THE SCHOOL DISTRICT OF PHILADELPHIA

Grades K-5 Assessment Data Snapshot

aimswebPlus Math, Winter 2020-2021

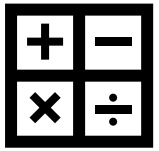
March 2021

Office of Research and Evaluation

This slide deck provides a District-level overview of K– 5th grade student performance on the winter aimswebPlus Math Assessments

AimswebPlus is a universal screening, benchmarking, and progress-monitoring tool from Pearson.

At the District, aimswebPlus is administered three times (fall, winter, and spring) in grades K-5. Students in each grade take multiple assessments, or "subtests." Each subtest measures a discrete literacy skill. Subtest scores are combined into a "composite score." Composite scores measure student performance on a combination of key skills that are critical to becoming a proficient in math.



AimswebPlus Math assessments focus on emerging numeracy skills such as number recognition for kindergarten. In first grade, skills shift to number pair comparisons and math facts. In second through fifth grade, assessments measure mental computation, triad number comparisons, and math concepts.

The District tracks student progress toward Board Goals by using *Leading Indicators*

The **Leading Indicator** of progress towards Goal 3 for the 2020-2021 school year is that by the Spring, 57.4% of students in grades 3-8 will test at target on their within-year math assessment.

Board Goal #3
The percentage of students in grades 3-8 who are proficient on the state Math assessment will grow from 21.5% in August 2019 to 52.0% by August 2026.

For more information, please visit the District's Office of Evaluation, Research, and Accountability's Goals and Guardrails page.

K-5 students must take the following subtests in order to receive a Composite Score:

Grade Level	Subtest Name (Required for Composite Score)	Skill Assessed
Kindergarten	Number Naming Fluency (NNF)	Amount of numbers between 0 and 20 that students can identify in one minute.
	Quantity Total Fluency (QTF)	The total sum of dots within each presented box students can identify in one minute.
	Concepts and Applications (CA)	The number of one- and two-step word problems students can solve correctly. This subtest is untimed and 25 questions in length.
First	Concepts and Applications (CA)	The number of one- and two-step word problems student can solve correctly. This subtest is untimed and 25 questions in length.
	Number Comparison Fluency -Pairs (NCF-P)	Number of instances a student can identify the larger number in a given pair in one minute.
	Math Facts Fluency -1 Digit (MFF-1D)	The number of simple addition and subtraction problems students can solve correctly in one minute.
Second through Fifth	Concepts and Applications (CA)	The number of multiple-choice math word problems students answer correctly. This subtest is untimed and 29-31 questions in length.
	Number Comparison Fluency-Triads (NCF-T)	The number of instances a student can correctly identify where a given number falls on the number line between the two choices in three minutes.
	Mental Computation Fluency (MCF)	The number of multiple-choice mental math problems students can solve and answer correctly in four minutes.

We measure **student performance** using the following metrics:

Metric	Description	Analytic Purpose
Average National Percentile	A student's National Percentile; a norm-referenced performance measure that compares a student's scaled score to her grade-level peers nationwide.	The Percentile Rank is useful for understanding a student's reading ability compared to other students in the same grade nationally.
Tier Level	Based on a student's Percentile Rank, Tiers are used to identify the level of intervention students need in order to reach proficiency. There are four tier levels: • **Tier 1** indicates that students are testing "**at target**" and are on track to read proficiently. • **Tier 2** indicates that students need **strategic intervention** to ensure progress towards proficiency. • **Tier 3** indicates that students require **intensive intervention** to make progress towards becoming a proficient reader.	Tier Levels are useful for understanding District-wide performance trends, as well as for identifying students who need additional supports in the classroom.

We measure **student growth** using the following metric:

Metric	Description	Analytic Purpose
Student Growth Percentile (SGP)	A norm-referenced metric that compares a student's growth to her "academic peers" (students in the same grade with a similar score history) nationwide. Measured on a 1-99 scale; lower numbers indicate lower relative growth and higher numbers indicate higher relative growth. Students are placed into three growth categories, based on their SGP: • **High Growth** (SGP between 66th-99th percentiles) • **Typical Growth** (SGP between 35th-65th percentiles) • **Low Growth** (SGP between 1st-34th percentiles)	The SGP is used to understand how much growth a student is making compared to his or her peers.

For more information about SGP, please reference aimswebPlus's technical manual

The following sections present student performance for all K-5th grade students who took the winter aimswebPlus Math assessment

- Student performance and growth on the key metrics outlined on the previous slide is presented as follows:
  - Overall and by grade
  - By racial/ethnic subgroup
  - By other student subgroups (economically disadvantaged status, special education, English Learner)
- Tier levels are presented first, followed by Average National Percentile, then Student Growth Percentiles

Student Participation in Assessments

How many students participated in the winter 2020-21 assessment?

Winter 20-21 aimswebPlus participation rates were similar across grades K-5.

	Number of students eligible to participate in assessment	Number of students who were assessed	Percent of students who were assessed
Grades K-3 Combined	35,942	31,460	87.5%
Kindergarten	7,624	6,764	88.7%
1st Grade	9,491	8,253	87.0%
2nd Grade	9,338	8,153	87.3%
3rd Grade	9,489	8,290	87.4%
Grades 4-5 Combined	18,214	15,843	87.1%
4th Grade	9,141	7,943	87.0%
5th Grade	9,073	7,900	87.1%

Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

Asian and White students had higher participation rates than other groups of students.

	Number of students eligible to participate in assessment	Number of students who were assessed	Percent of students who were assessed
Asian	4,846	4,466	92.3%
Black/African American	25,473	21,736	85.3%
Hispanic/Latino	12,914	11,098	86.0%
Multi-racial/Other	2,131	1,876	89.3%
White	8,626	7,981	92.5%
Economically Disadvantaged	40,946	35,360	86.4%
Has IEP (Individualized Education Plan)	7,809	5,562	70.5%
EL (English Learner)	7,385	6,560	89.0%

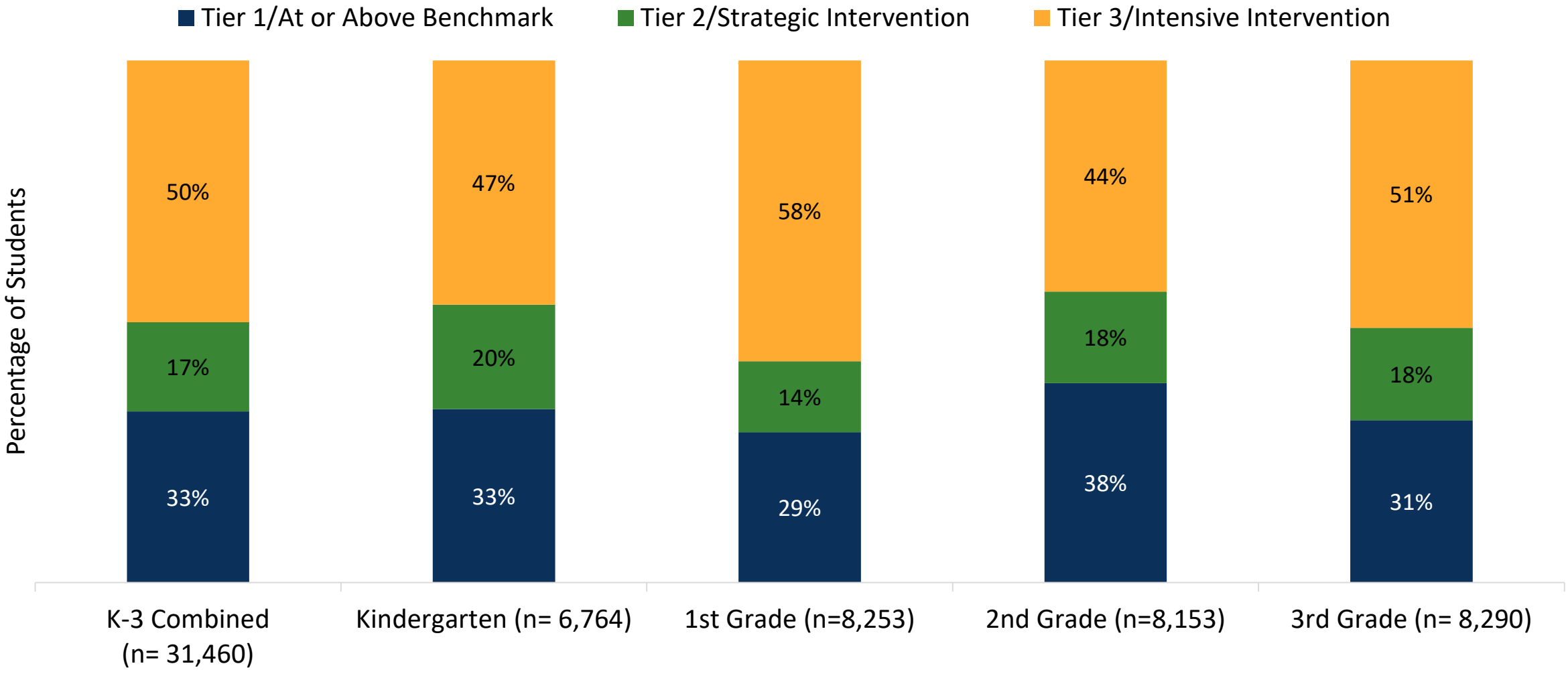
* All students are required to participate except for students who are exempted based on their Individualized Education Program (IEP). For the Special Education student group, participation rate includes all students, included those who are exempted, in the denominator.

Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

Tier-Level Analysis

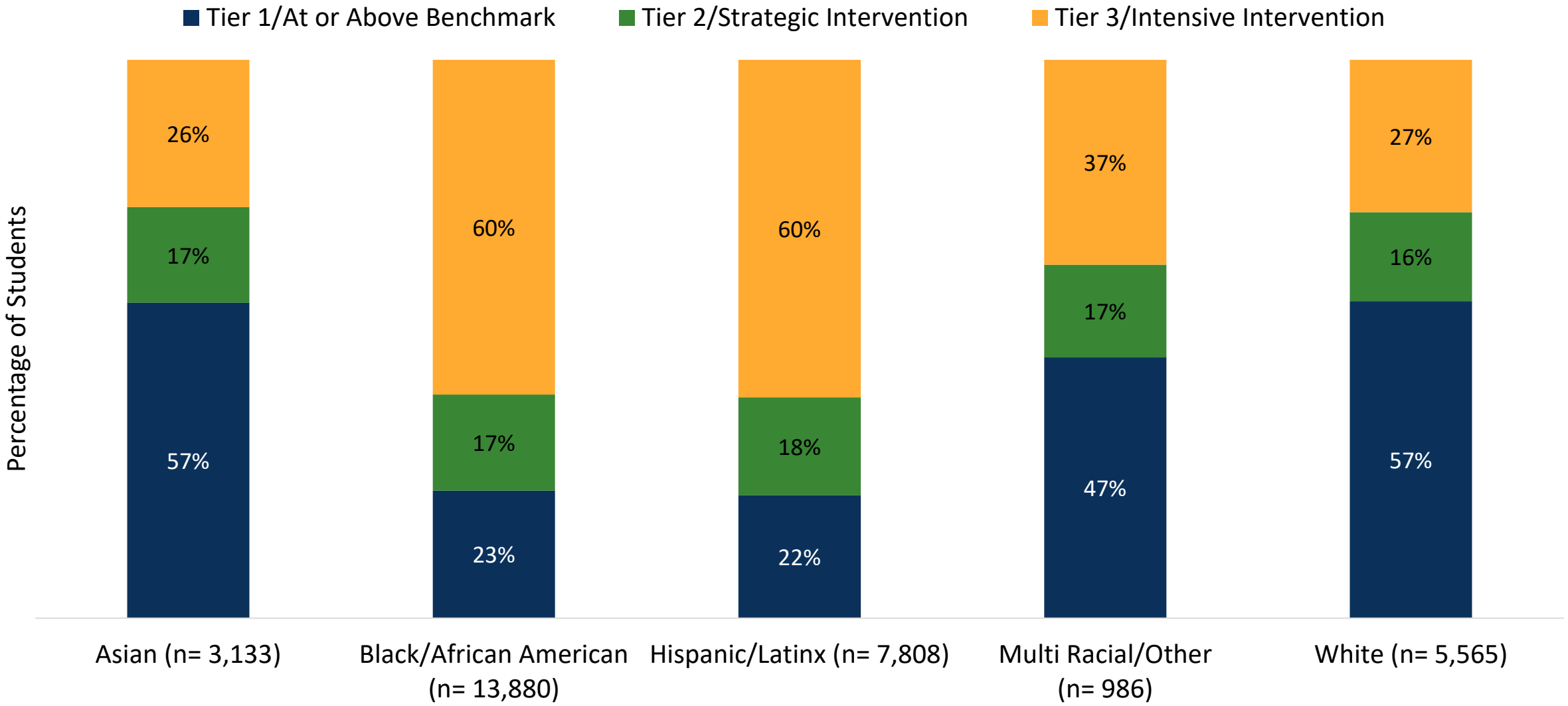
Who is performing at target and who requires additional support?

Half of K-3 students who took the winter aimswebPlus composite assessments scored in Tier 3/Intensive Intervention.



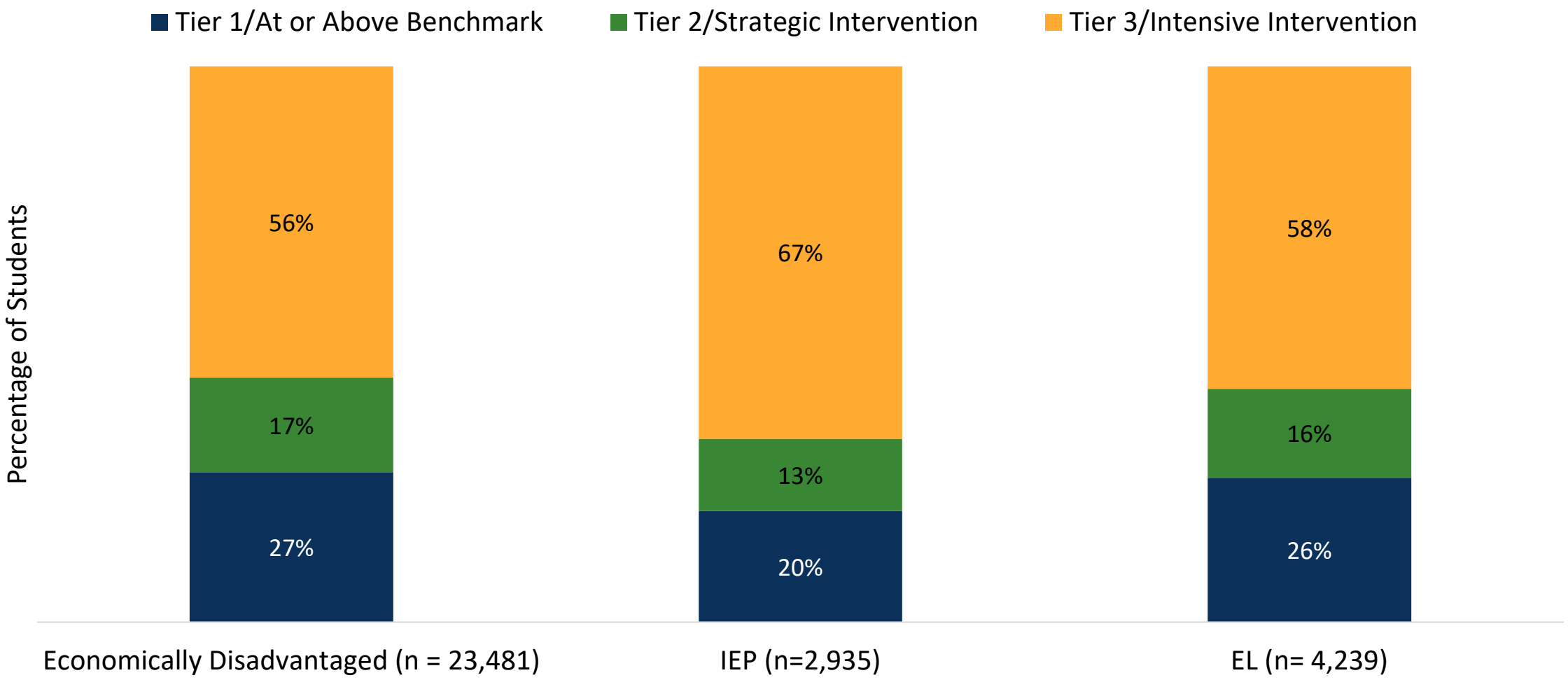
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

