

Accountability Working Committee

March 2, 2017

Georgia Department of Education

Agenda



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

Time	Activity
9:00 – 9:15	Welcome and overview of today's meeting
9:15 – 9:30	Discuss primary goal and agenda
9:30 – 10:00	Review theory of action and summary of recommendations
10:00 – 10:10	Break
10:10 – 10:45	Activity 1: Defining effective schools
10:45 – 12:15	Activity 2: Evaluation of CCRPI profiles
12:15 – 1:00	Lunch (on your own)
1:00 – 2:15	Activity 3: Determining the relative emphasis of CCRPI components and indicators
2:15 – 2:55	Minimum N size
2:55 – 3:00	Wrap up and next steps

Accountability Working Committee Meeting: What do we value?

Defining the Intended Emphasis of CCRPI
Components and Indicators

Erika Hall, Center for Assessment

The Center for Assessment

- The National Center for the Improvement of Educational Assessment (NCIEA or “Center for Assessment”) is a non-profit firm established in 1998 with the mission of improving student learning through improved assessment and accountability practices.
 - Facilitate and participate in TAC
 - Provide customized support in the design/development of assessment and accountability systems
 - Develop and disseminate policy briefs, white papers
 - Present at state, national and international conferences
- The Center works with over 30 states/entities, several large school districts, and a variety of organizations that work directly with states or whose work impact states including: Council of Chief State School Officers (CCSSO), National Center for Educational Outcomes and US Department of Education.

Goal of Meeting

- **Primary Goal:** Work as a group to clarify how the CCRPI components and associated indicators should be prioritized within the system
- **Sub-goals:**
 - Identify where there is variability in terms of what features/outcomes are most important in identifying/distinguishing effective and ineffective schools.
 - Discuss the nature of that variability – what are the rationales driving decisions

Goal of Meeting (cont.)

- **Desired Outcome:** Group recommendation as to the intended emphasis of different components of the system in the overall CCRPI score
 - Which components should be prioritized/emphasized
 - What is the degree of relative importance across components
- **Intended Use:** These recommendations will *inform* the calculations and procedures defined by GaDOE's to determine the overall CCRPI score
 - GaDOE is working with a variety of advisors who will also be providing guidance (e.g., TAC, consultants, etc...)

We are not....

- Defining the final points associated with each component/indicator or the weights that will be used in aggregation calculations
- For a variety of reasons the recommendations you put forward regarding relative emphasis may look different when operationalized within the system.
 - Primary reasons have to do with potential differences in the
 - variability or spread of component measures (Nominal vs. Effective Weights)
 - relationship (i.e., correlation) between component measures

Nominal vs. Effective Weights

- Nominal weight – assigned or intended weight (a.k.a. policy weight)
- Effective weight – actual weight or emphasis after accounting for differential variability of measures
- Example: A teacher administers 2 tests. The teacher decides to weight each test by 50% to establish a composite score that can be used to identify students who require remediation.
 - The teacher wants each test to contribute 50% to the final score that will be used for decision making, so .5 is the nominal weight for each test.

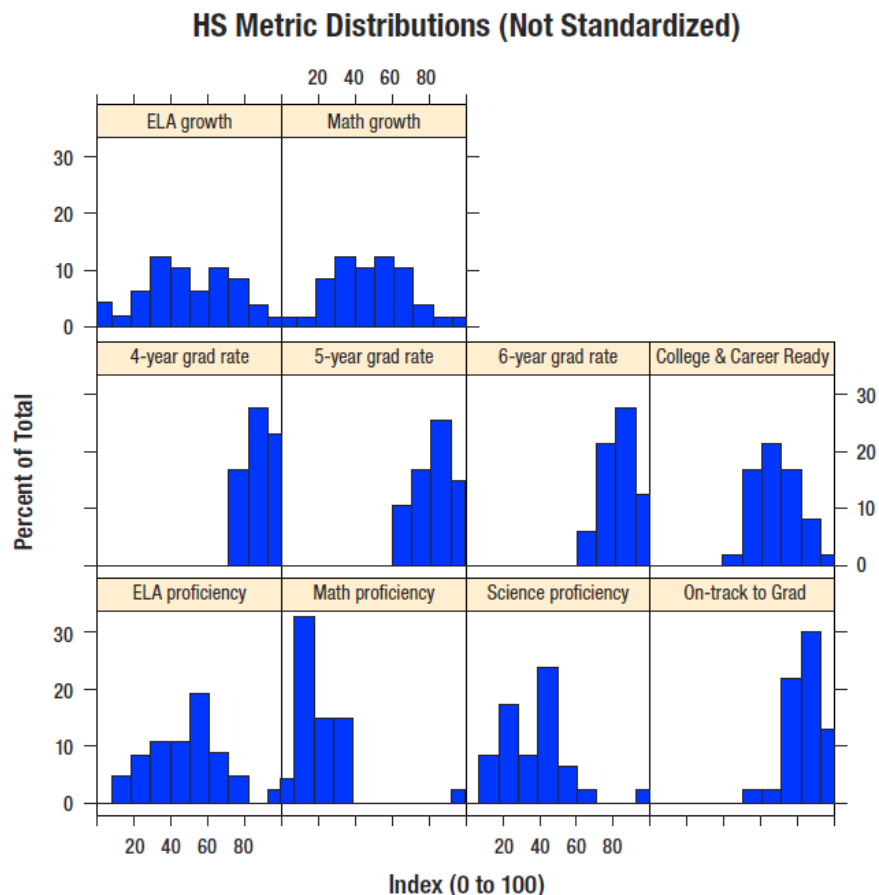
Nominal vs. Effective Weights

ID	Test 1	Test 1	Total = (.5)T1+.5(T2)
1	10	4	7.0
2	10	2	6.0
3	10	6	8.0
4	10	8	9.0
5	10	10	10.0
6	10	9	9.5
7	10	9	9.5
8	10	3	6.5
Average	10	6.38	8.20

- There is no variance in the Test 1 scores, therefore any variability in the Total score is due solely to performance on Test 2.
- The relative impact of test 1 in differentiating among students is 0.

Nominal vs. Effective Weights

Figure 7. Example of non-standardized high school accountability measures.



Taken from: Reyna, R., (2016) *Key Issues in Aggregating Indicators for Accountability Determinations under ESSA (2016)*
Published by CCSSO

Correlated Components

- If two components are highly correlated that means they are essentially providing the same information and do not, uniquely, contribute anything new to decisions about school performance.
- In these situations a decision might be made to assign multiple variables a given weight in establishing the overall determination rather than weighting them separately.

Three Activities

- Activity 1: Work in small groups to discuss what it means to be an effective school
 - based on pre-work document
- Activity 2: Discuss and evaluate different profiles of school performance (Large Group)
 - pairwise comparison of schools to identify where there is convergence/divergence in the group's thinking
- Activity 3: Quantify the relative emphasis of different components of the CCRPI system (Individual with Large Group Discussion)

Working Draft of the Revised CCRPI Framework

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Working Draft of a Revised CCRPI Framework

Content Mastery

English/Language Arts
Mathematics
Science
Social Studies

Readiness

Multiple indicators
(varies by level)

Progress

Growth in English/Language
Arts
Growth in Mathematics
Progress towards English
Language proficiency (EL
students)

Graduation Rate (HS only)

4-Year Cohort Graduation Rate
5-Year Cohort Graduation Rate

Closing Gaps

English/Language Arts
Mathematics
Science
Social studies

Working Draft of a Revised CCRPI Framework

- Percent of achievement targets met (all students and subgroups)
 - Full points when targets met
 - Partial points when progress is made but targets are not met
 - No points when performance declines

Closing Gaps

English/Language Arts
Mathematics
Science
Social studies



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Readiness

Multiple indicators
(varies by level)

Graduation Rate (HS only)

4-Year Cohort Graduation Rate
5-Year Cohort Graduation Rate

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Working Draft of Readiness Indicators

Level	Indicators
Elementary	<ul style="list-style-type: none"><li data-bbox="523 561 1251 611">➤ Literacy (Lexiles in grades 3-5)<li data-bbox="523 625 1740 675">➤ Chronic absenteeism (10% of enrollment or 15 days)<li data-bbox="523 689 1673 739">➤ Career awareness lessons and/or career portfolio<li data-bbox="523 753 1798 861">➤ Students with disabilities served in a general education environment<li data-bbox="523 875 1667 982">➤ Academic enrichment (earning credit in fine arts, world language)

Working Draft of Readiness Indicators

Level	Indicators
Middle	<ul style="list-style-type: none">➤ Literacy (Lexiles in grades 6-8)➤ Chronic absenteeism (10% of enrollment or 15 days)➤ Career inventories/individual graduation plan➤ Students with disabilities served in a general education environment➤ Academic enrichment (earning credit in fine arts, career exploratory, world language)➤ High school readiness (earning 3+ core credits in 9th grade)

Working Draft of Readiness Indicators

Level	Indicators
High	<ul style="list-style-type: none">➤ Literacy (Lexiles in 9th Grade Lit and American Lit)➤ Chronic absenteeism (10% of enrollment or 15 days)➤ Completion of advanced courses (MOWR, AP, IB)➤ Pathway completion (CTAE, advanced academic, fine arts, world language)➤ College and career readiness (entering TCSG/USG not needing remediation, ACT score, SAT score, 2+ AP scores, 2+ IB scores, industry-recognized credential (EOPA)) <p>*Explore adding ACCUPLACER and ASVAB</p>

Theory of Action

- TOA Components
 - ✓ goals
 - ✓ intended uses
 - ✓ system components/design and rationale (working)
 - assumptions underlying the system working as intended
 - Research/evidence that shows the system is working as intended
- Aggregation procedures must make sense given the goals and TOA

Major Themes Emerging from Working Committee

- **Role of Accountability System**

- Accountability should play a supporting role in assisting schools, districts, and the state to reach its mission of offering a holistic education to every child and preparing them for college, career, and life. Accountability should not be the driving force behind decisions about educating students.
- CCRPI should focus on universal goals and outcomes instead of encouraging specific programs. This retains local flexibility to implement the programs and policies important to local communities that will lead to improved opportunities and outcomes for their students.

- **Role of CCRPI Score/Measure**

- CCRPI should provide an objective measure that illustrates the extent to which schools and districts are succeeding in providing improved opportunities and outcomes for all students.

Major Themes Emerging from Working Committee

- Purpose of CCRPI
 - CCRPI should be intentionally redesigned to make the ultimate goal be **continuous improvement**.
 - CCRPI can serve as a **school improvement and communication tool** by providing schools and districts with information on their progress and information to share with their communities as they set goals and work together towards **improved student opportunities and outcomes**.
 - A **focus on continuous improvement** can be accomplished through how the state sets goals, weights components, reports information, and identifies schools for comprehensive and targeted support and improvement (CSI and TSI).
 - The accountability system should **encourage long-term, sustainable improvement**, not quick fixes for immediate points.

Major Themes Emerging from Working Committee

- **Goals of CCRPI System**

1. Increase student achievement for all students and make progress in closing achievement gaps.
2. Increase graduation rates.
3. Increase literacy and numeracy.
4. Increase student completion of advanced courses.
5. Increase the percentage of students on the path to college and career readiness.

Major Themes Emerging from Working Committee

Intended Uses of CCRPI

- Identify, at the school, district, and state level, where progress has been made and areas in need of improvement;
- Identify schools and districts that need additional support
- Provide meaningful data to guide school improvement plans
- Communicate publicly student performance

Impact of Weighting and Aggregation Rules

The emphasis given to different components of the system:

- influences the attention and focus they receive in schools/districts.
 - goals aligned to those components are more likely to be met.
- reflects the information you value or prioritize in supporting an intended use
 - primary use of the CCRPI score is identification of schools/districts that need support
 - the weighting of the CCRPI component reflects the information you believe should be prioritized when identifying schools for support.

Activity 1: What makes a school

- Think about a school in your district that you would consider effective. Pretend you are describing that school to a friend who is considering moving into the area. What features, outcomes, teacher/student experiences would you include in your description to support the claim that the school is effective? What do you believe constitutes the most compelling piece of evidence?
- Now think about a (elementary/middle/high) school that you would consider ineffective. What are the primary features you would include in your description to distinguish this school from the school previously discussed?

Activity 1 (cont.)

- Within your group summarize and prioritize what you believe to be the three factors that best distinguish an effective school from an ineffective school.
- Choose a recorder so you can share your thoughts with the group.

