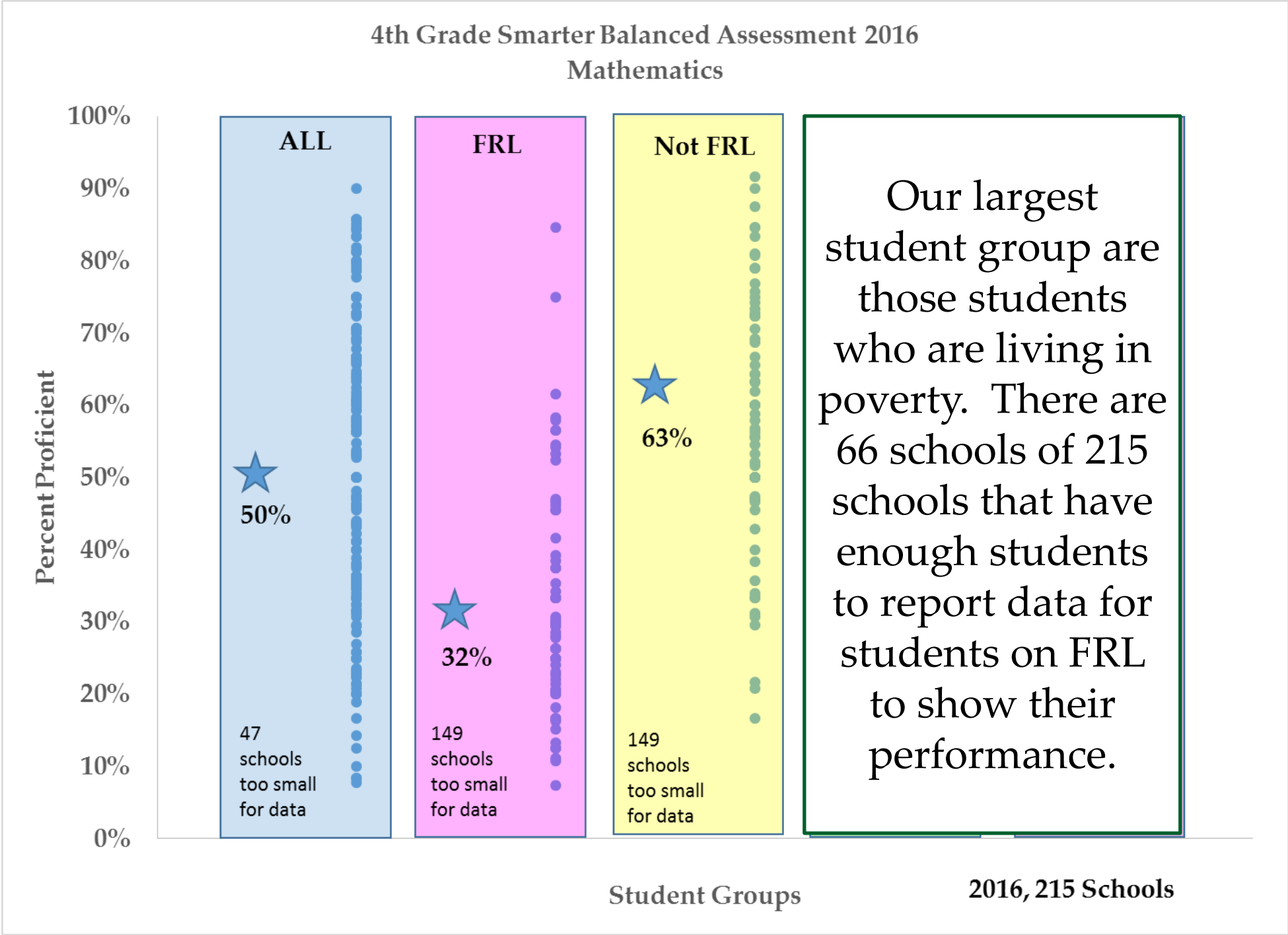
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Data Decisions

- ## Selected three groups to examine-
  - "All Students" – includes the greatest number of schools that can report data.
  - "Free and Reduced Lunch (FRL)" and "Not on Free and Reduced Lunch (Not FRL)"- the largest demographic of students in the state.
  - "Special Education (SPED)" and "Not Special Education (Not SPED)"- a critical concern in the state, 11-30 schools report data.
  - Did not select ethnic/racial groups- other than "White" no ethnic group has sufficient students to report data for more than 5 schools for any grade or any test.
- Selected 4th Grade to examine, but data is consistent across grade levels.