Over half of Hispanic/Latinx and Black/African American K-3 students who took the winter aimswebPlus composite assessments scored in Tier 3/Intensive Intervention.



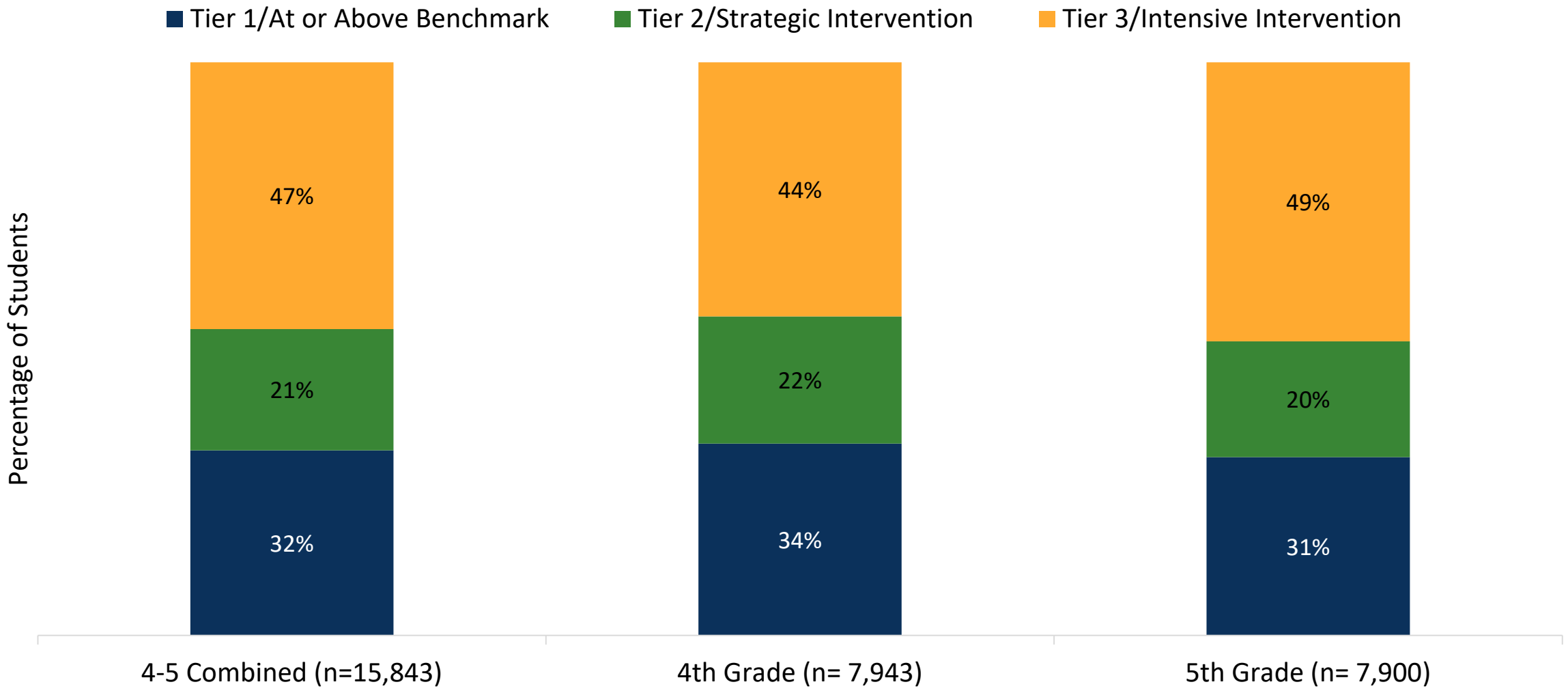
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

About 70% of K-3 students who have an Individualized Education Plan (IEP) require Intensive Intervention.



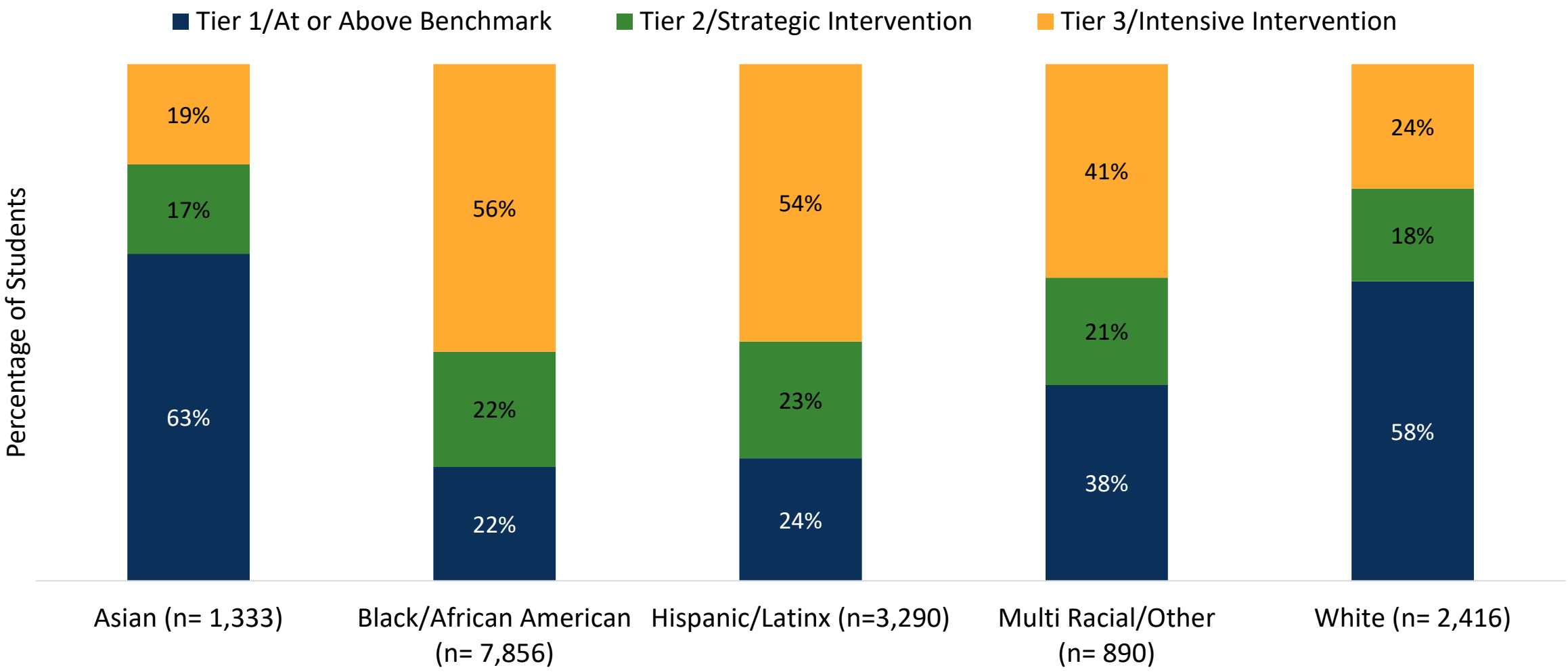
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

About one-third of all 4th and 5th grade students scores in Tier 1/At or Above Benchmark based on their aimswebPlus composite assessments .