Activity 2 – Evaluate CCRPI Profiles

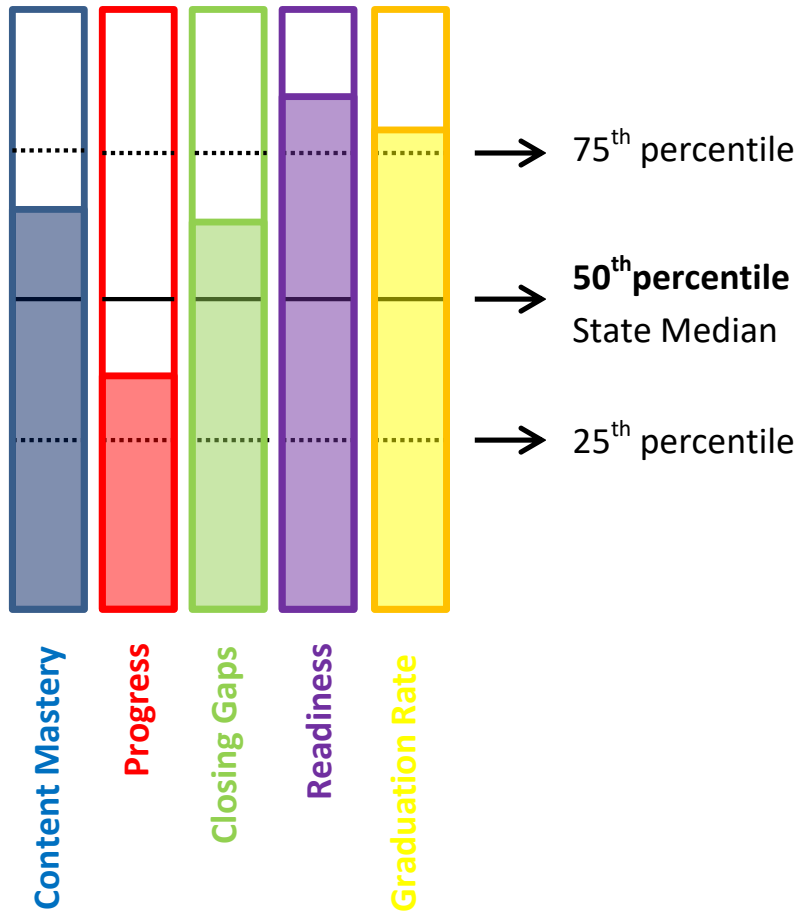
- Task: Compare the performance profiles of two *hypothetical* schools and discuss which profile you believe represents the more effective school.
 - Using a paired comparison approach
- Purpose: inspire group discussion about the relative value of different components of the CCRPI system in making decisions
 - determine where there is variability in the group’s thinking
AND
 - discuss the factors that influence that thinking

Activity 2 – Evaluate CCRPI Profiles

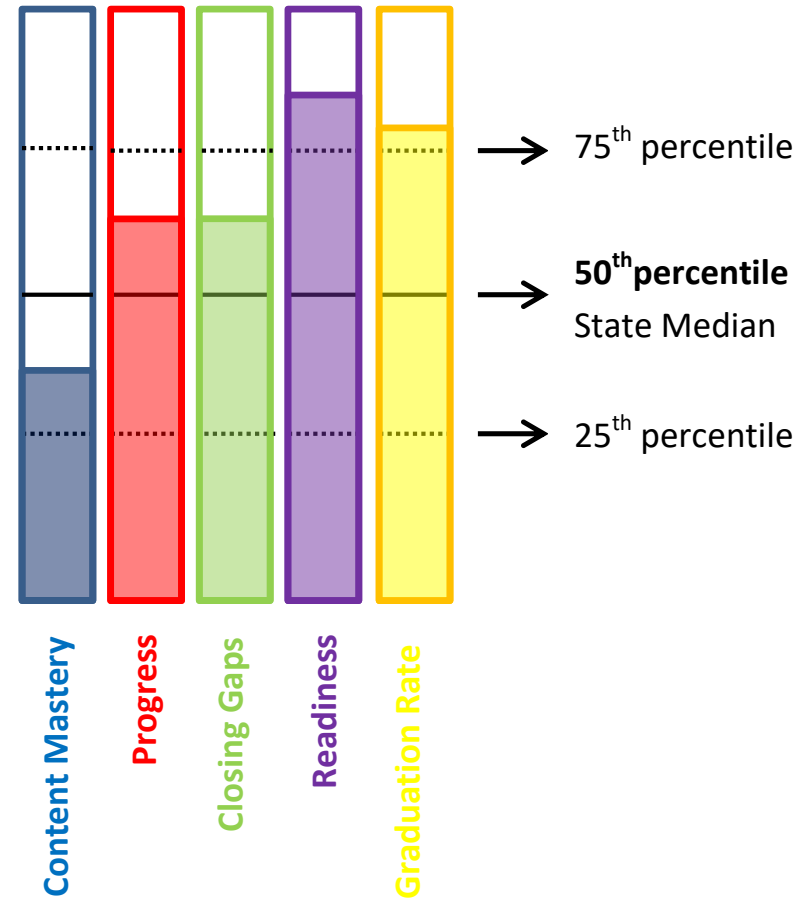
- For each hypothetical school the performance profiles are represented in terms of percentiles – which indicate how well the school performed on a given component of the system compared to all other schools in the state.
- Assume that all indicators are available within each of the two schools and minimum N-count requirements have been met.

Profiles of Performance: #1

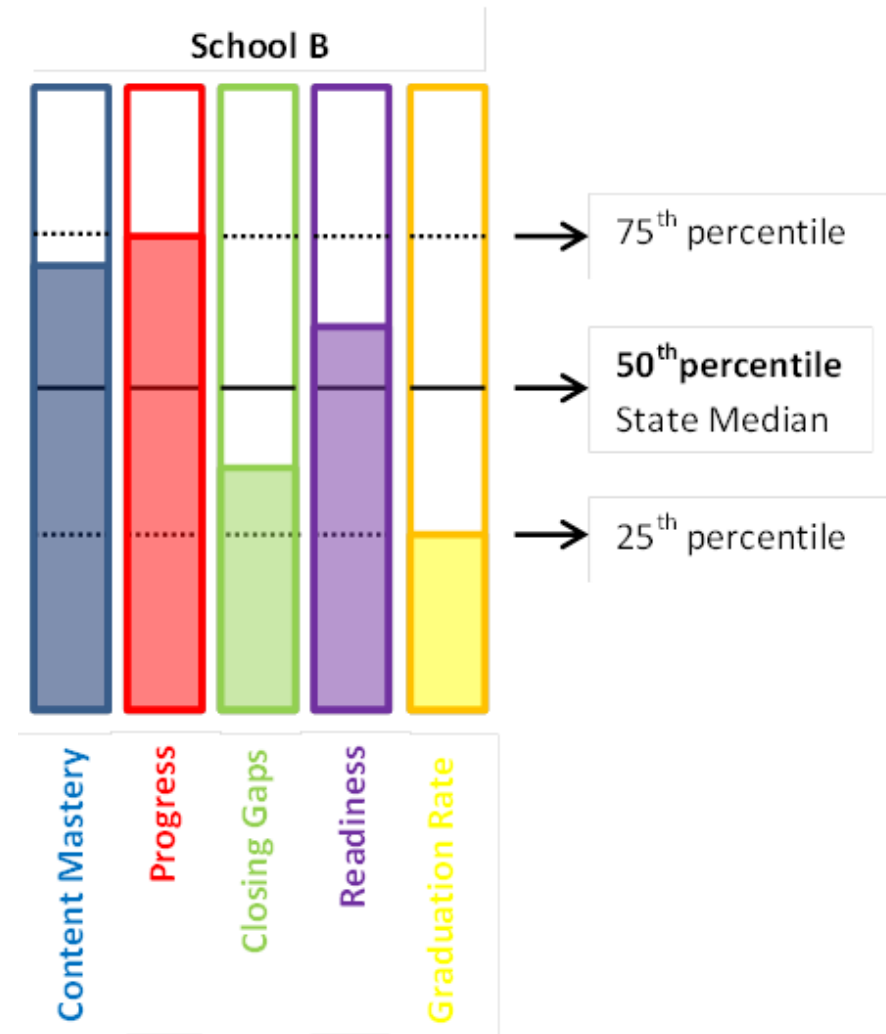
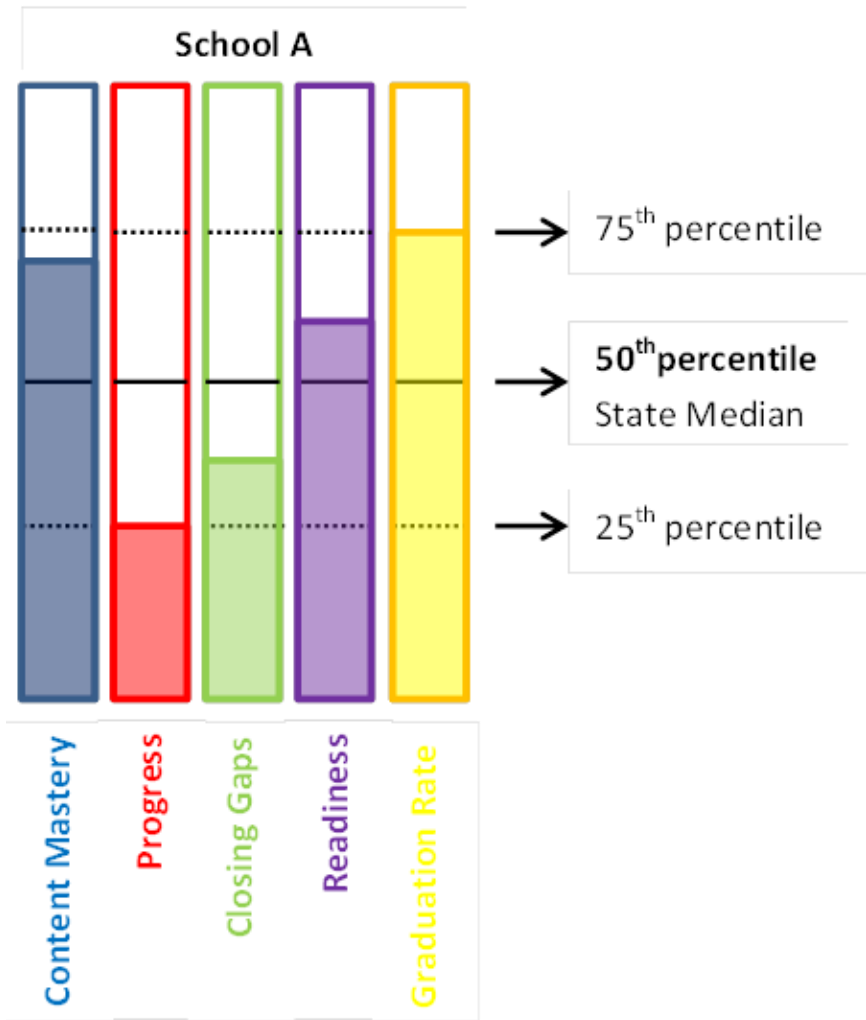
High School A