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Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
Mathematics

- State Average
  - Includes every student in the state by category

- School Average
  - Each dot is an individual school or subgroup in a school.
  - Dots are the same size in the graph
    - but each represents somewhere between 11 and 148 students per school

- Note: The State Average is calculated by averaging individual level scores, not school level scores

- Note: There are 47 of 215 schools which cannot report data because they have fewer than 11 students.

Student Groups   2016, 215 Schools

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Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
Mathematics

Percent Proficient

ALL — 50% — 47 schools too small for data

FRL — 32% — 149 schools too small for data

Not FRL — 63% — 149 schools too small for data

Student Groups

Our largest student group are those students who are living in poverty. There are 66 schools of 215 schools that have enough students to report data for students on FRL to show their performance.

2016, 215 Schools

Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
Mathematics

Our next largest student group are those students who have a disability. There are 14/15 schools of 215 schools have enough students to report data for students with a disability to show their performance.

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Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
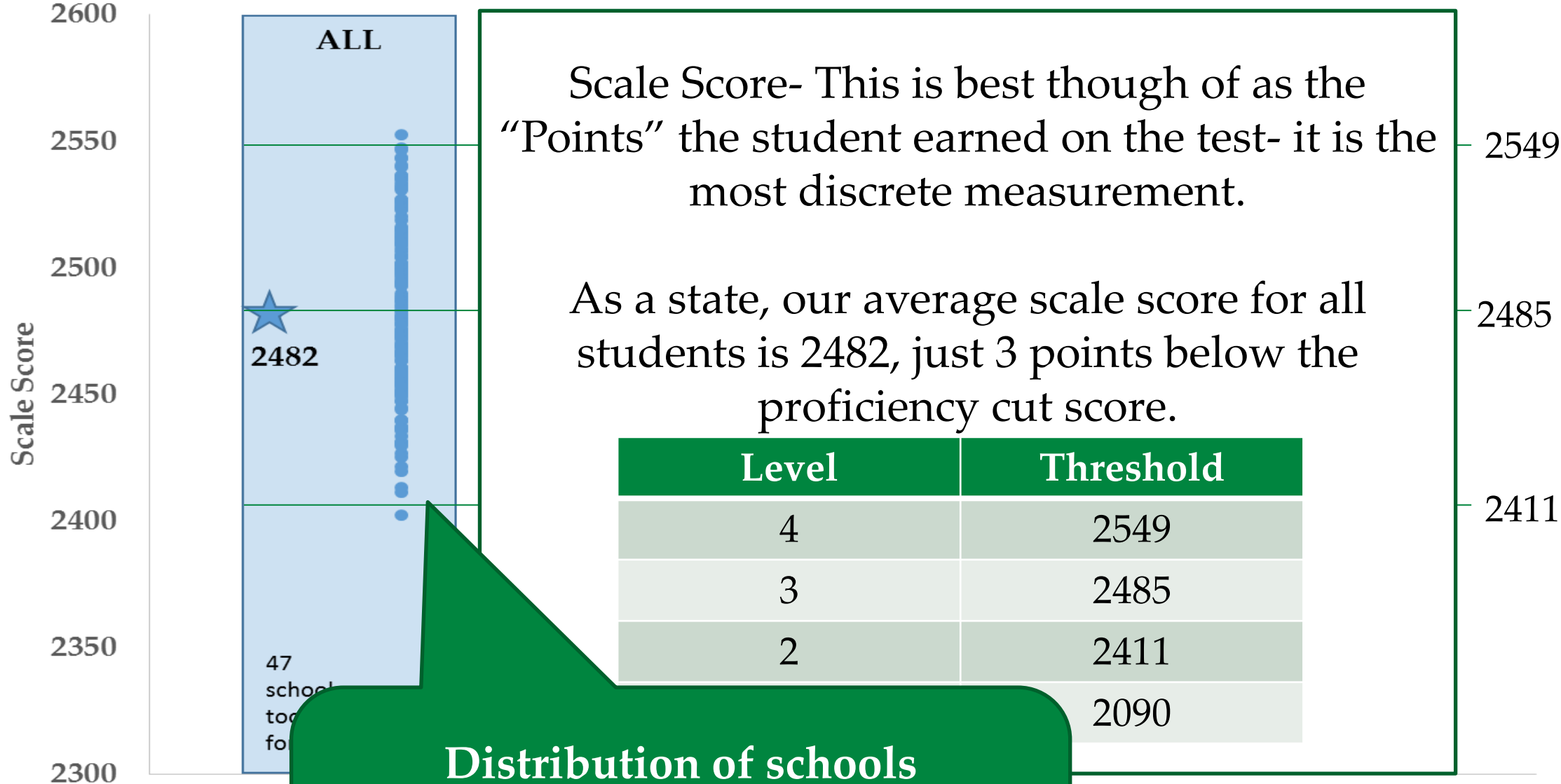Mathematics

Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
Mathematics

Scale Score- This is best though of as the "Points" the student earned on the test- it is the most discrete measurement.
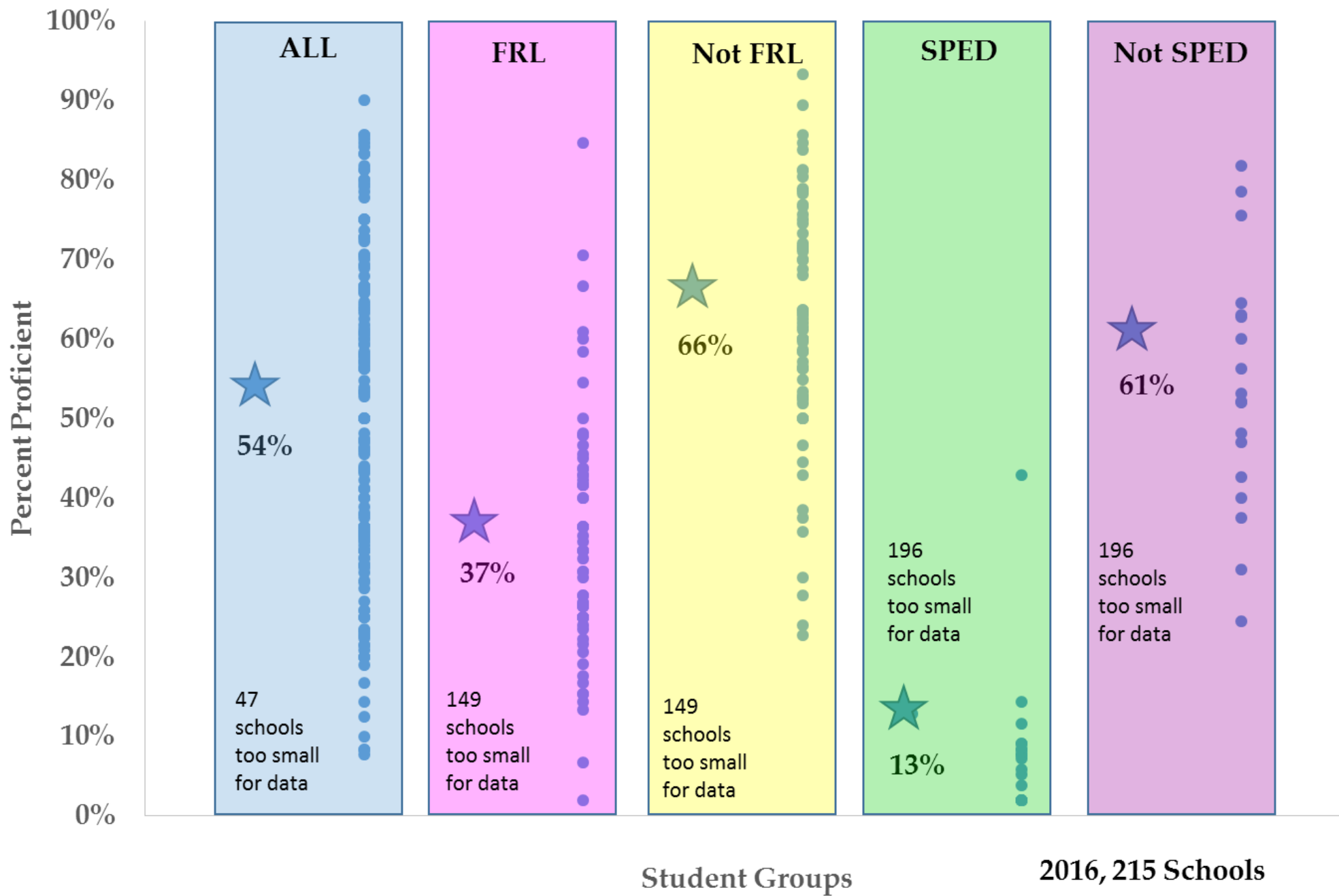
As a state, our average scale score for all students is 2482, just 3 points below the proficiency cut score.