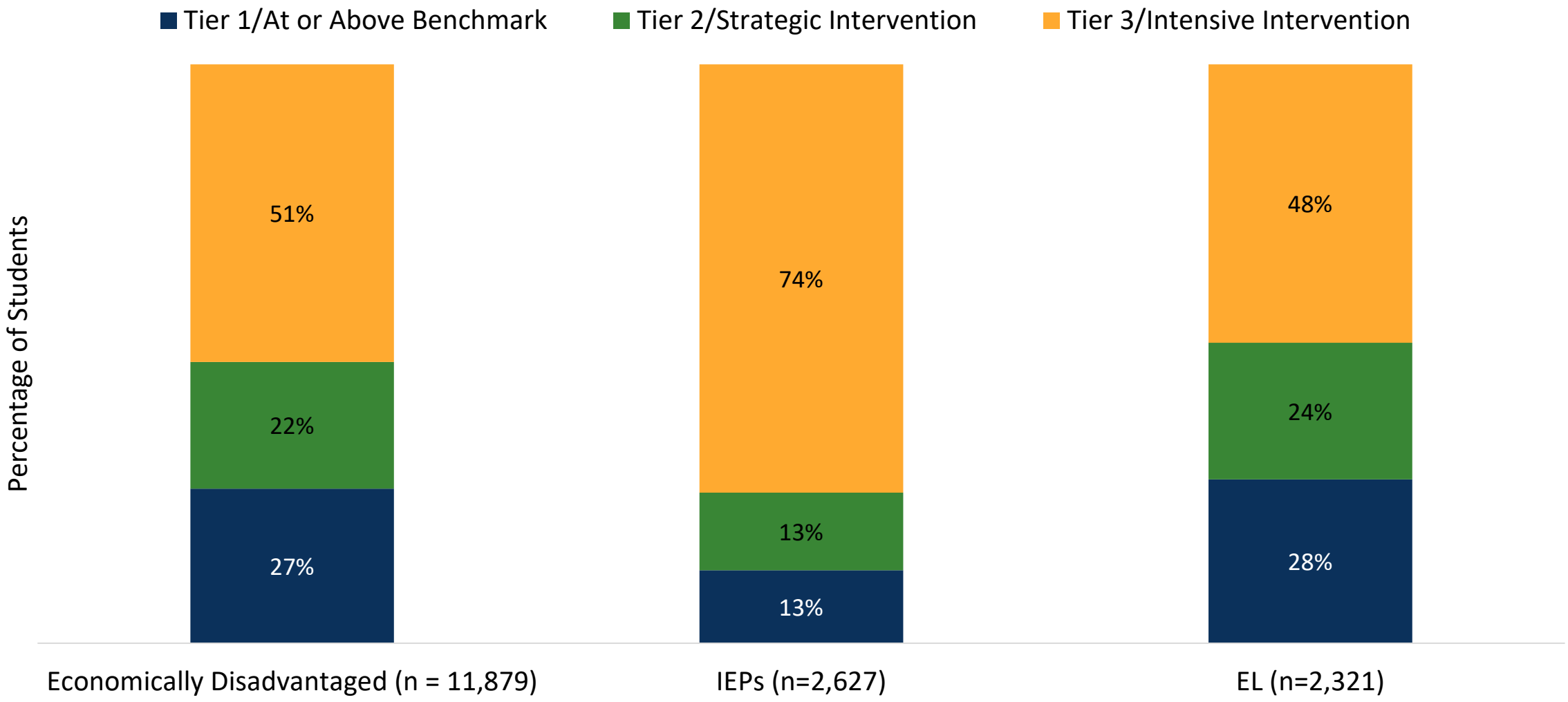
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

Over half of African American/Black and Hispanic/Latinx 4th and 5th grade students require Intensive Intervention, compared to a quarter of White and Asian students.



Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

About 80% of 4th and 5th grade students who have an Individualized Education Plan (IEP) require Intensive Intervention.