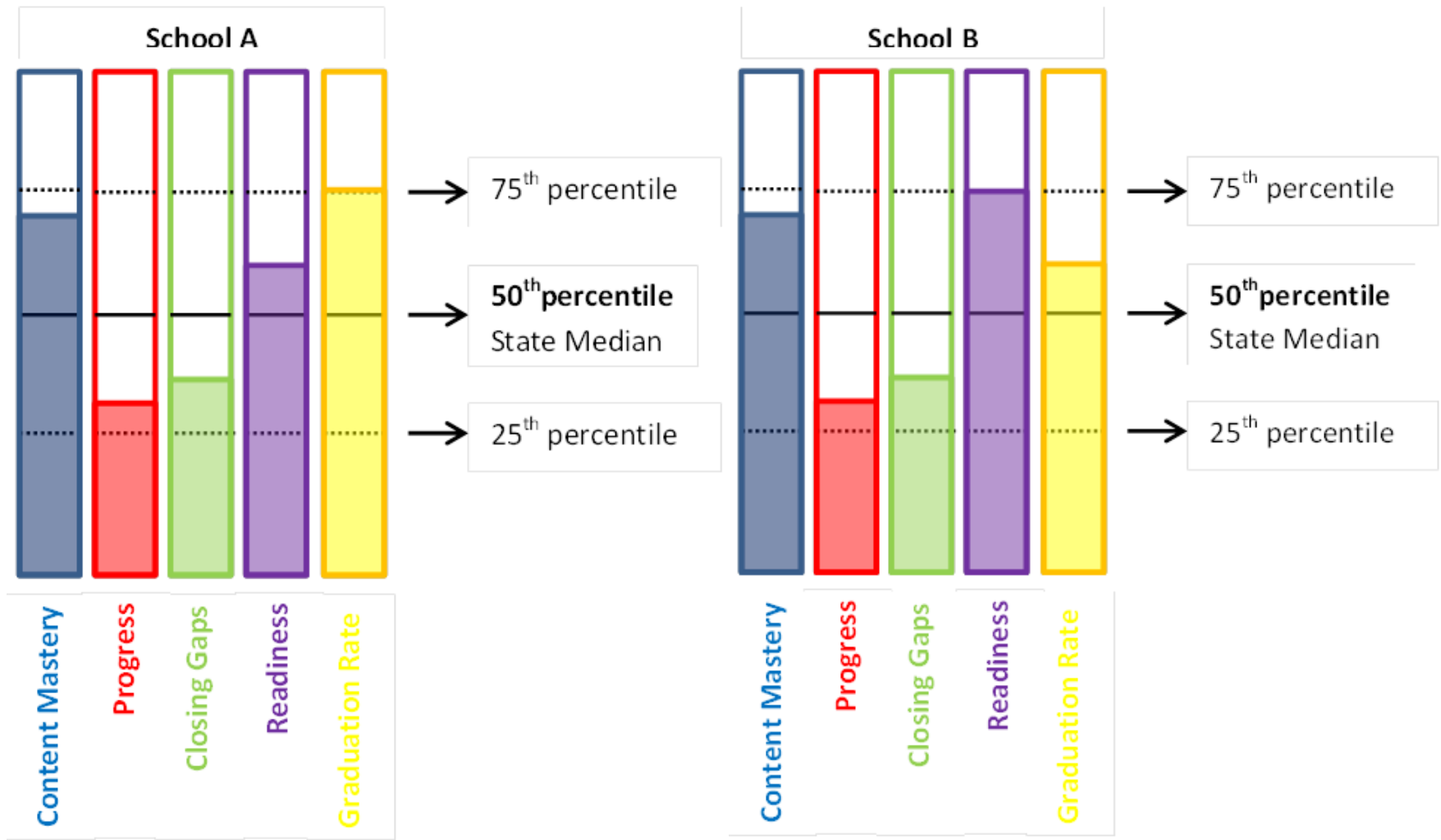
High School B



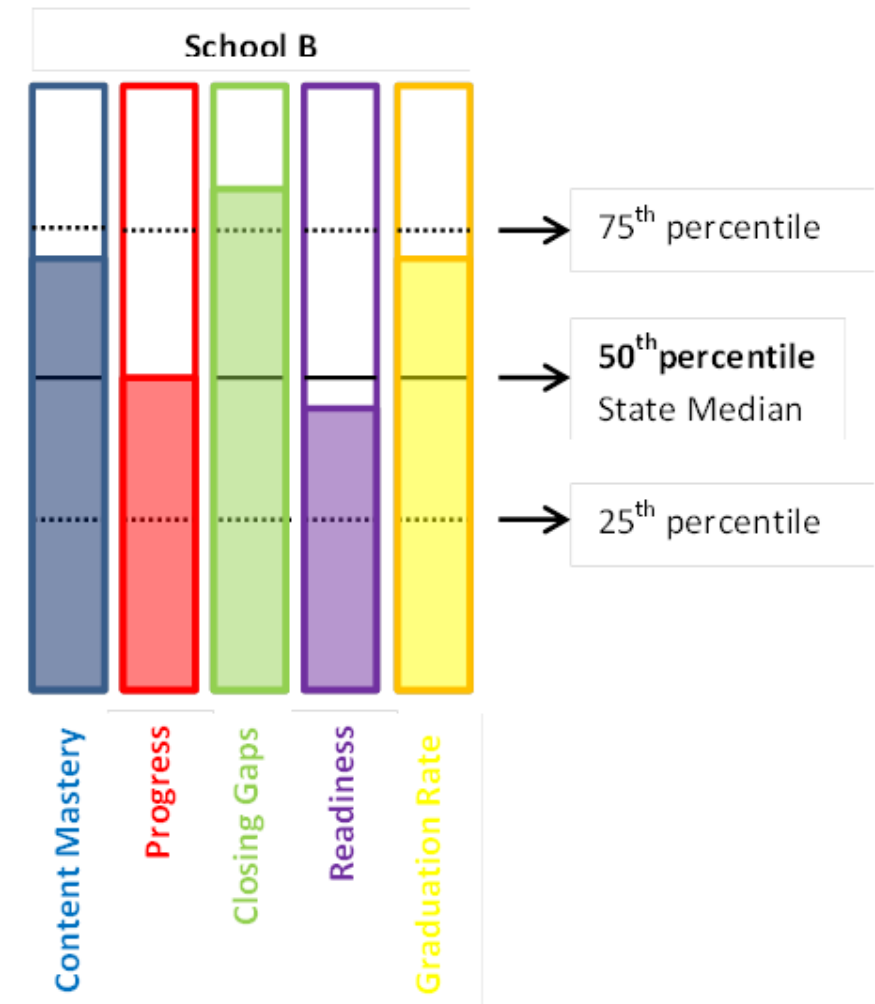
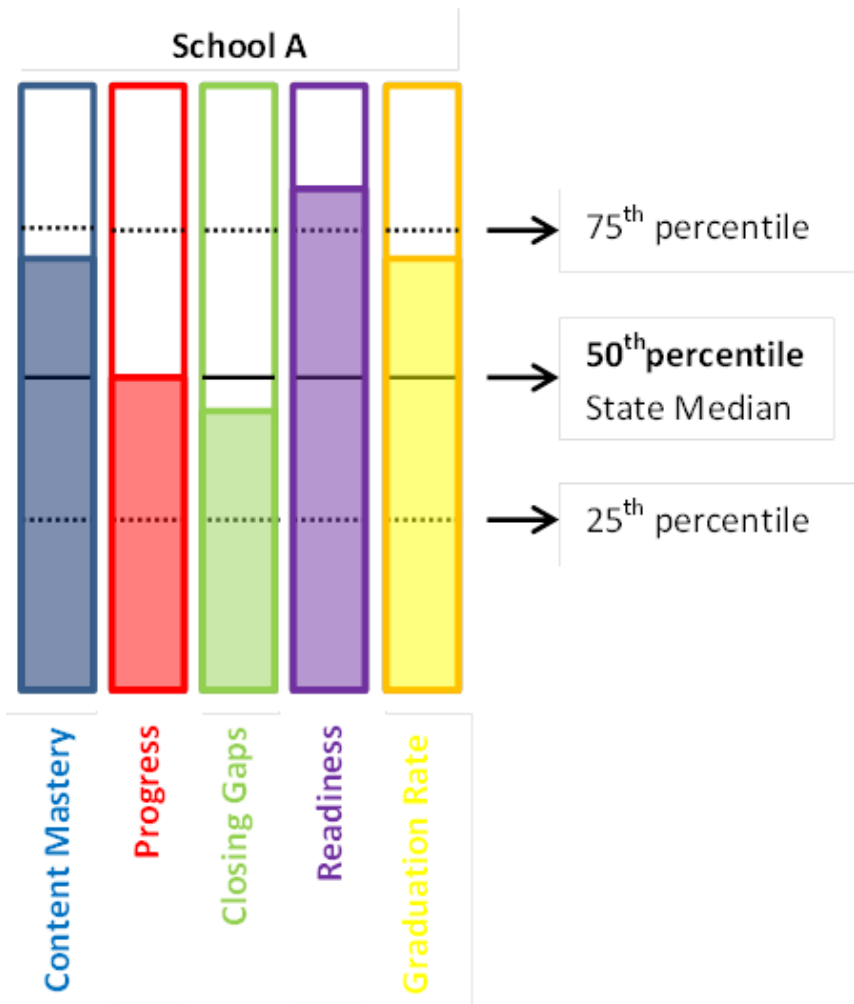
Profiles of Performance: #2