Level	Threshold
4	2549
3	2485
2	2411
	2090

ALL

2482

47
school
too
fo

2549

2485

2411

2016, 215 Schools

Distribution of schools demonstrates a pattern of inequity across schools (ALL) AND across groups (FRL, SPED, etc.)

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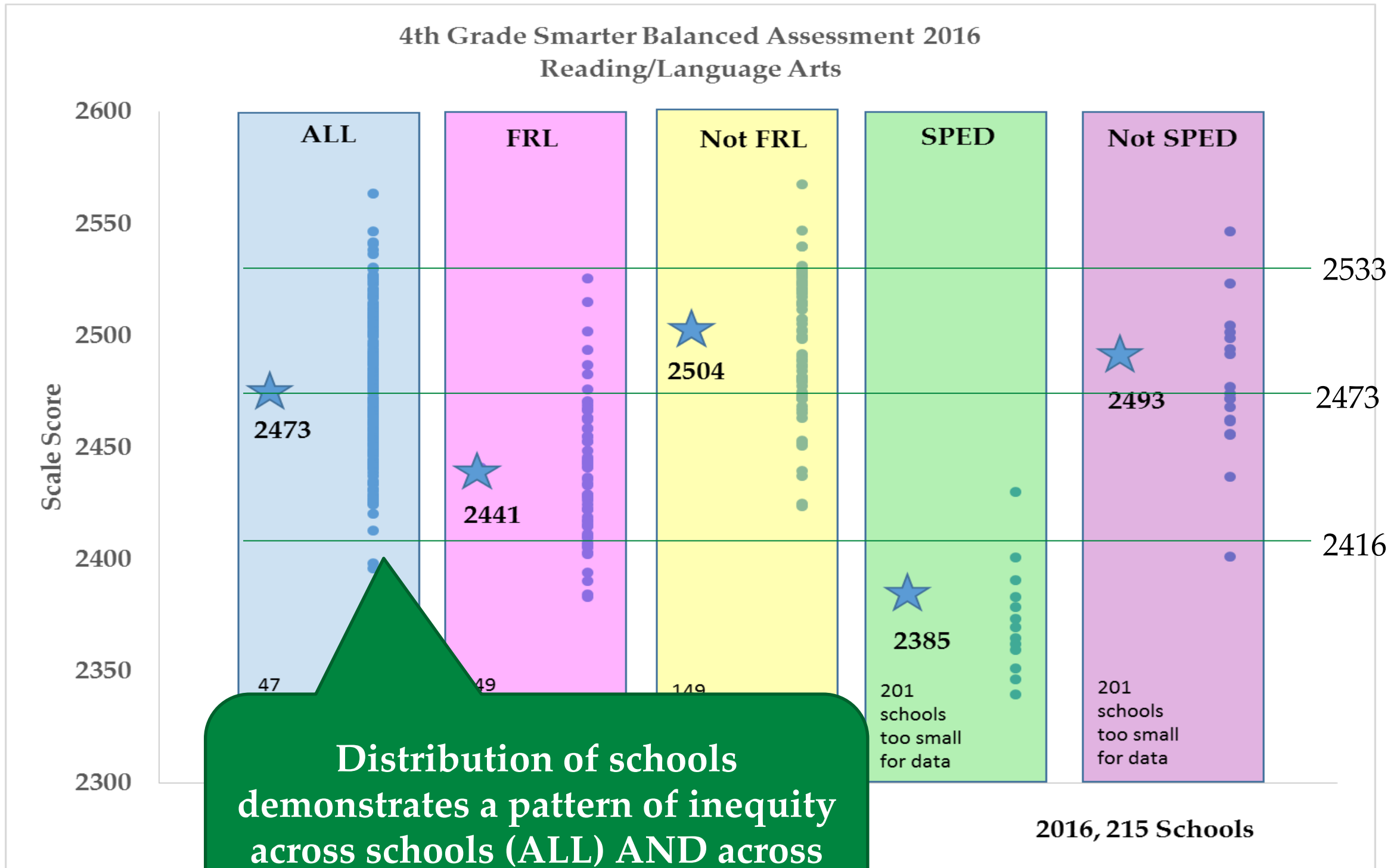
Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
Reading/ELA