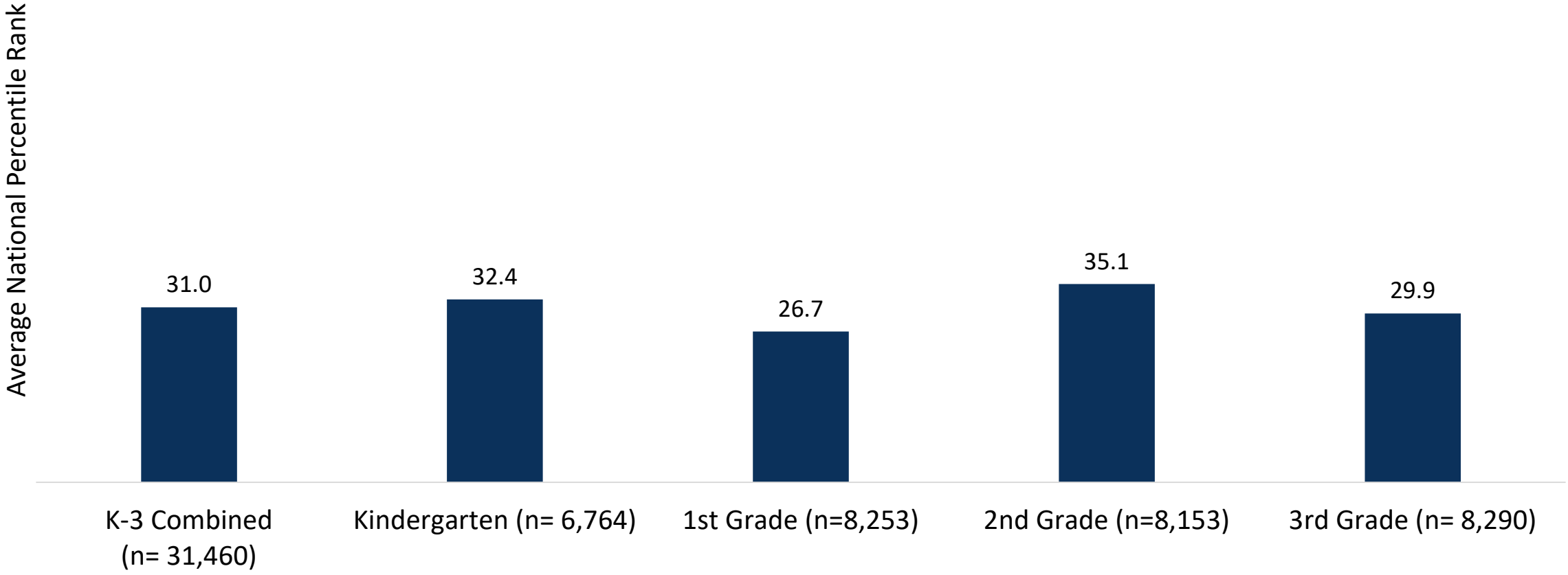


Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

Average National Percentile Rank

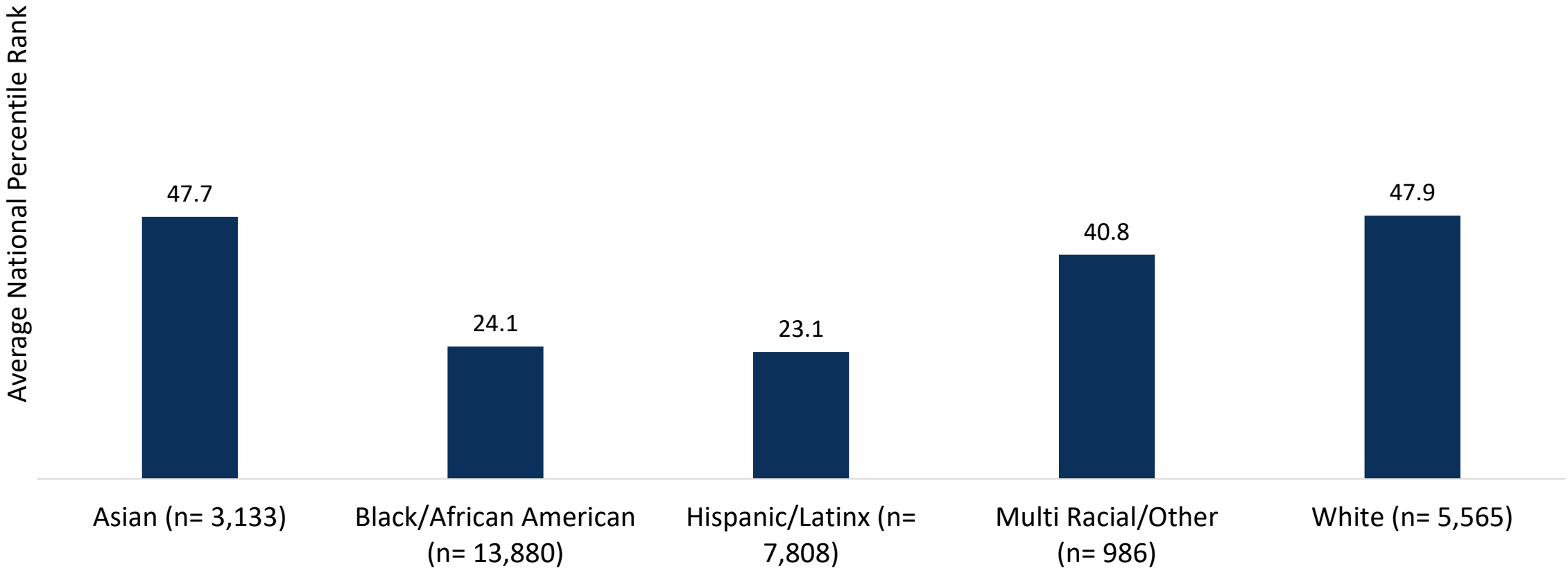
How are students performing compared to the national sample?

Overall, K-3 students had an average National Percentile Rank (NPR) of 31.0, which means that they scored higher than about a one-third of students in the national sample.



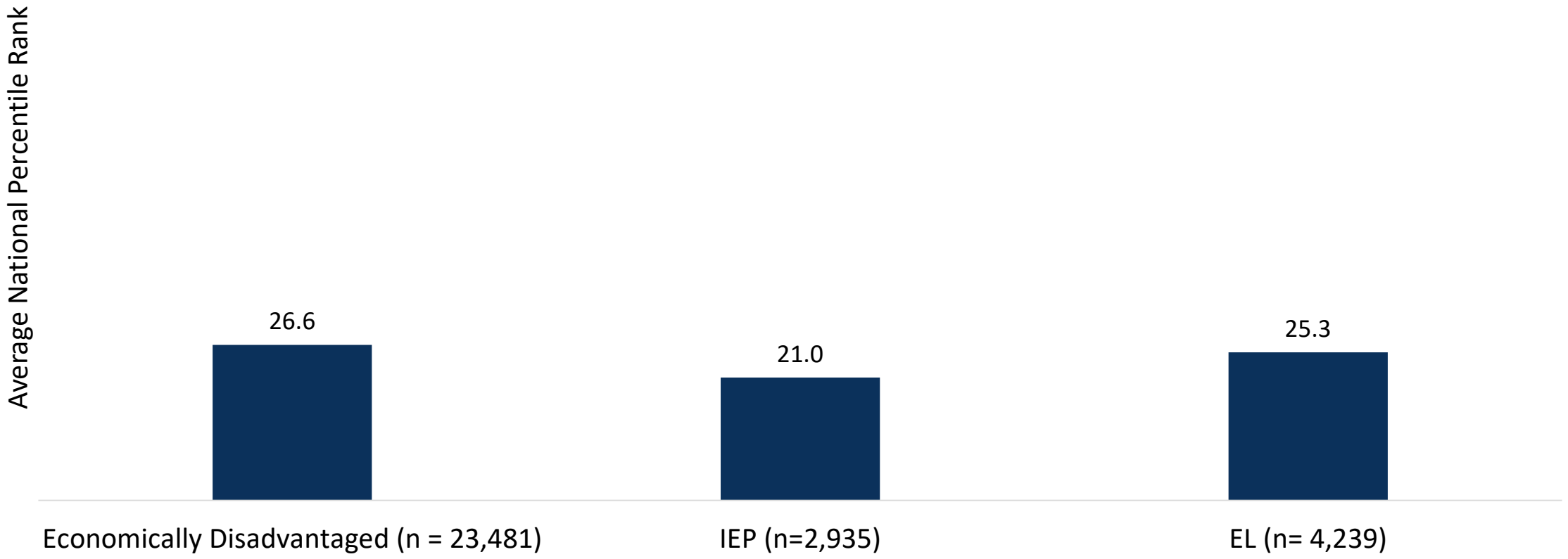
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

White and Asian K-3 students performed higher than their Black/African American and Hispanic/Latinx peers.



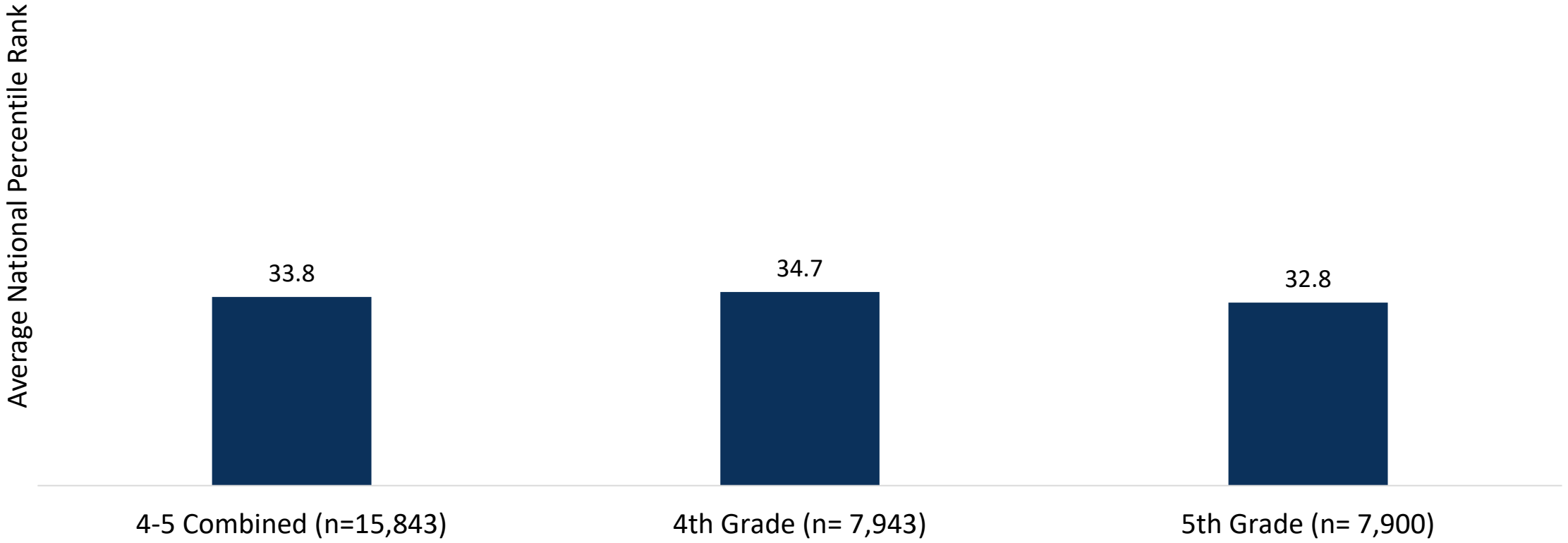
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

K-3 students who were classified as an English Learner (EL) or Economically Disadvantaged scored lower than about 75% of the national sample.