Profiles of Performance: #3

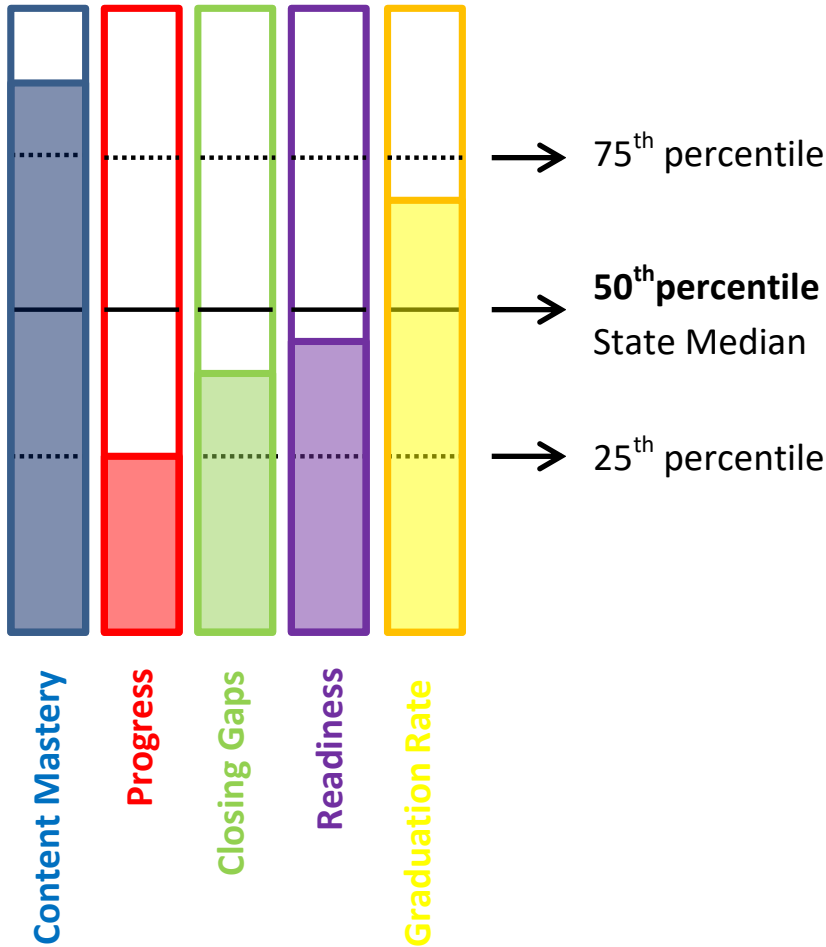


Profiles of Performance: #4

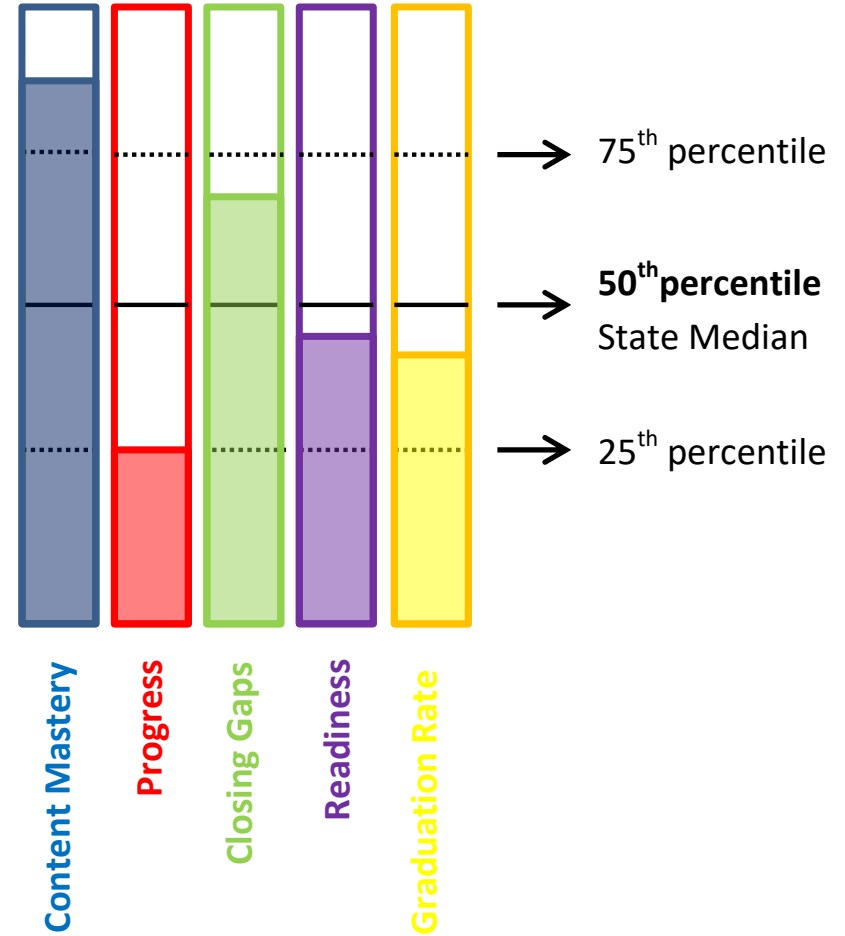


Profiles of Performance: #5

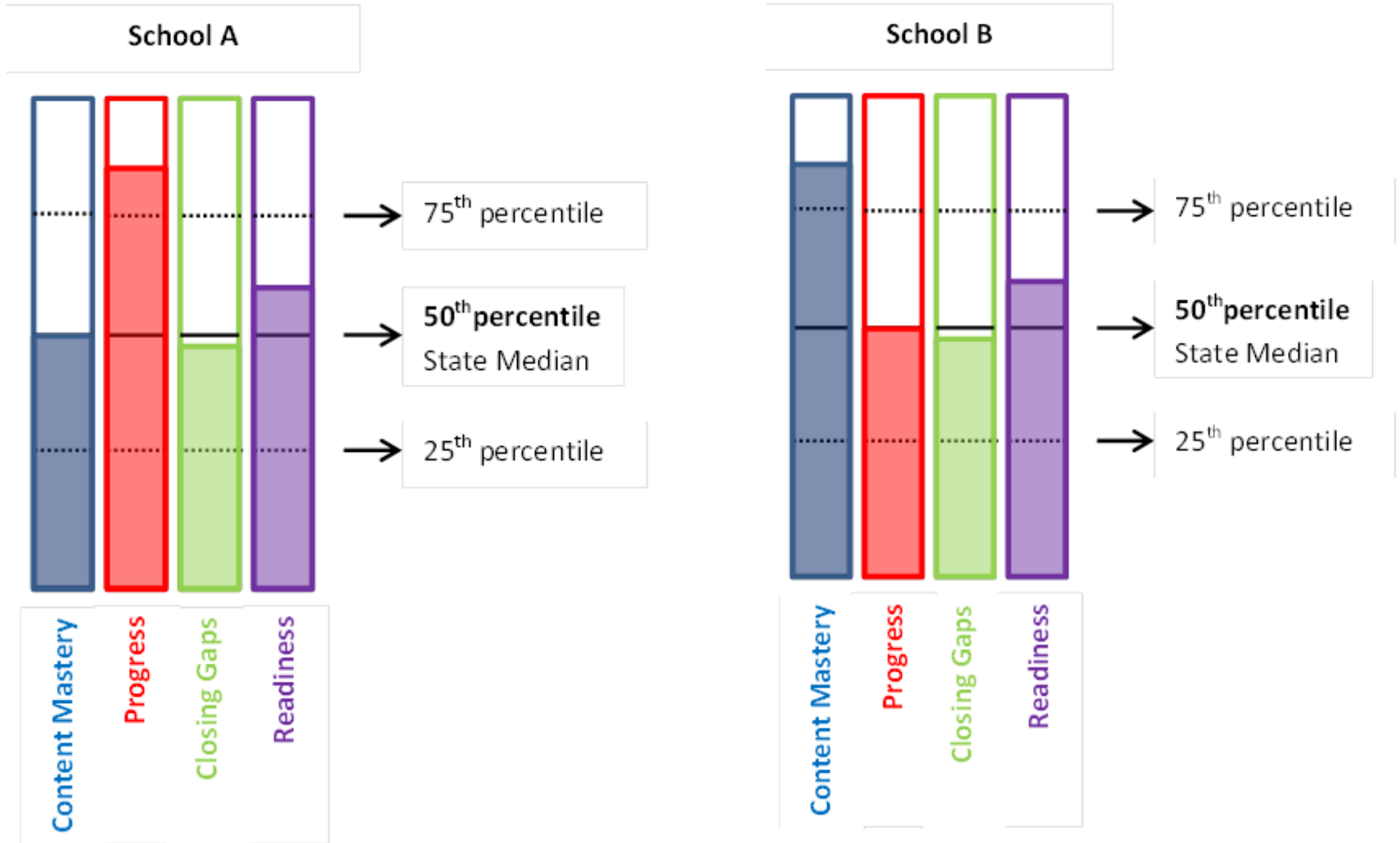
School A



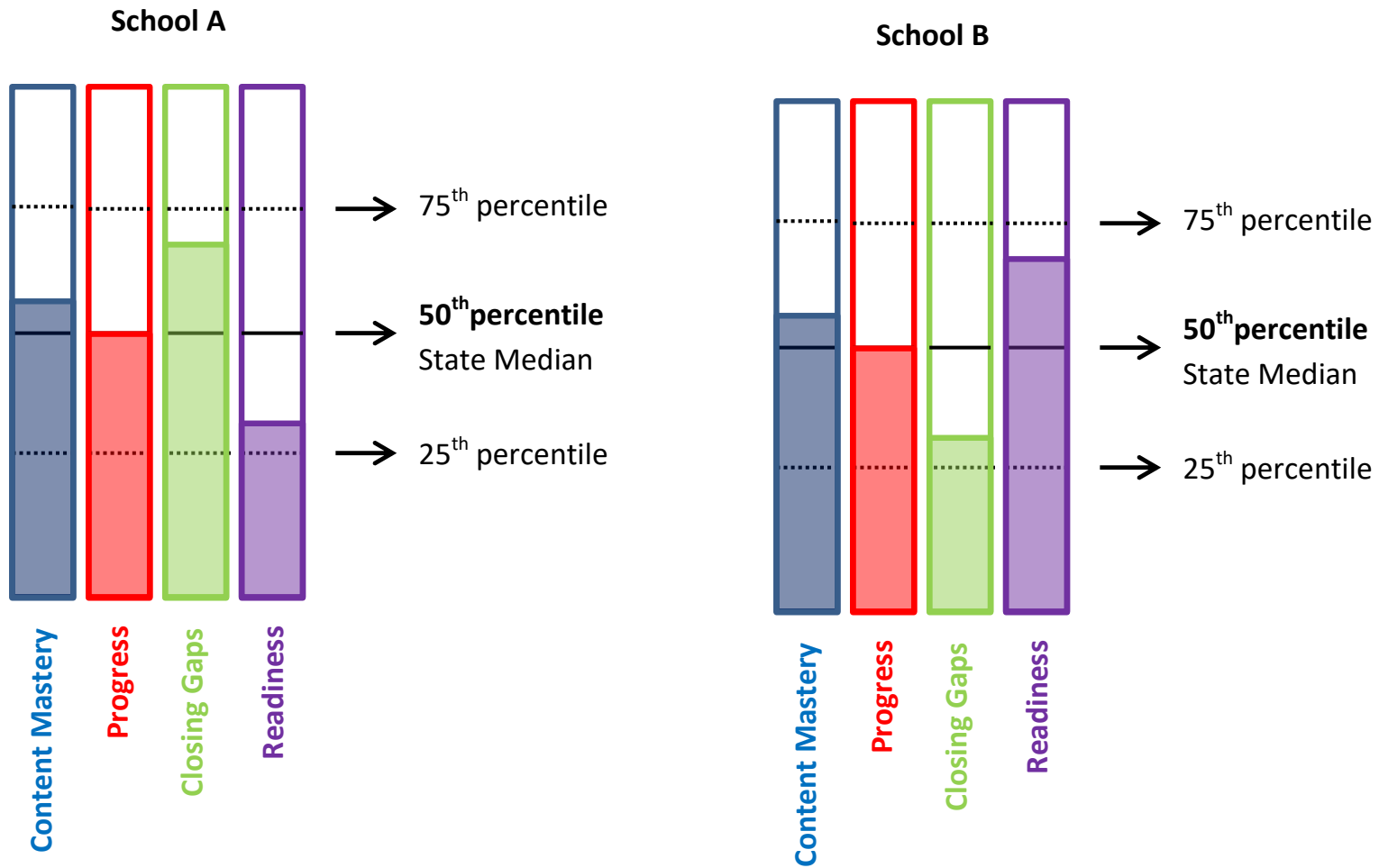
School B



Profiles of Performance: #6



Profiles of Performance: #7



Activity 2 – Discussion

- For what components was there good agreement about relative emphasis?
- What are main areas of disagreement?
- What are the primary factors underlying those areas of disagreement?

Lunch

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Activity 3: Determining the Relative Emphasis of Components and Indicators

- Phase 1: Quantify what you believe should be the relative emphasis of each component within the overall CCRPI system.
- Phase 2: Quantify what you believe should be the relative emphasis of each indicator within the Progress and Readiness components.

Phase 1 Directions

Within each grade span distribute 100 pennies across the different components of the system based on your perceptions of the extent to which each should be reflected in the overall CCRPI score.

- use all 100 pennies
- no component can be assigned 0 pennies
- distribute pennies in multiples of 5
- think about goals of system and how CCRPI will be used

Content Mastery	
Progress	
Achievement Gap	
Readiness	
Graduation Rate	

Phase 2 Directions

Distribute 30 pennies across the different indicators within the progress component of the CCRPI.

- use all 30 pennies
- no indicator can be assigned 0 pennies
- distribute pennies in multiples of 5
- recall that, under ESSA, gains toward English Language Proficiency must be given “significant” weight within the system

Progress	Growth in ELA/Language Arts	
	Growth in Mathematics	
	Progress towards ELP	

Activity #3- Survey Link

- Please type the following link within your browser to begin the survey. Once you have completed the survey please click done.

https://www.surveymonkey.com/r/GA_Acct_2017

- Note that you will have an opportunity to go back and revise your recommendations, if desired, after group discussion.

Discussion of Results

- Consider the average (or median) recommendation associated with each component in high school
 - In general does the emphasis reflect the shared goals and priorities of the group?
 - Where are the key areas of disagreement?
 - Can the group come to some general agreement around:
 - The relative importance of each component (e.g. rank order)
 - The relative emphasis each component should receive
- Same questions for elementary and middle school
- In what way does the recommended emphasis differ in elementary/middle school?
 - Does this make sense?
 - Does it appropriately reflect the state's changing goals and priorities across grade spans?

Discussion of Results

- Consider the emphasis given to the indicators within the progress component.
 - How does emphasis given to progress on the state assessment in ELA and Mathematics compare to that of progress in achieving ELP?
 - Should emphasis associated with these indicators be allowed to vary across the different grade spans?
 - Can the group come to some agreement as to the emphasis each of these indicators should receive
- To what extent did the group feel as if the readiness indicators should receive differential emphasis within the readiness component?
 - Are there certain indicators that were clearly and consistently considered less important than others?

Final Survey requests

If you would like to make modifications to your rating based upon the previous discussion please do so now.

https://www.surveymonkey.com/r/GA_Acct_2017

Subsequently, please complete the following end-of-day survey which provides a final opportunity for you to provide feedback upon the recommendations discussed by the group.

https://www.surveymonkey.com/r/GA_Acct_EOD

For more information:

Center for Assessment
www.nciea.org



Erika Hall
ehall@nciea.org

Minimum N Size

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Minimum N Size

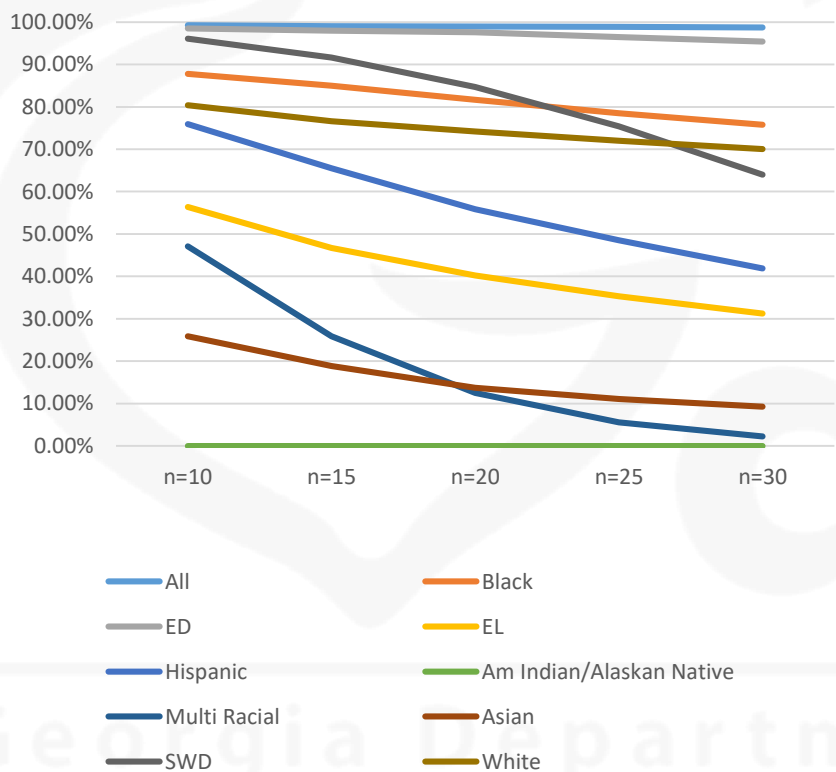
- AYP
 - Participation subgroup N size of 40 students
 - AMO and Second Indicator subgroup N size of 40 or 10% of enrolled in AYP grades, whichever is greater (with a 75 student cap)
- CCRPI, TKES/LKES
 - 15
- Purpose:
 - High enough to protect student confidentiality and maximize reliability
 - Low enough to maximize the number of students and student subgroups included in accountability

Figure 1: Elementary school subject area EOGs and the percent of schools meeting the minimum N size



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Elementary: English/Language Arts EOG and Percent of Schools with Minimum N



Elementary: Mathematics EOG and Percent of Schools with Minimum N

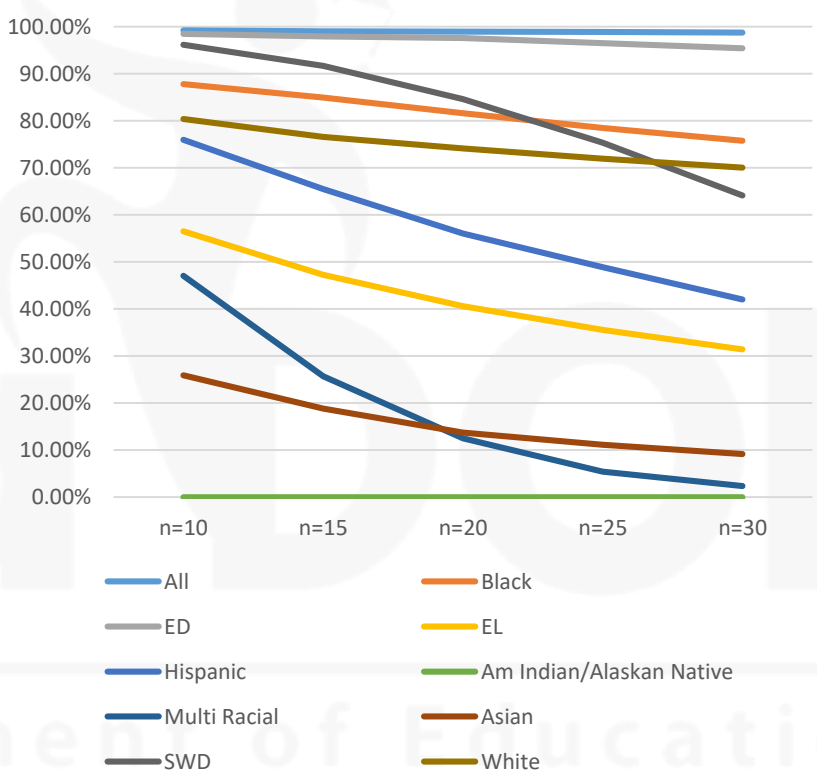
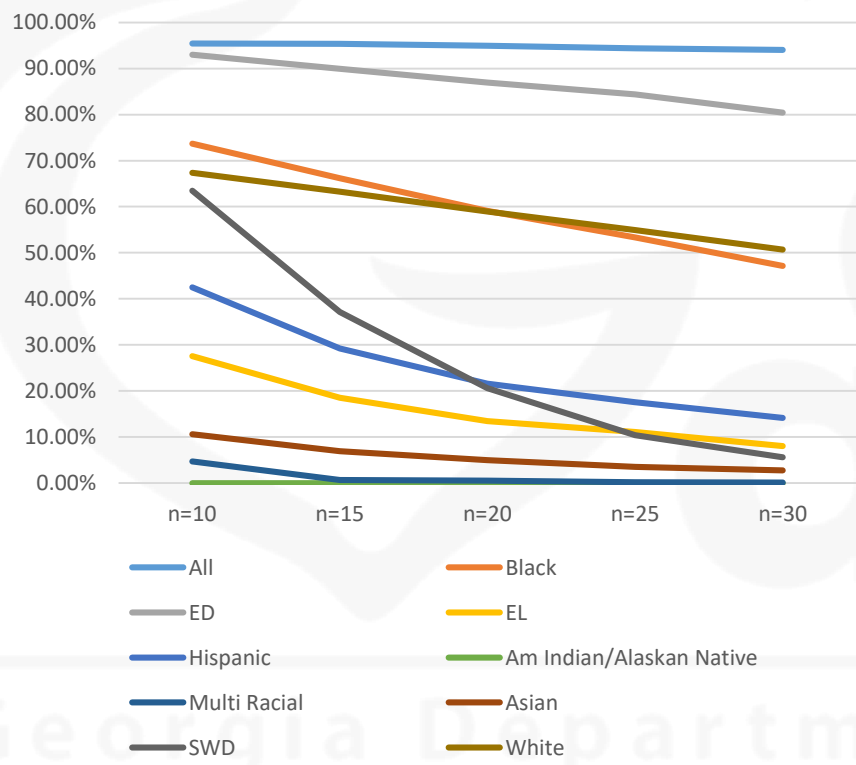


Figure 1: Elementary school subject area EOG's and the percent of schools meeting the minimum N size



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Elementary: Science EOG and Percent of Schools with Minimum N



