

Nevada Class Sizes and Workforce Needs

Contributing Factors to Optimal Education

This presentation is a summary of a [detailed class size and educator workforce analysis](#) completed by Data Insight Partners combined with Nevada Department of Education data regarding Specialized Instructional Support Personnel ratios.

Does Nevada have an education system worth investing in?

Nevada Has Made Massive Investments in Early Literacy

Full Day Kindergarten

- 2015 to 2017 \$41 - \$96 Million per year

Class Size Reduction

- 2015 to 2019 \$147 - 189 Million per year

Zoom

- 2013 to 2014 \$25 Million per year
- 2015 to 2019 \$50 Million per year

Victory

- 2016 to 2019 \$25 Million per year

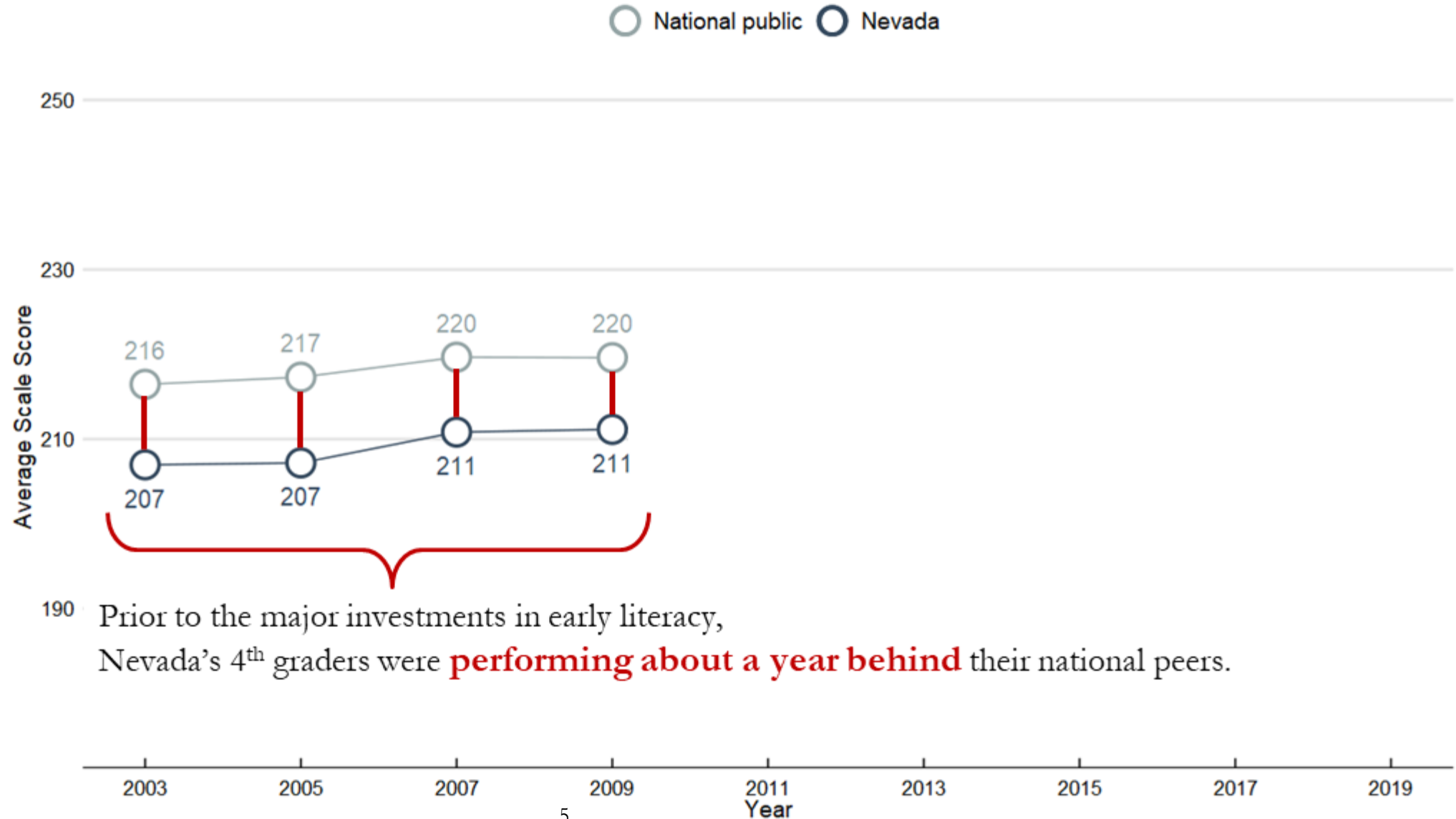
Read by Grade 3

- 2016 to 2019 \$4.9 - \$22.3 Million per year

The screenshot shows the NAEP website header with the IES and NCES logos, a search bar, and social media links. The main navigation bar includes links for About, Assessments, Publications and Newsroom, Participating in NAEP?, Resources, and Help. The