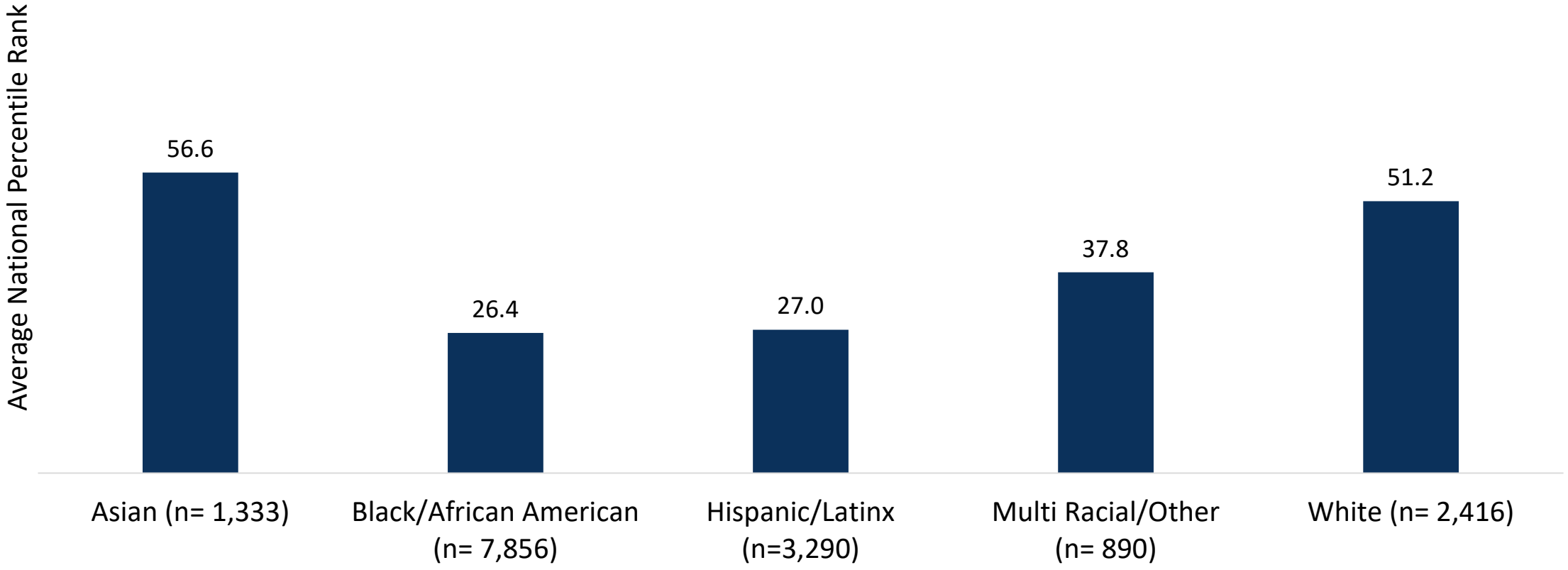
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

Overall, 4th and 5th grade students had an average National Percentile Rank (NPR) of 33.8, which means that they scored higher than about one-third of students in the national sample.



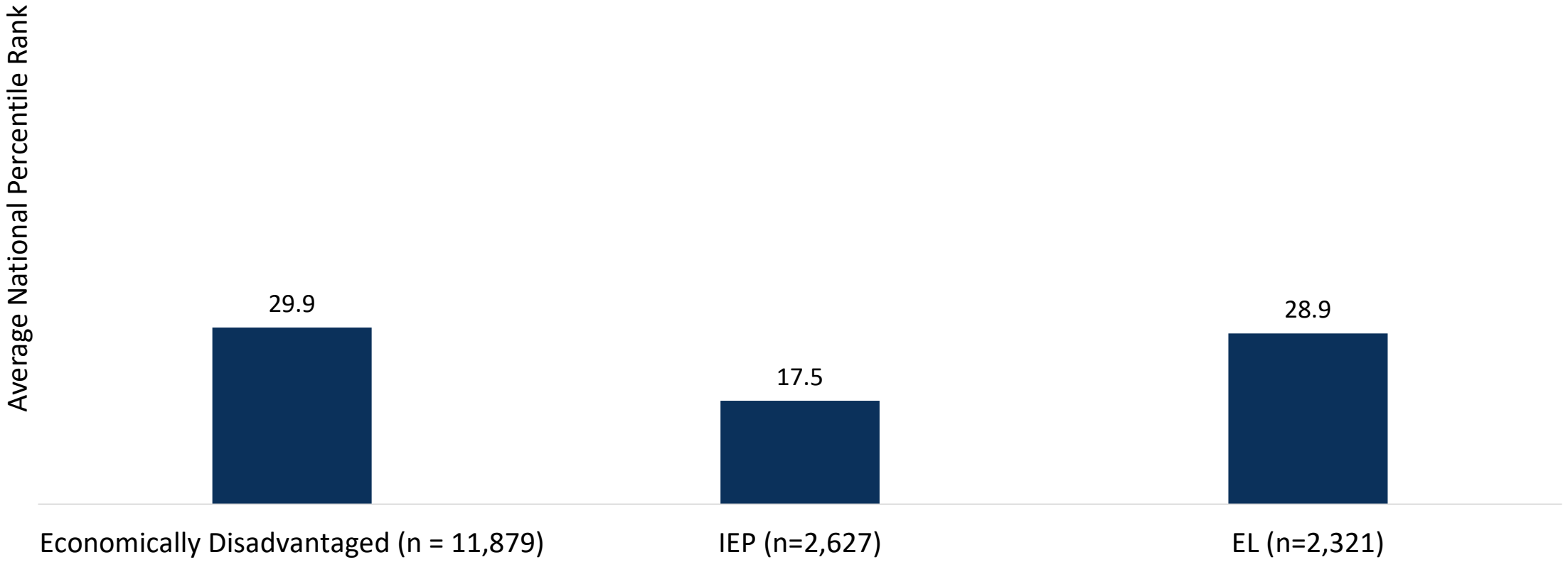
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

White and Asian 4th-5th grade students performed better than their Black/African American and Hispanic/Latinx peers.



Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

4th and 5th grade students with an Individualized Education Plan (IEP) scored lower than about 80% of the national sample.