Elementary: Social Studies EOG and Percent of Schools with Minimum N

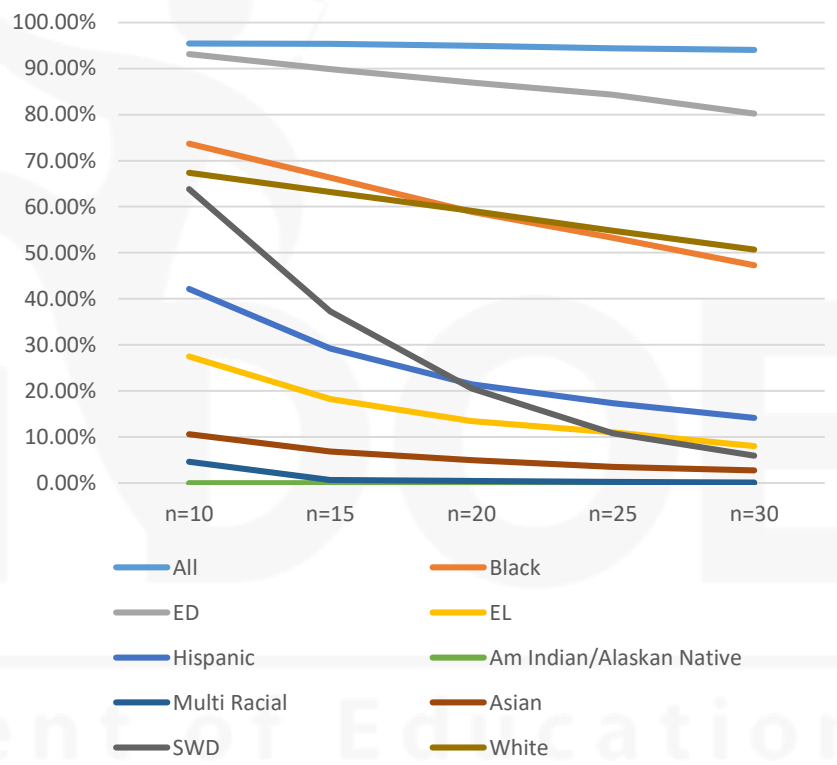
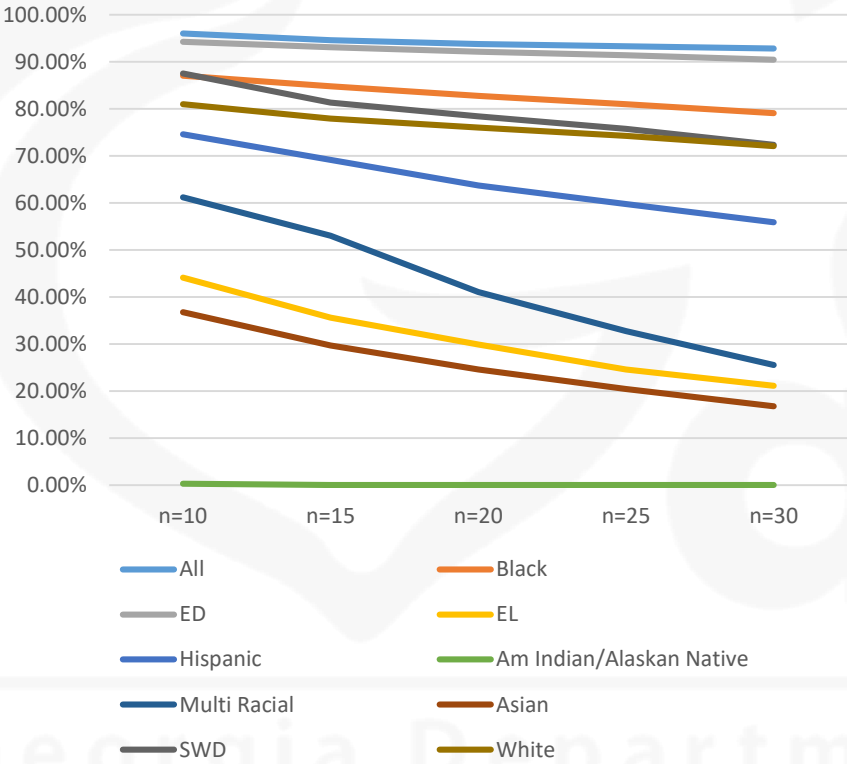


Figure 2: Middle school subject area EOGs and the percent of schools meeting the minimum N size

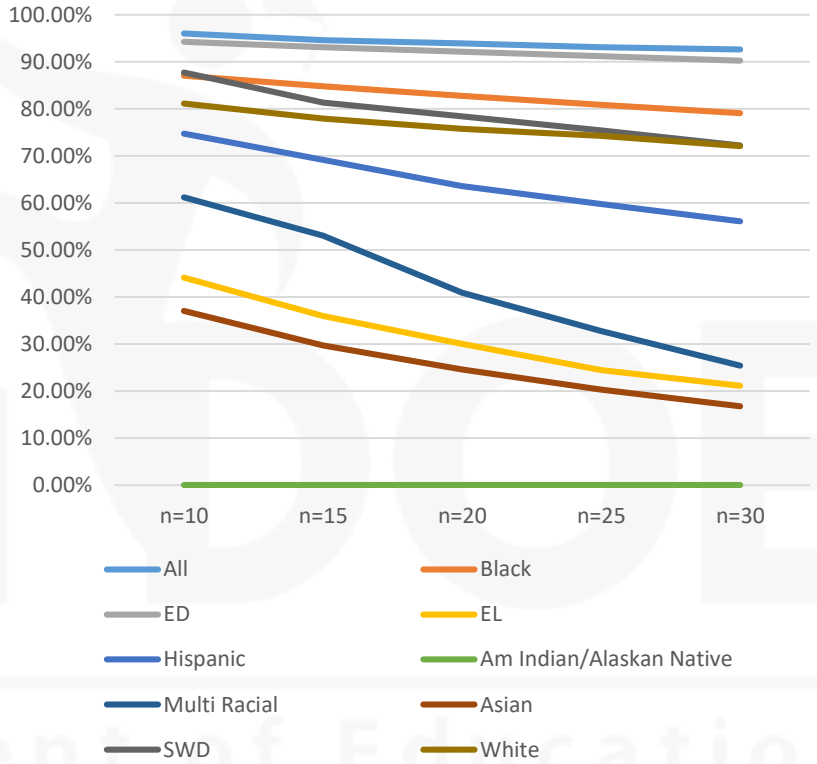


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Middle: English/Language Arts Percent of Schools with Minimum N



Middle: Mathematics and Percent of Schools with Minimum N



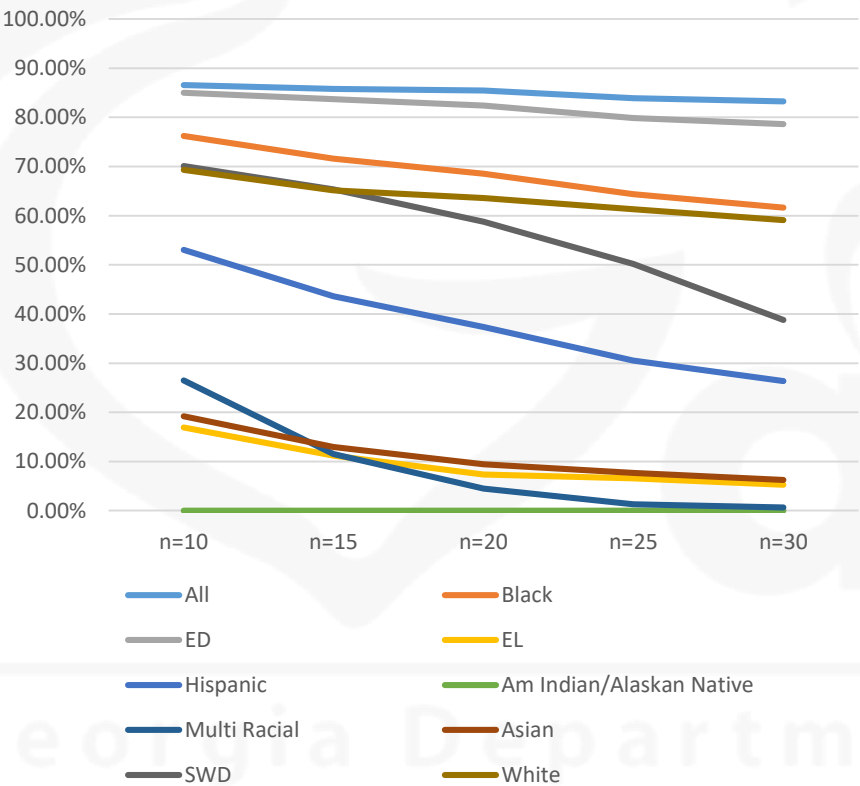
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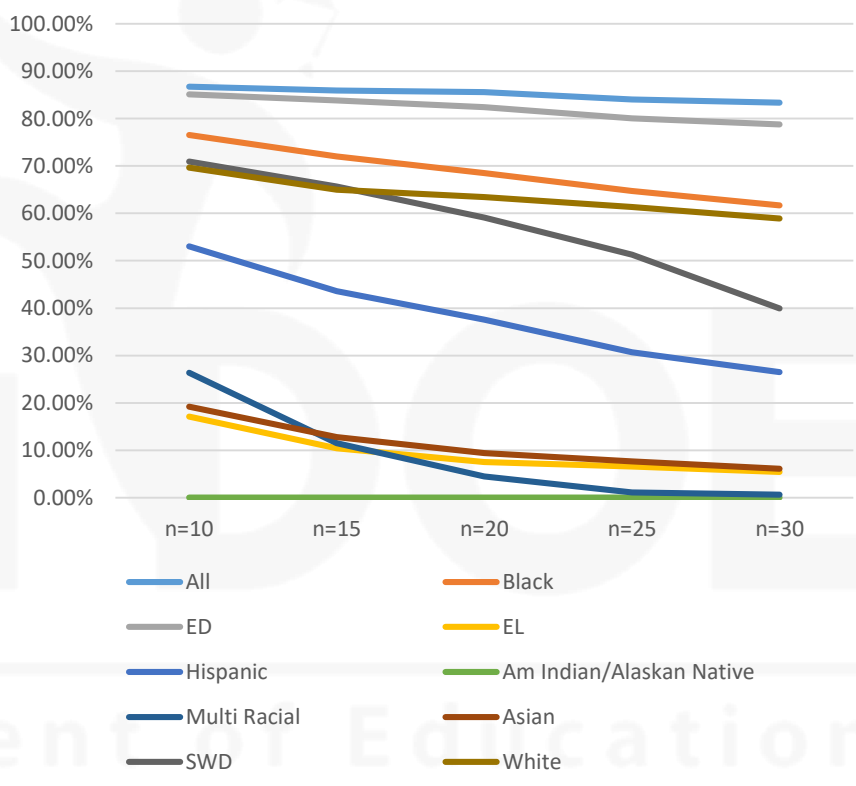


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Middle: Science and Percent of Schools with Minimum N



Middle: Social Studies and Percent of Schools with Minimum N



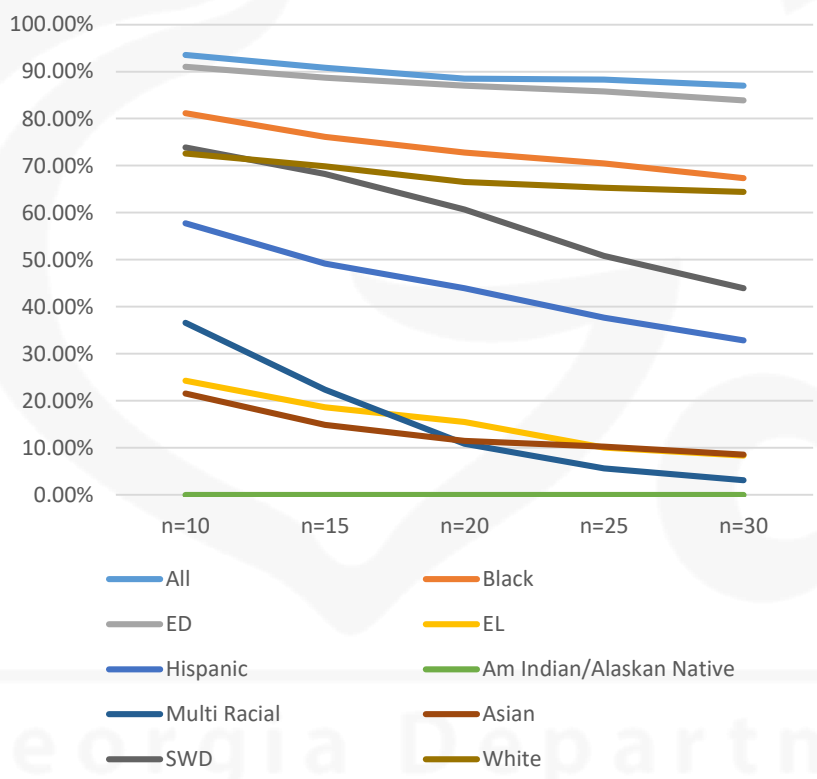
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Figure 3: High school subject area EOCs and the percent of schools meeting the minimum N size

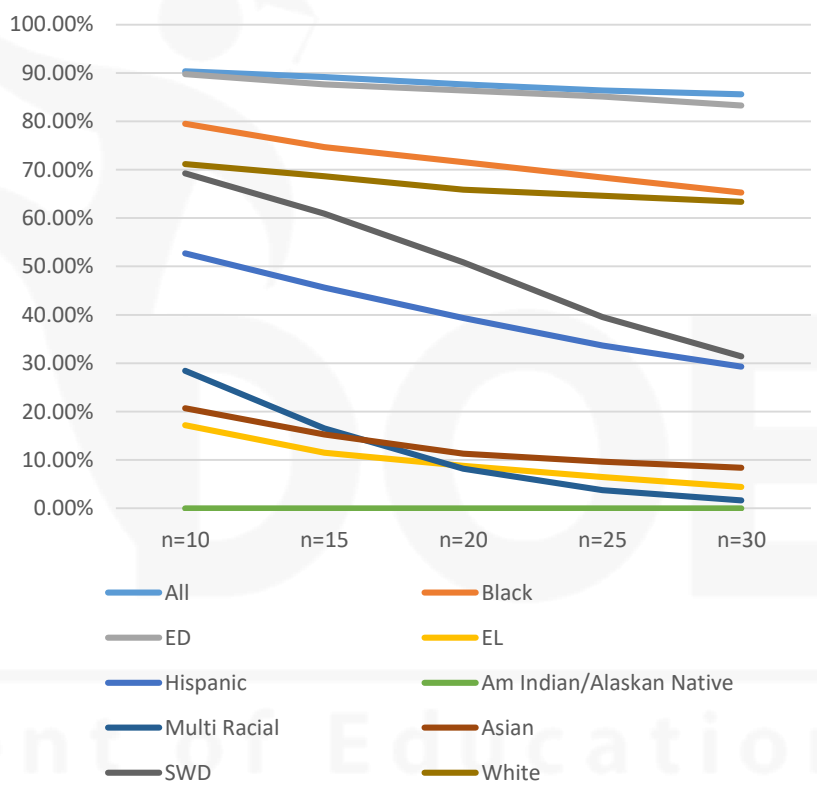


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9th Grade Literature EOC and Percent of Schools with Minimum N