page title is "NAEP is the Leader in Large-Scale Assessment". A quote from The Washington Post states: "NAEP is the gold standard of student assessments." The source is cited as "The Washington Post editorial board". Below the quote, a paragraph explains that NAEP is the gold standard in large-scale assessments, developed by a group of assessment and content specialists, education experts, and teachers. A sidebar on the right titled "Related Information" lists various links such as "The Nation's Report Card", "Assessments", "Digitally Based Assessments", "Assessment Frameworks", "Guide to Understanding Reports", "Assessment Process", "Try an Assessment", "Participating in NAEP?", and "Explore Assessment Data".

US Department of Education
tests the nation in 4th Grade Reading
every two years.

National Assessment of Educational Progress (NAEP) 4th Grade Reading



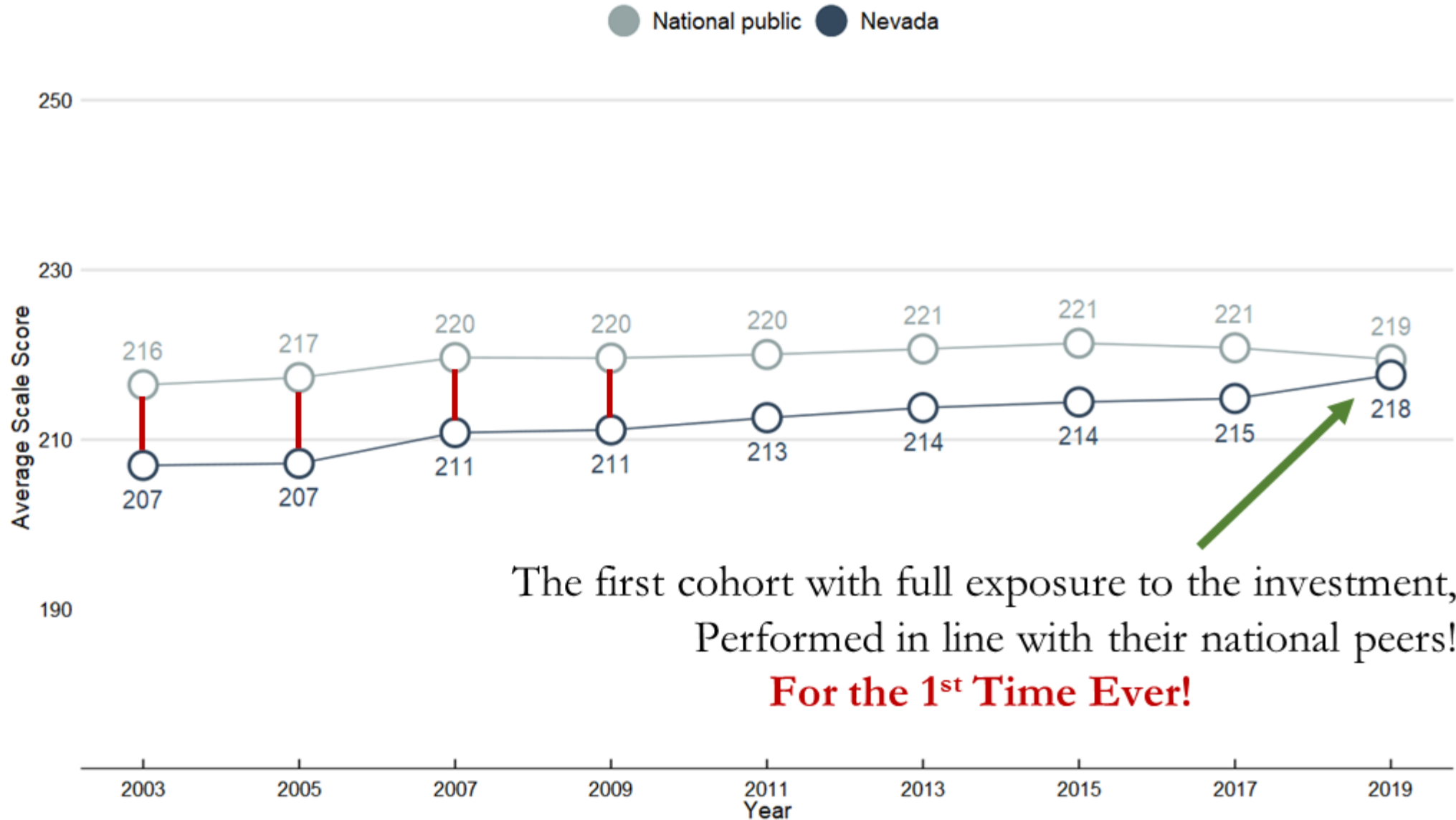
190 Prior to the major investments in early literacy, Nevada's 4th graders were **performing about a year behind** their national peers.