Percent Proficient

ALL	FRL	Not FRL	SPED	Not SPED

54%

37%

66%

13%

61%

47 schools too small for data

149 schools too small for data

149 schools too small for data

196 schools too small for data

196 schools too small for data

Student Groups

2016, 215 Schools

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Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
Reading/Language Arts

ALL — 2473
FRL — 2441
Not FRL — 2504
SPED — 2385
Not SPED — 2493

2533
2473
2416

47   49   149

SPED: 201 schools too small for data
Not SPED: 201 schools too small for data

2016, 215 Schools

Distribution of schools demonstrates a pattern of inequity across schools (ALL) AND across groups (FRL, SPED, etc.)
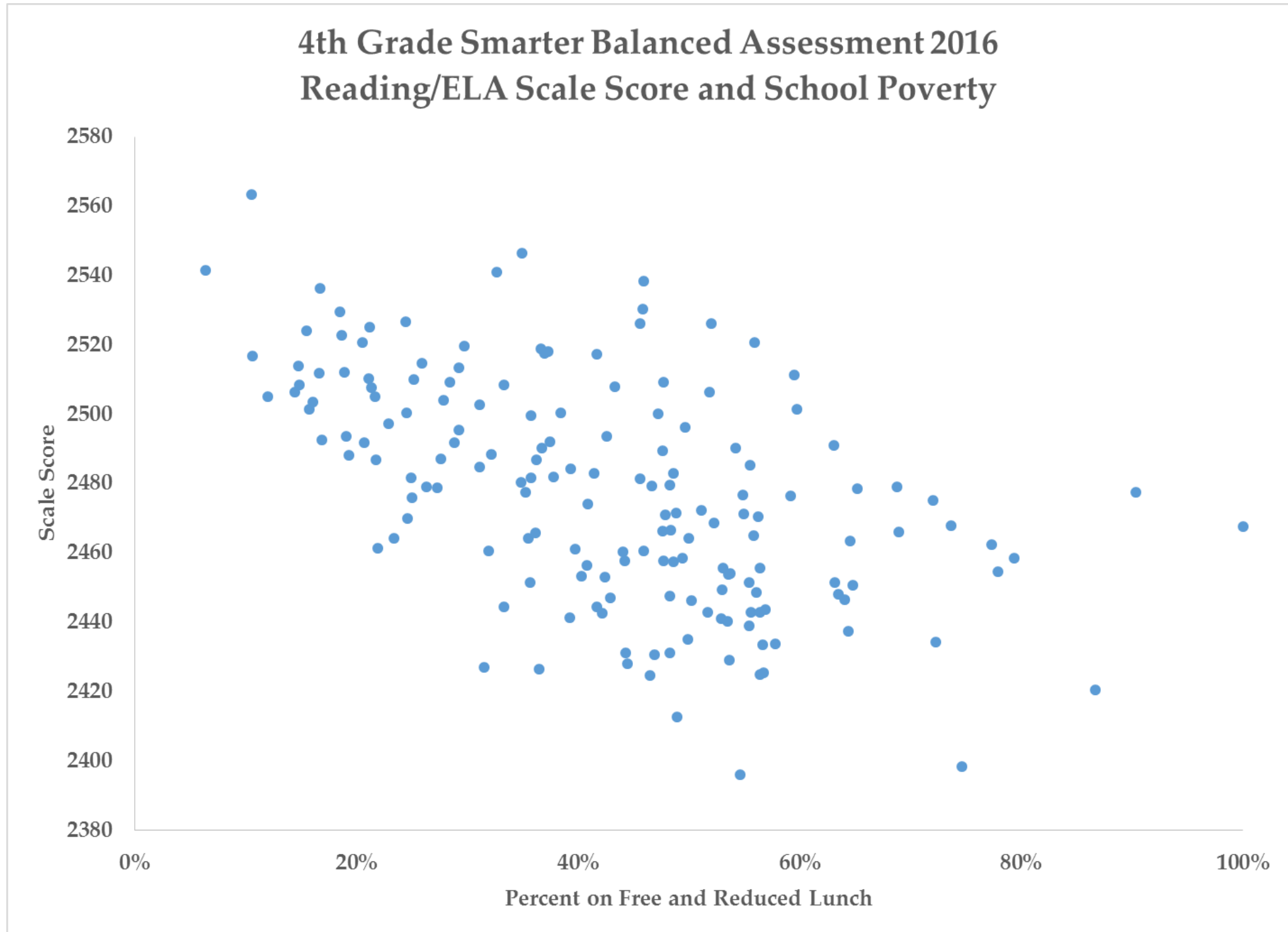
9/20/16