American Literature and Percent of Schools with Minimum N



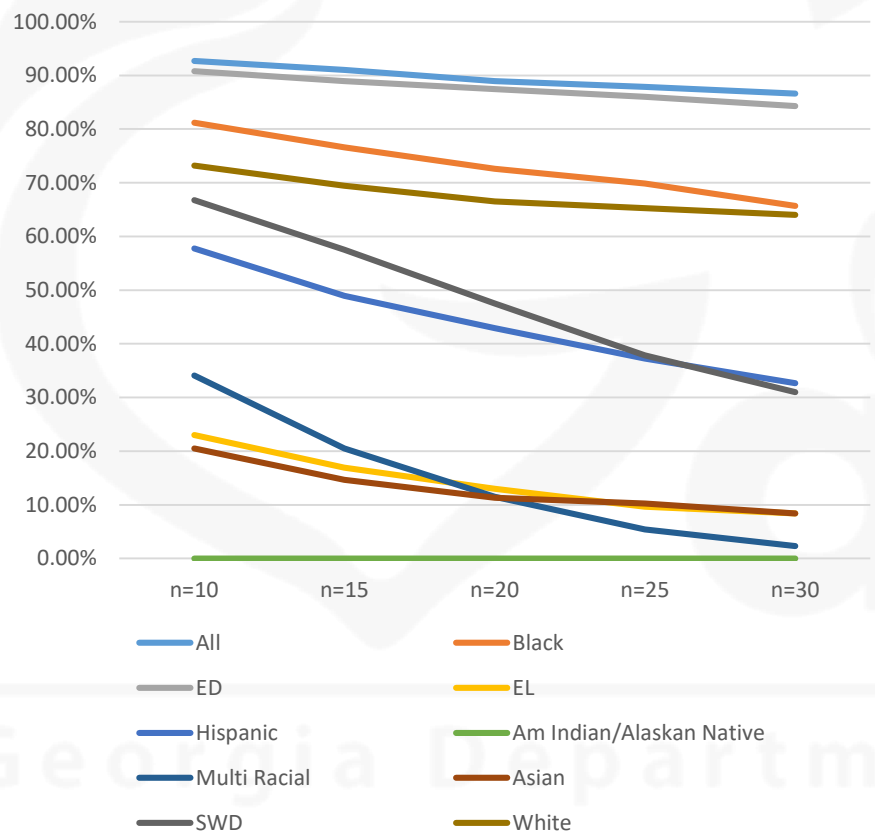
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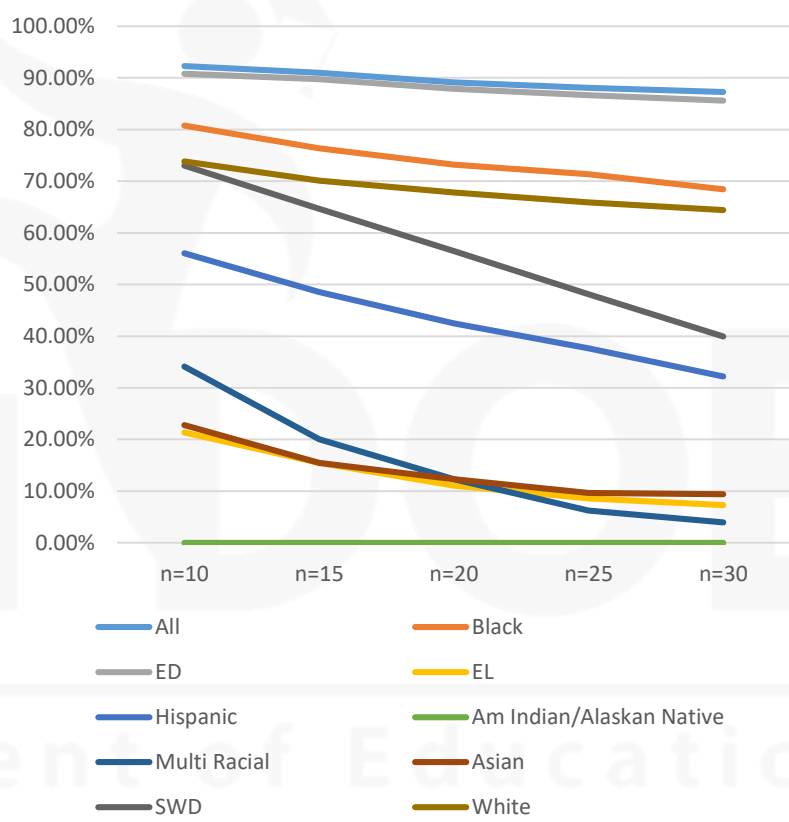


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Algebra EOC and Percent of Schools with Minimum N



Geometry EOC and Percent of Schools with Minimum N



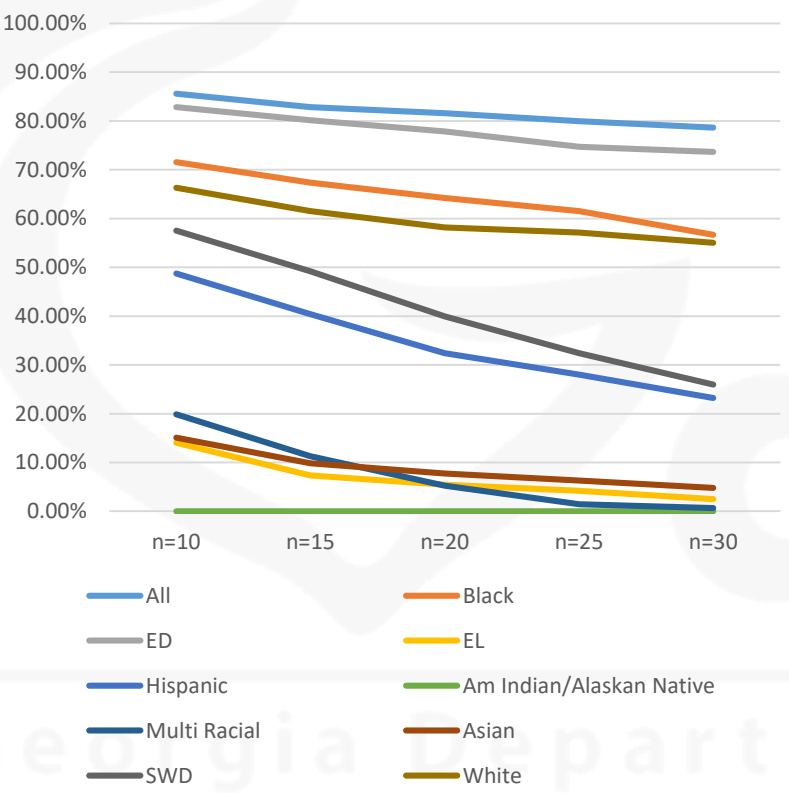
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Figure 3: High school subject area EOCs and the percent of schools meeting the minimum N size

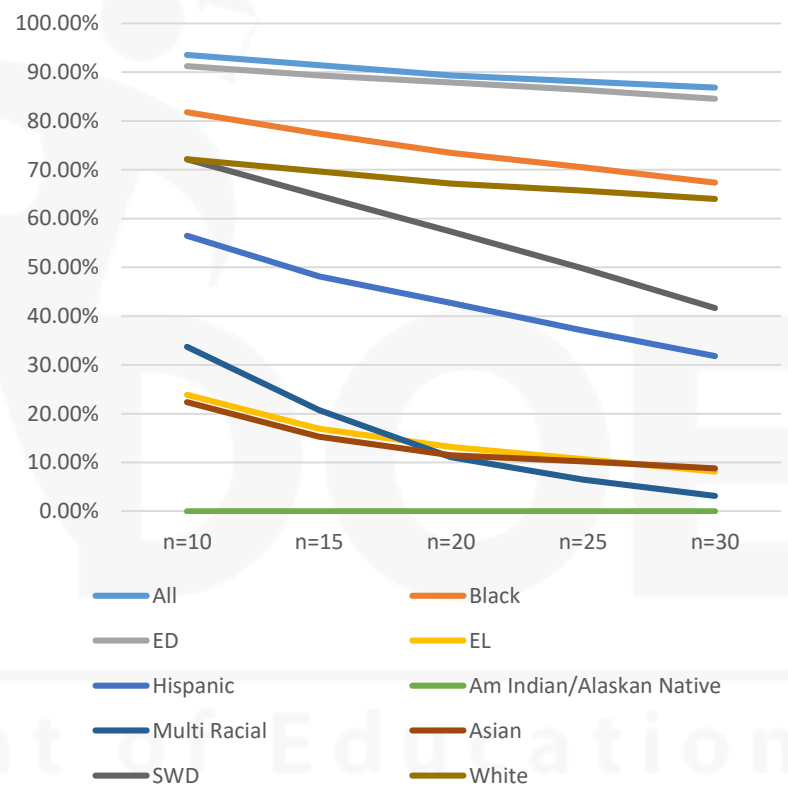


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Physical Science EOC and Percent of Schools with Minimum N



Biology EOC and Percent of Schools with Minimum N



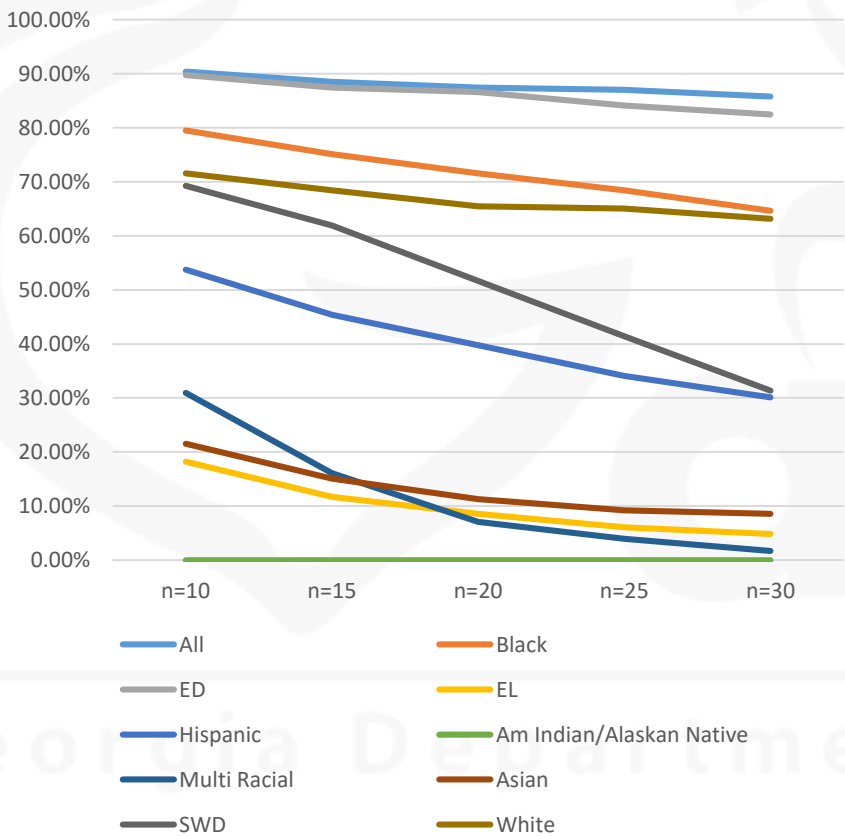
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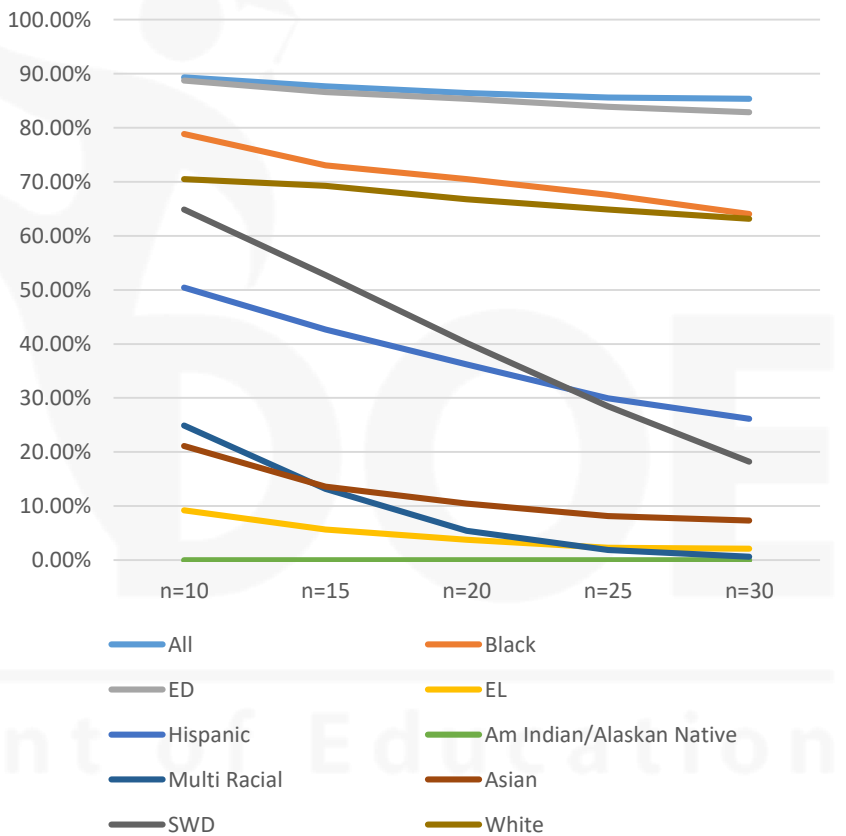


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US History EOC and Percent of Schools with Minimum N



Economics EOC and Percent of Schools with Minimum N



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Table 1: Percent of each subgroup accounted for under different N sizes for elementary school EOGs



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Elementary School English/Language Arts EOG					
	N=10	N=15	N=20	N=25	N=30
All	99.99	99.98	99.98	99.97	99.96
Black	99.57	99.26	98.74	98.10	97.40
ED	99.98	99.95	99.91	99.79	99.64
EL	96.06	92.75	89.58	86.43	83.18
Hispanic	97.81	95.17	91.68	88.20	84.41
American Indian/Alaskan Native	0.00	0.00	0.00	0.00	0.00
Multi Racial	77.56	53.13	31.47	16.86	8.53
Asian/Pacific Islander	86.09	79.00	71.69	66.81	62.78
SWD	99.49	98.15	95.26	90.24	82.60
White	99.47	99.09	98.74	98.34	97.91