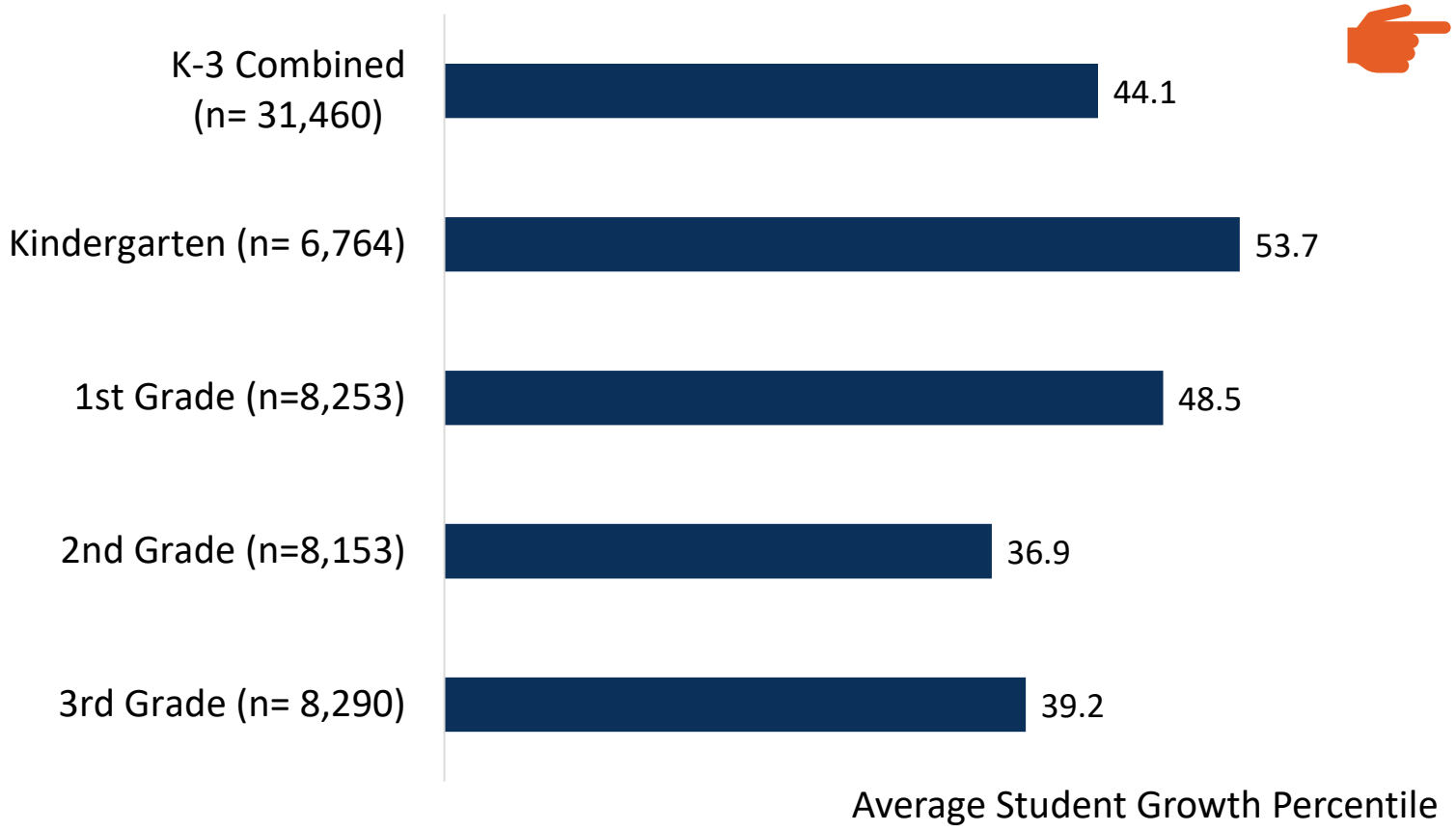


Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

Student Growth Percentiles (SGP)

How quickly are students growing compared to similar students in the national sample?

On average, K-3 students demonstrated "typical" growth from fall to winter.

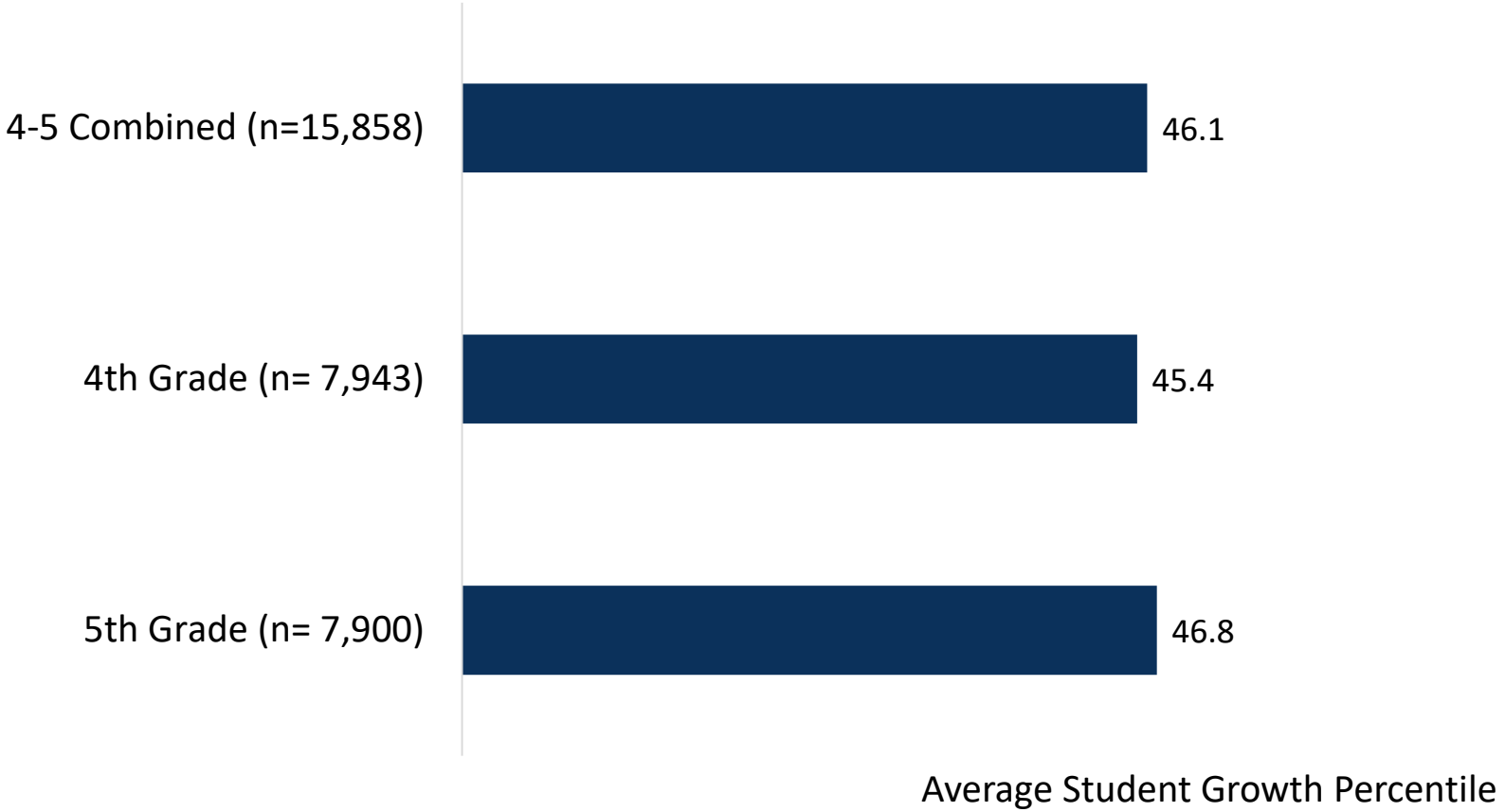


Remember - students are placed into three growth categories, based on their SGP:

- **High Growth** (SGP between 66th-99th percentiles)
- **Typical Growth** (SGP between 35th-65th percentiles)
- **Low Growth** (SGP between 1st-34th percentiles)