11

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Exploring Patterns of Inequity

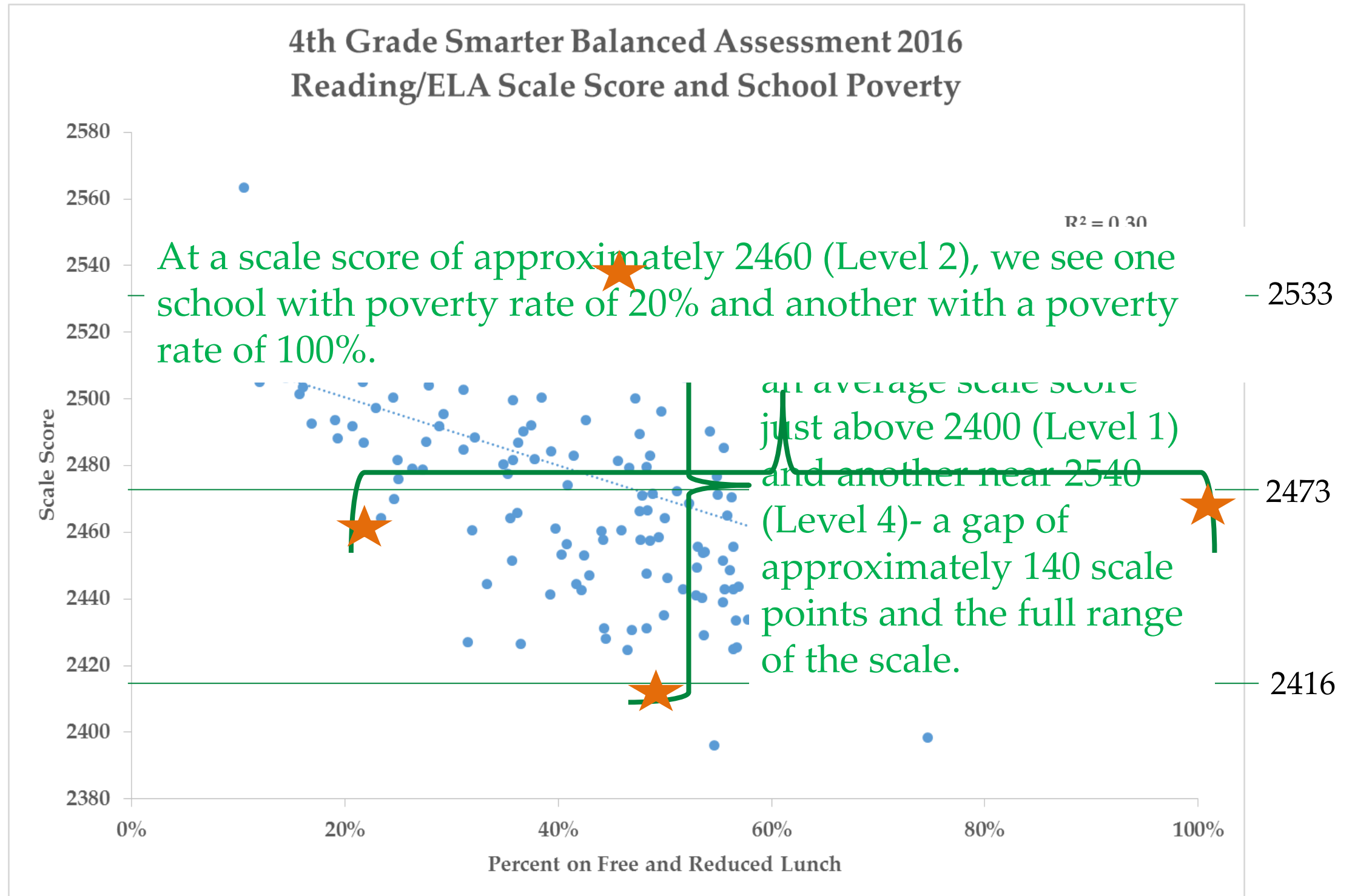| Test	Minumum Scale Score	Maximum Scale Score	Range in Scale Score	Minimum Percent Proficient	Maximum Percent Proficient	Range in Percent Proficient	Schools Too Small to Report <11
SB English Language Arts Grade 03							
All Students	2359	2535	176	8%	96%	88%	53
SB English Language Arts Grade 04							
All Students	2396	2563	167	9%	89%	80%	47
SB English Language Arts Grade 05							
All Students	2411	2609	198	13%	96%	83%	45
SB English Language Arts Grade 06							
All Students	2444	2624	179	12%	94%	83%	56
SB English Language Arts Grade 07							
All Students	2462	2	181	12%	94%	82%	21
SB English Language Arts Grade 08							
All Students	2477		184	13%		81%	16
SB English Language Arts Grade 11							
All Students	2474		218	19%		68%	1