Table 1: Percent of each subgroup accounted for under different N sizes for elementary school EOGs



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Elementary School Science EOG					
	N=10	N=15	N=20	N=25	N=30
All	99.96	99.95	99.88	99.76	99.65
Black	97.60	94.96	91.40	87.74	82.88
ED	99.74	99.18	98.38	97.49	95.79
EL	81.49	70.68	61.85	56.59	48.03
Hispanic	86.33	75.84	67.28	61.49	55.48
American Indian/Alaskan Native	0.00	0.00	0.00	0.00	0.00
Multi Racial	18.66	5.00	4.21	2.23	1.62
Asian/Pacific Islander	66.73	56.09	48.07	39.86	35.15
SWD	85.46	62.09	41.83	25.34	15.68
White	98.23	97.01	95.21	92.98	90.09

Table 3: Percent of each subgroup accounted for under different N sizes for high school EOCs



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9 th Grade Literature					
	N=10	N=15	N=20	N=25	N=30
All	99.90	99.78	99.64	99.63	99.50
Black	99.37	98.78	98.23	97.74	96.91
ED	99.84	99.69	99.53	99.36	99.06
EL	84.18	77.56	72.27	60.48	56.01
Hispanic	96.63	94.01	91.68	88.10	84.73
American Indian/Alaskan Native	0.00	0.00	0.00	0.00	0.00
Multi Racial	77.69	57.80	34.74	21.02	12.83
Asian/Pacific Islander	85.58	78.17	73.02	70.46	66.17
SWD	97.20	94.97	90.53	82.95	76.57
White	99.39	99.11	98.63	98.38	98.19

Table 3: Percent of each subgroup accounted for under different N sizes for high school EOCs



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Algebra					
	N=10	N=15	N=20	N=25	N=30
All	99.90	99.82	99.69	99.60	99.47
Black	99.49	98.95	98.27	97.69	96.57
ED	99.85	99.72	99.56	99.36	99.09
EL	84.79	77.58	71.03	63.96	60.66
Hispanic	96.91	94.25	91.55	88.39	85.22
American Indian/Alaskan Native	0.00	0.00	0.00	0.00	0.00
Multi Racial	76.39	56.19	37.52	21.10	10.64
Asian/Pacific Islander	84.93	78.37	73.25	71.09	66.27
SWD	95.34	90.69	83.35	74.43	66.42
White	99.48	99.06	98.62	98.38	98.07

Table 3: Percent of each subgroup accounted for under different N sizes for high school EOCs



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Biology					
	N=10	N=15	N=20	N=25	N=30
All	99.92	99.82	99.69	99.59	99.46
Black	99.50	98.97	98.31	97.67	96.83
ED	99.87	99.73	99.58	99.38	99.07
EL	83.55	74.85	67.77	61.68	54.22
Hispanic	96.27	93.58	91.09	87.66	83.75
American Indian/Alaskan Native	0.00	0.00	0.00	0.00	0.00
Multi Racial	76.56	57.05	36.95	24.55	13.41
Asian/Pacific Islander	87.61	80.00	74.34	71.74	68.15
SWD	96.76	93.57	89.15	83.24	75.34
White	99.42	99.18	98.82	98.55	98.16



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Table 3: Percent of each subgroup accounted for under different N sizes for high school EOCs

US History					
	N=10	N=15	N=20	N=25	N=30
All	99.89	99.80	99.72	99.69	99.55
Black	99.42	98.85	98.18	97.42	96.30
ED	99.85	99.65	99.56	99.16	98.83
EL	74.93	62.63	54.31	45.05	39.51
Hispanic	95.75	92.38	89.21	85.09	81.53
American Indian/Alaskan Native	0.00	0.00	0.00	0.00	0.00
Multi Racial	74.95	49.67	27.48	17.53	8.58
Asian/Pacific Islander	86.67	78.43	71.50	66.55	64.88
SWD	95.80	91.94	84.29	74.46	62.80
White	99.50	99.14	98.68	98.60	98.12

Figure 4: Count of elementary schools with at least one subgroup at each subgroup size



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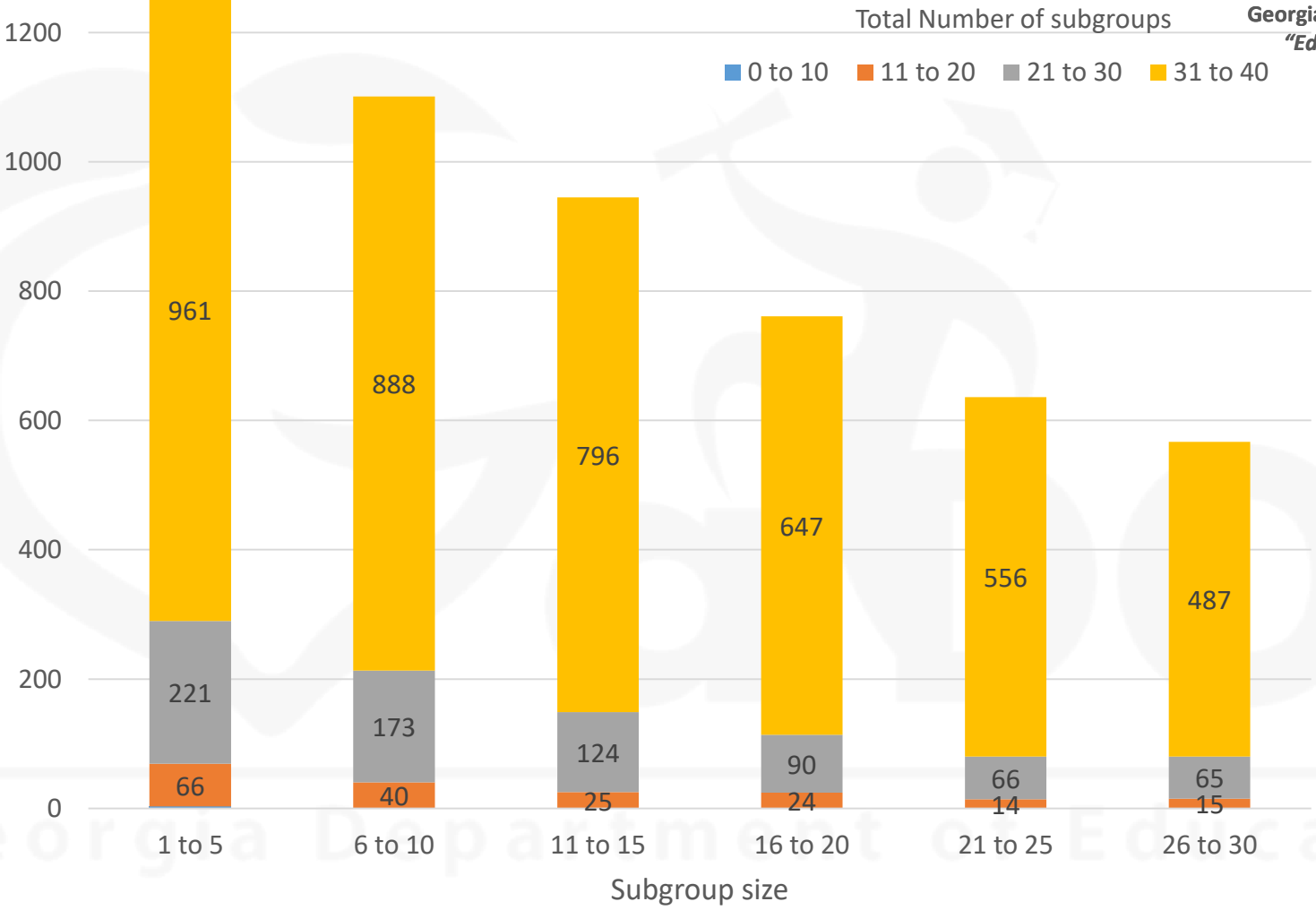


Figure 5: Count of middle schools with at least one subgroup at each subgroup size



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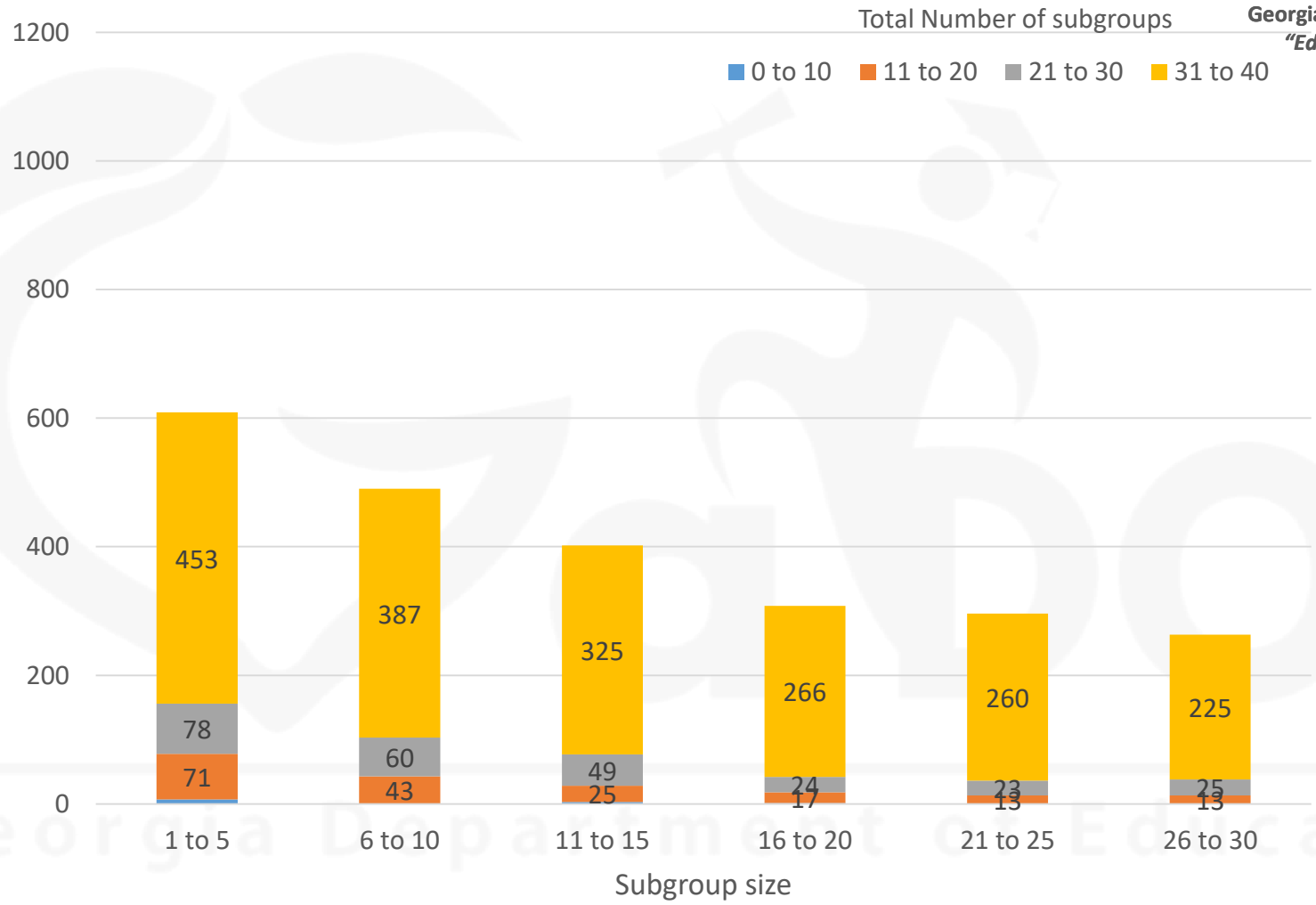


Figure 6: Count of high schools with at least one subgroup at each subgroup size



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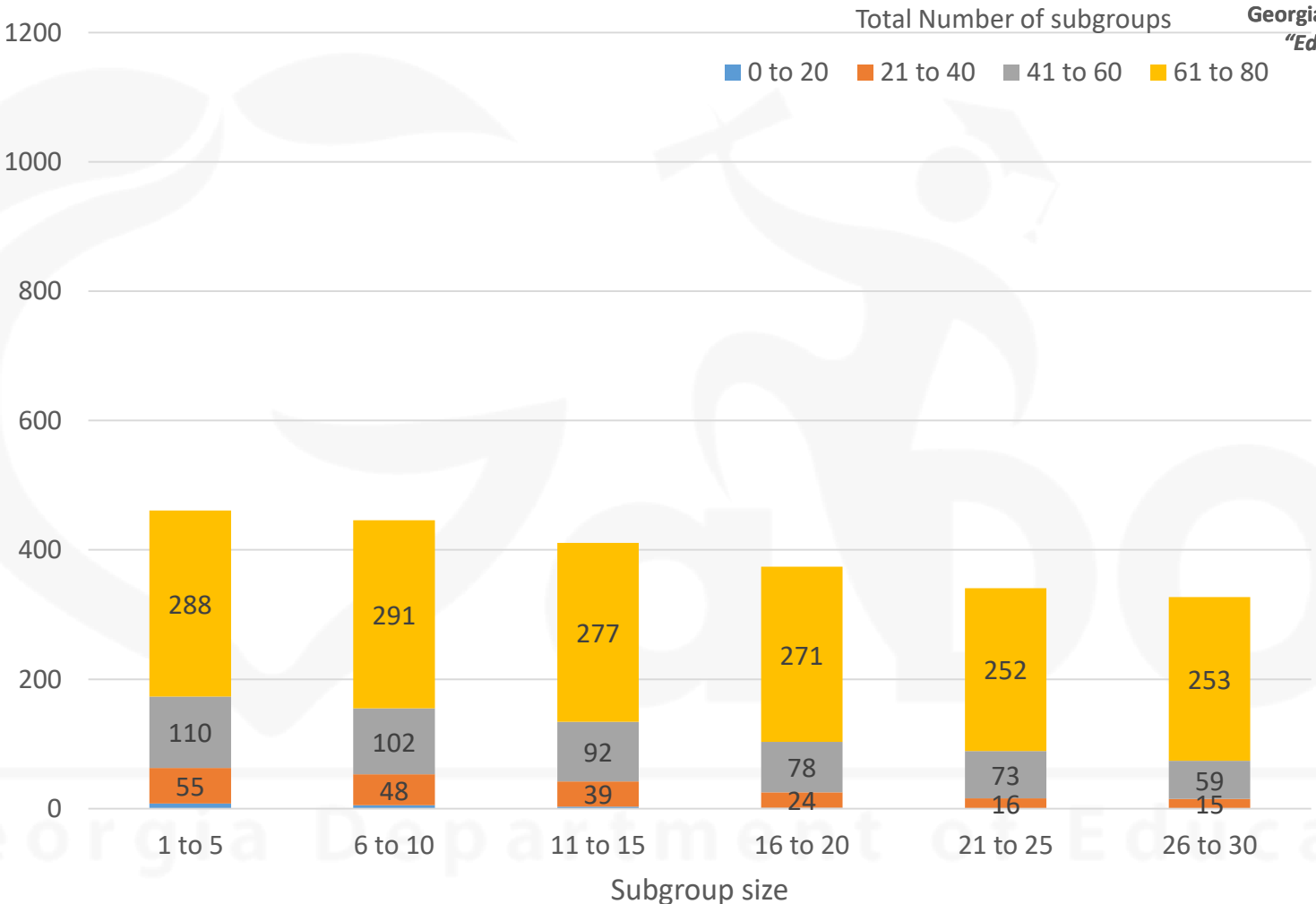