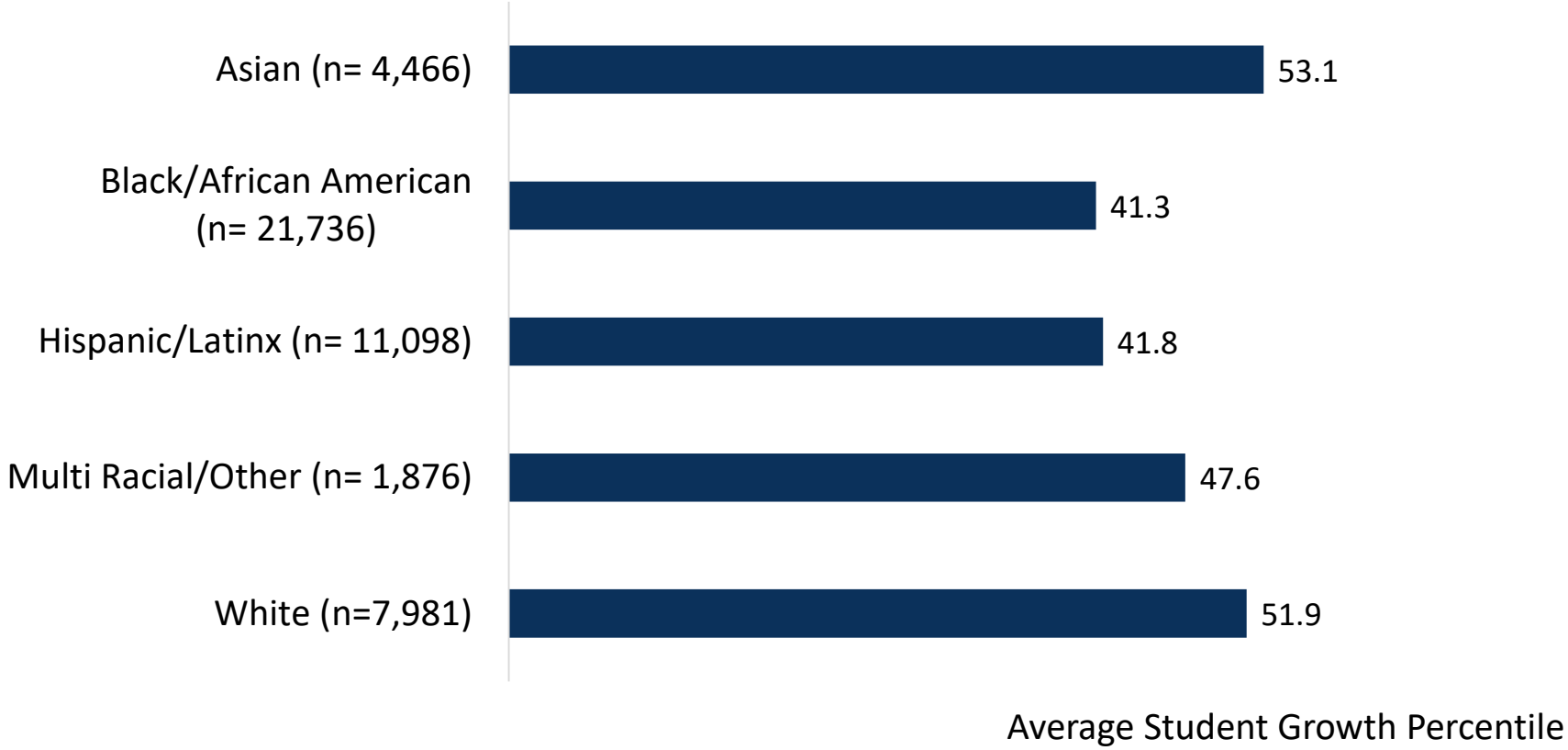
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

On average, 4th-5th grade students demonstrated “typical” growth from fall to winter.



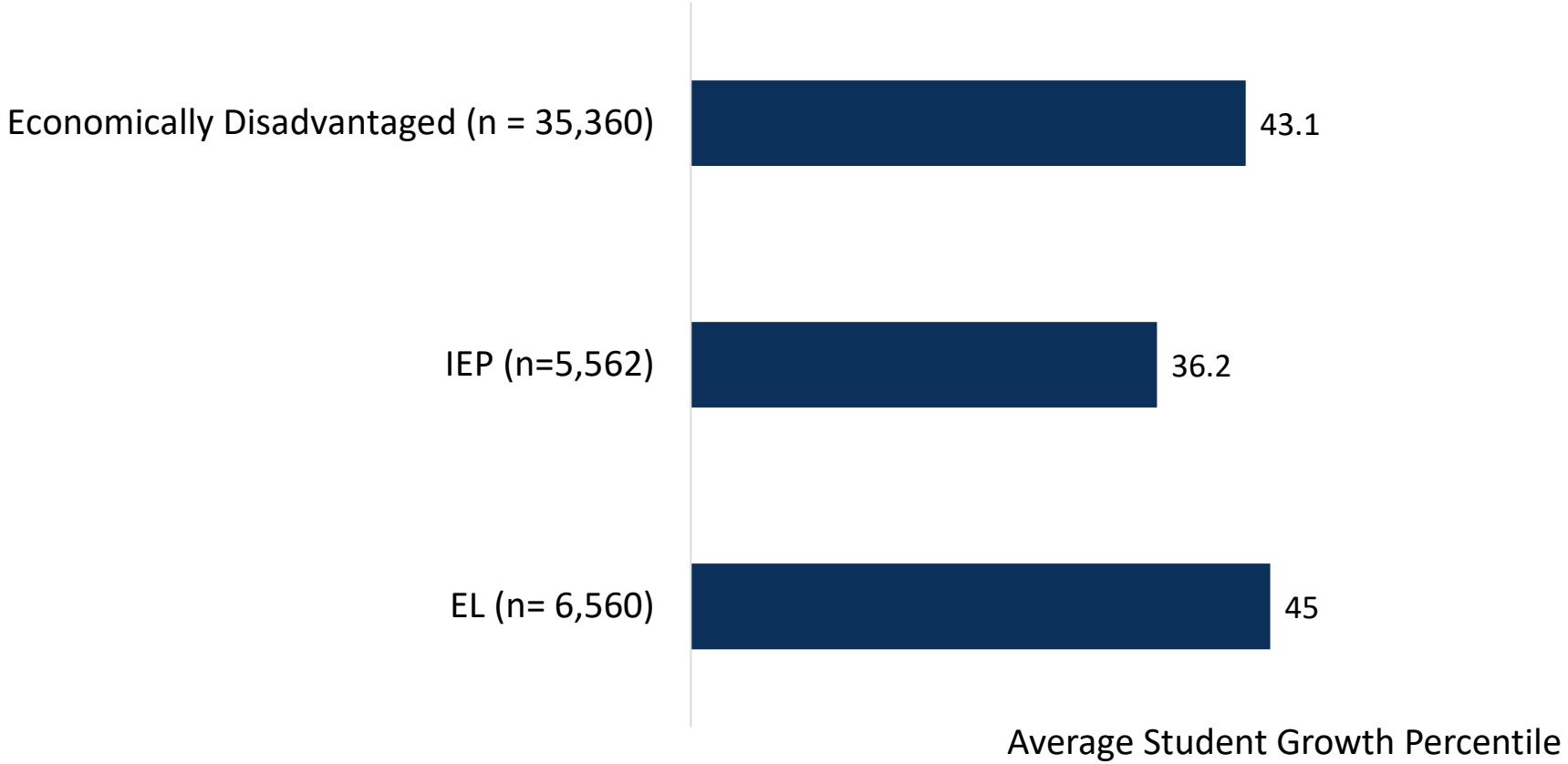
Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

On average, students in all racial/ethnic subgroups demonstrated "typical" growth from fall to winter.



Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

On average, economically disadvantaged students, students with IEPs, and EL students demonstrated "typical" growth from fall to winter.



Source: Qlik Aimsweb-Star App. Accessed 03/03/2021

Summary of Winter 2020-21 aimswebPlus Math Assessment Data

- About one-third of K-5 students who took the winter aimswebPlus composite assessments scored in Tier 1/At or Above Benchmark.
- The majority of K-5 students ELs and special education students require either strategic or intensive intervention.
- The majority of K-5 students scored lower, on average, than their peers nationwide.
- Most K-5 students, including ELs and special education students, demonstrated a “typical” amount of growth between the fall and winter.