Scale scores vary by 167-218 points between the highest and lowest performing schools

Differences in proficiency rates range from 68-88% between the highest and lowest performing schools.

Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
Reading/ELA Scale Score and School Poverty

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Exploring Patterns of Inequity

4th Grade Smarter Balanced Assessment 2016
Reading/ELA Scale Score and School Poverty

At a scale score of approximately 2460 (Level 2), we see one school with poverty rate of 20% and another with a poverty rate of 100%.

an average scale score just above 2400 (Level 1) and another near 2540 (Level 4)- a gap of approximately 140 scale points and the full range of the scale.

$R^2 = 0.30$

2533

2473

2416

Scale Score (y-axis): 2380, 2400, 2420, 2440, 2460, 2480, 2500, 2520, 2540, 2560, 2580

Percent on Free and Reduced Lunch (x-axis): 0%, 20%, 40%, 60%, 80%, 100%

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Strategic Goals Findings

Ensure that Vermont's public education system operates within the framework of high expectations for every learner and ensure that there is equity in opportunity for all.

- At the State level, Vermont performs well (near the proficiency mark for "All Students")
  - However, there is wide variability in performance between schools that report data.
  - Some schools are too small to report data for the "all students" group.
    - Nearly 25% of elementary schools   (4th grade)
    - Nearly 18% of middle schools   (7th grade)
    - 2% of high schools   (11th grade)

Question: if performance is invisible, can the public make sound decisions about their schools?

Strategic Goals Findings

Ensure that Vermont's public education system operates within the framework of high expectations for every learner and ensure that there is equity in opportunity for all.

- As we disaggregate data for student groups we can no longer see the performance of most groups.
    - Gaps continue to exist related to poverty and disability status at the state and school level;
    - Persistent gaps for English Learners, Migrant Students, Black, Latino and Native American students are seen at the state level but not reportable for schools

Question: if performance is invisible, can the public make sound decisions about their schools?

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Strategic Goals Findings

Ensure that Vermont's public education system operates within the framework of high expectations for every learner and *ensure that there is equity in opportunity for all*.

- Slight correlation between school-level poverty and scale scores for each test.
  - The higher the school's rate of poverty, the lower the score on the assessment is.
  - However, there remains wide variation between schools with the same poverty levels.
  - The correlation tends to be larger for older students, but not substantially.

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Next Steps

- Re-commit to addressing inequities across the state in our new ESSA Accountability

- Identify schools which are performing at higher levels than other schools with similar demographics to find and disseminate promising practices.

- State-wide efforts to support mathematics
  - Special Education Professional Development Grant
  - Career and Technical Center Efforts
  - Consolidated Federal Grant Priority

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