Table 4: Descriptive Statistics for each Dataset – Content Mastery



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	Difference	Mean	SD	Min	1 st Quartile	3 rd Quartile	Max
N=10	2.29	69.90	17.39	40	58.75	85.00	105
N=15	0.14	72.33	13.77	50	60.00	83.30	106.67
N=20	2.36	74.55	8.96	55.0	69.38	80.00	95.0
N=25	0.33	72.52	10.75	48	66.00	82.00	100
N=30	0.34	72.53	9.05	55	34.58	78.33	86.67

Figure 9. Box Plots of Mean Distributions for Each Dataset

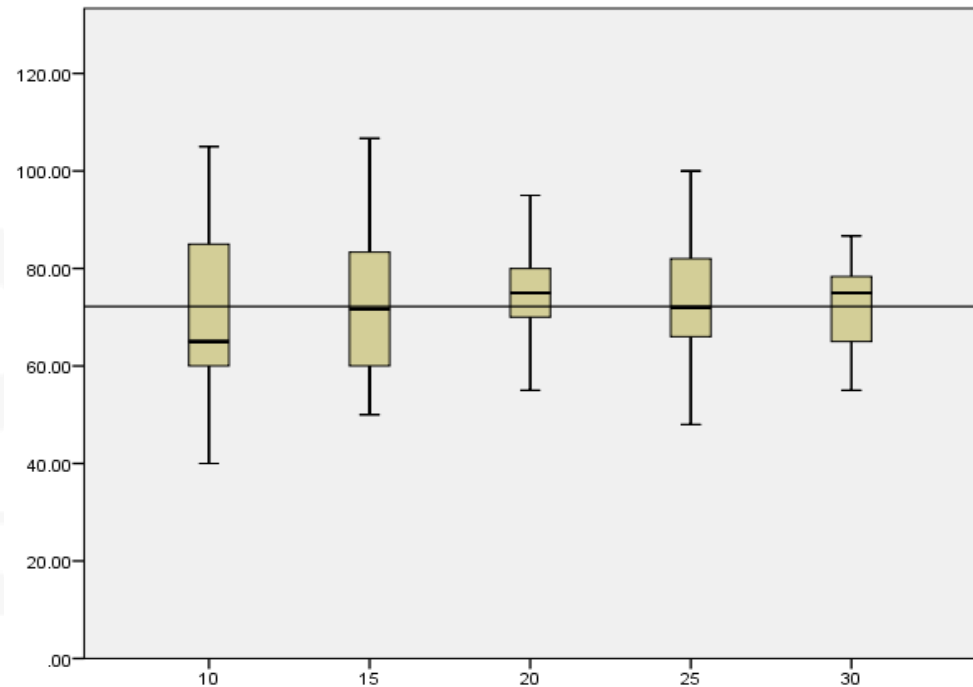


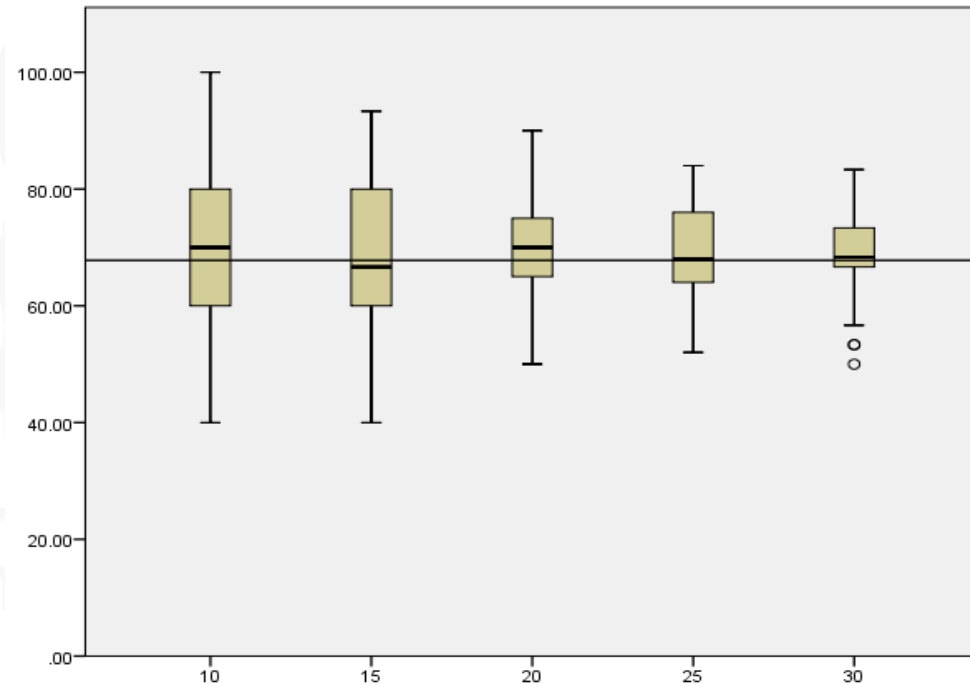
Table 5: Descriptive Statistics for each Dataset – Progress



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	Difference	Mean	SD	Min	1 st Quartile	3 rd Quartile	Max
N=10	1.42	69.20	14.82	40.00	60.00	80.00	100.00
N=15	0.35	68.13	12.51	40.00	60.00	80.00	93.33
N=20	2.12	69.90	8.84	50.00	65.00	75.00	90.00
N=25	0.86	68.64	7.85	52.00	64.00	76.00	84.00
N=30	0.69	68.47	7.13	50.00	68.83	73.33	83.33

Figure 11. Box Plots of Mean Distributions for Each Dataset



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Figure 12: Subgroup N size and change in proficiency



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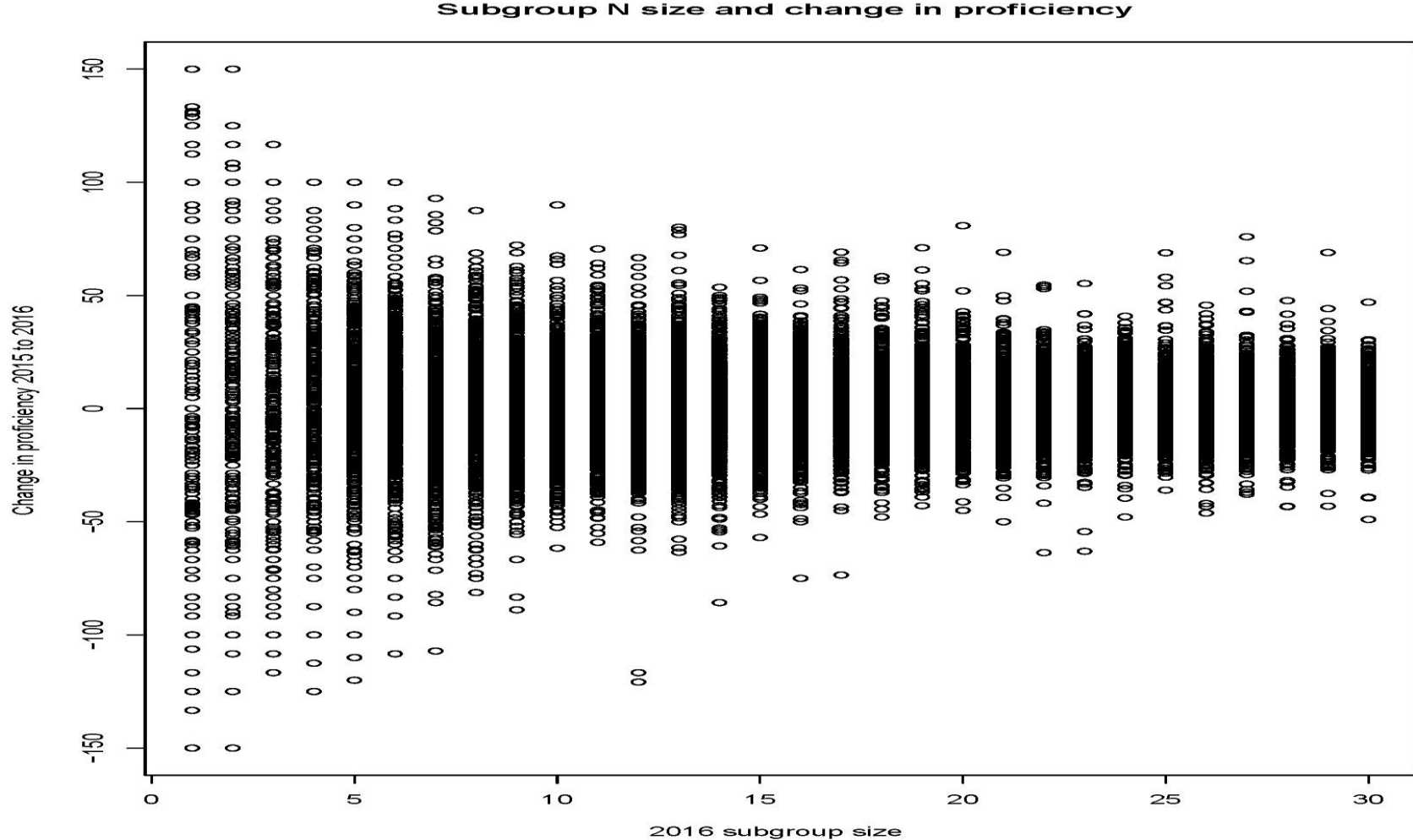


Table 6: Percent of school meeting minimum N requirements by grade band – ACCESS for ELLs



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	All Schools N=2491	Elementary N=1367	Middle N=635	High N=489
N=10	45.93%	58.16%	31.18%	31.07%
N=15	37.82%	49.31%	23.62%	24.28%
N=20	31.23%	42.14%	17.32%	18.93%
N=25	26.82%	37.16%	13.23%	15.64%
N=30	23.93%	33.65%	11.34%	13.17%

Figure 13: Percent of schools meeting minimum N size by grade band

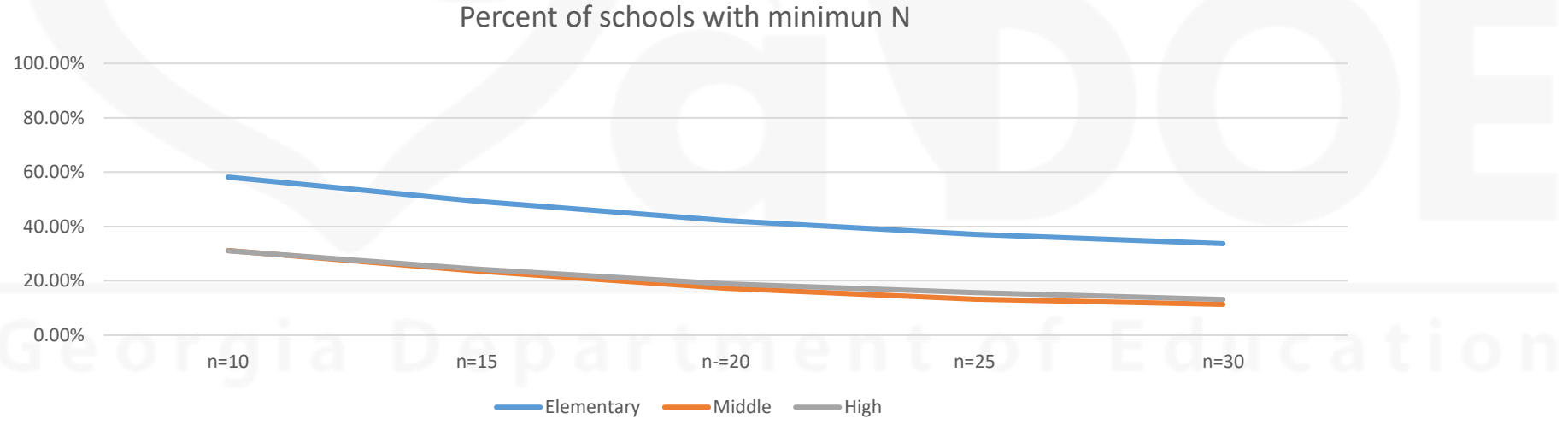


Table 8: Percent of EL students captured under each sample size



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	All Schools	Elementary Schools	Middle Schools	High Schools
N=10	95.17%	96.99%	89.04%	89.33%
N=15	91.85%	94.41%	82.88%	84.09%
N=20	88.08%	91.47%	75.71%	78.38%
N=25	84.78%	88.81%	69.71%	73.67%
N=30	82.09%	86.48%	66.26%	69.34%



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Table 9: Percent of schools with at least one EL student under each sample size

	All Schools	Elementary Schools	Middle Schools	High Schools
N=10	56.47%	66.42%	42.04%	42.18%
N=15	46.50%	56.31%	31.85%	32.96%
N=20	38.40%	48.12%	23.35%	25.70%
N=25	32.97%	42.44%	17.83%	21.23%
N=30	29.42%	33.92%	15.29%	17.88%

Discussion Questions

- Purpose
 - High enough to protect student confidentiality and maximize reliability
 - Low enough to maximize the number of students and student subgroups included in accountability
- What minimum N size strikes the right balance?