In 2019 the 1st cohort with exposure to Nevada’s massive investment in early literacy took the NAEP reading assessment.

What Happened?

	<u>School Year</u>	<u>Class Size Reduction</u>	<u>Zoom</u>	<u>Read by 3</u>	<u>Victory</u>	<u>Full Day K</u>
4th Grade	2018-2019	\$152 Million	\$50 Million		\$25 Million	
3rd Grade	2017-2018	\$147 Million	\$50 Million	\$20.5 Million	\$25 Million	
2nd Grade	2016-2017	\$155 Million	\$50 Million	\$22.3 Million	\$25 Million	
1st Grade	2015-2016	\$151 Million	\$50 Million	\$4.9 Million	\$25 Million	
Kindergarten	2014-2015	\$189 Million	\$50 Million			\$41 Million

National Assessment of Educational Progress (NAEP) 4th Grade Reading

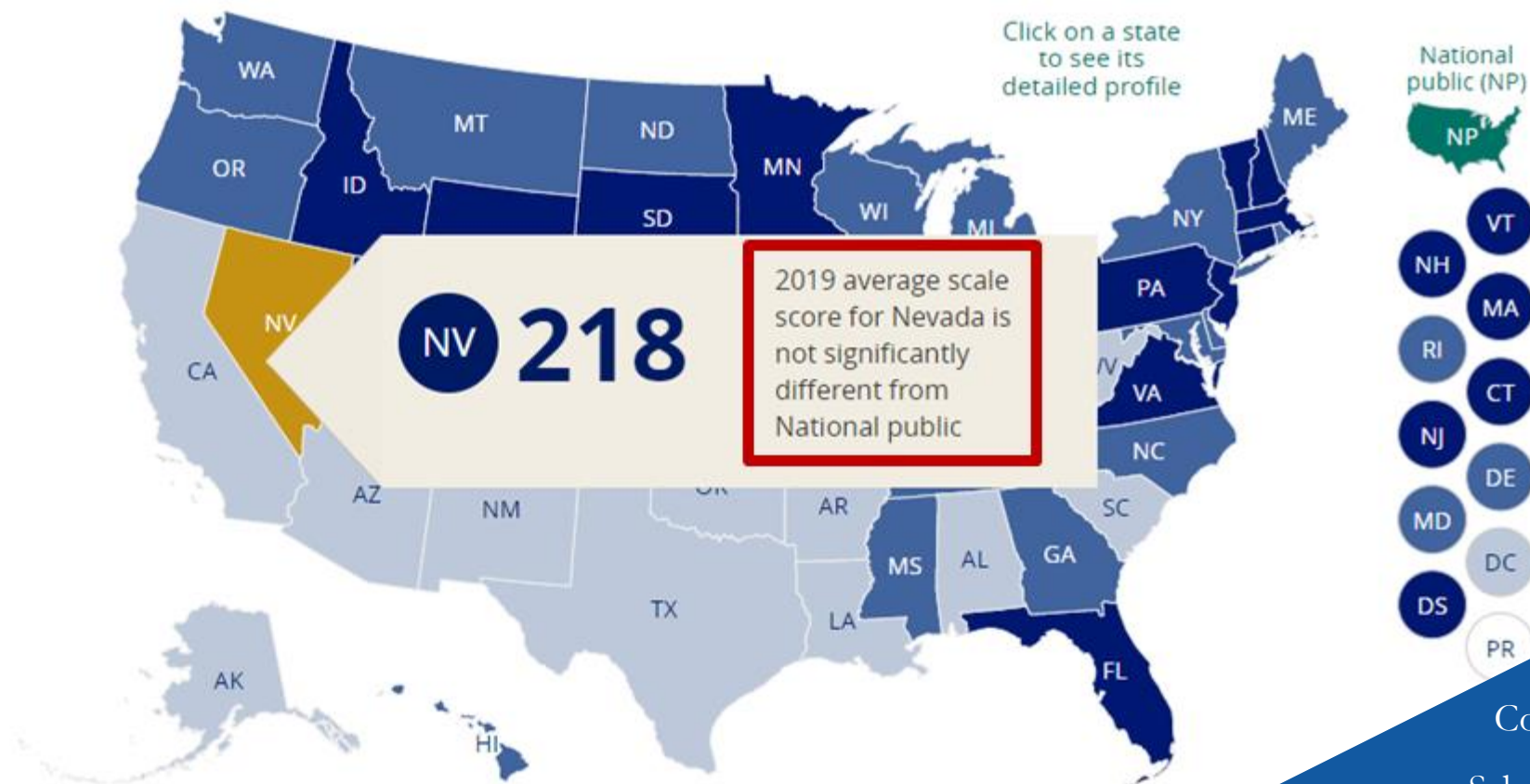


AVERAGE SCALE SCORES

Investment

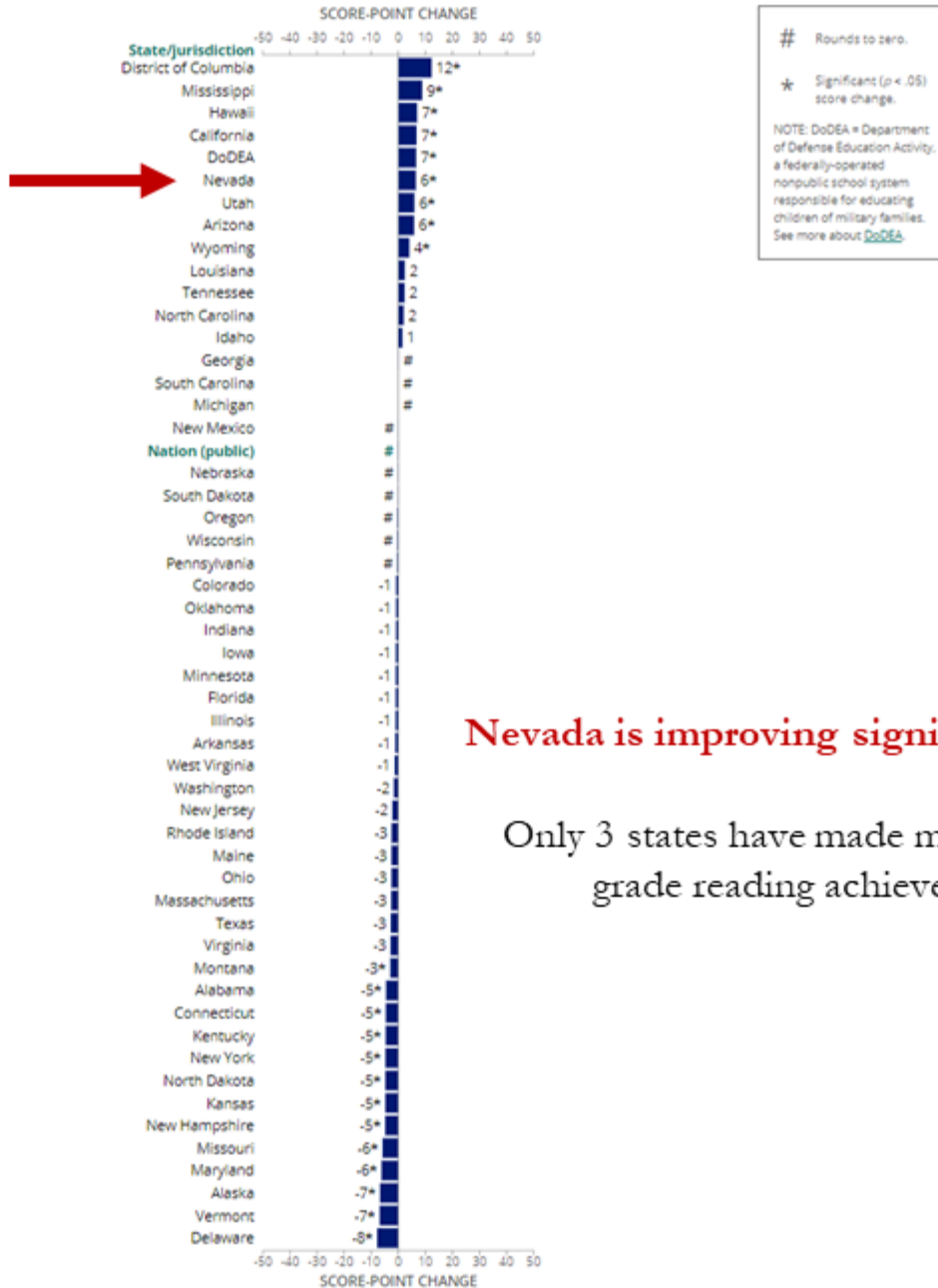


Reading, grade 4, Difference in average scale scores between jurisdictions, for all students [TOTAL] = All students, 2019



NAEP Improvement 2009 to 2019

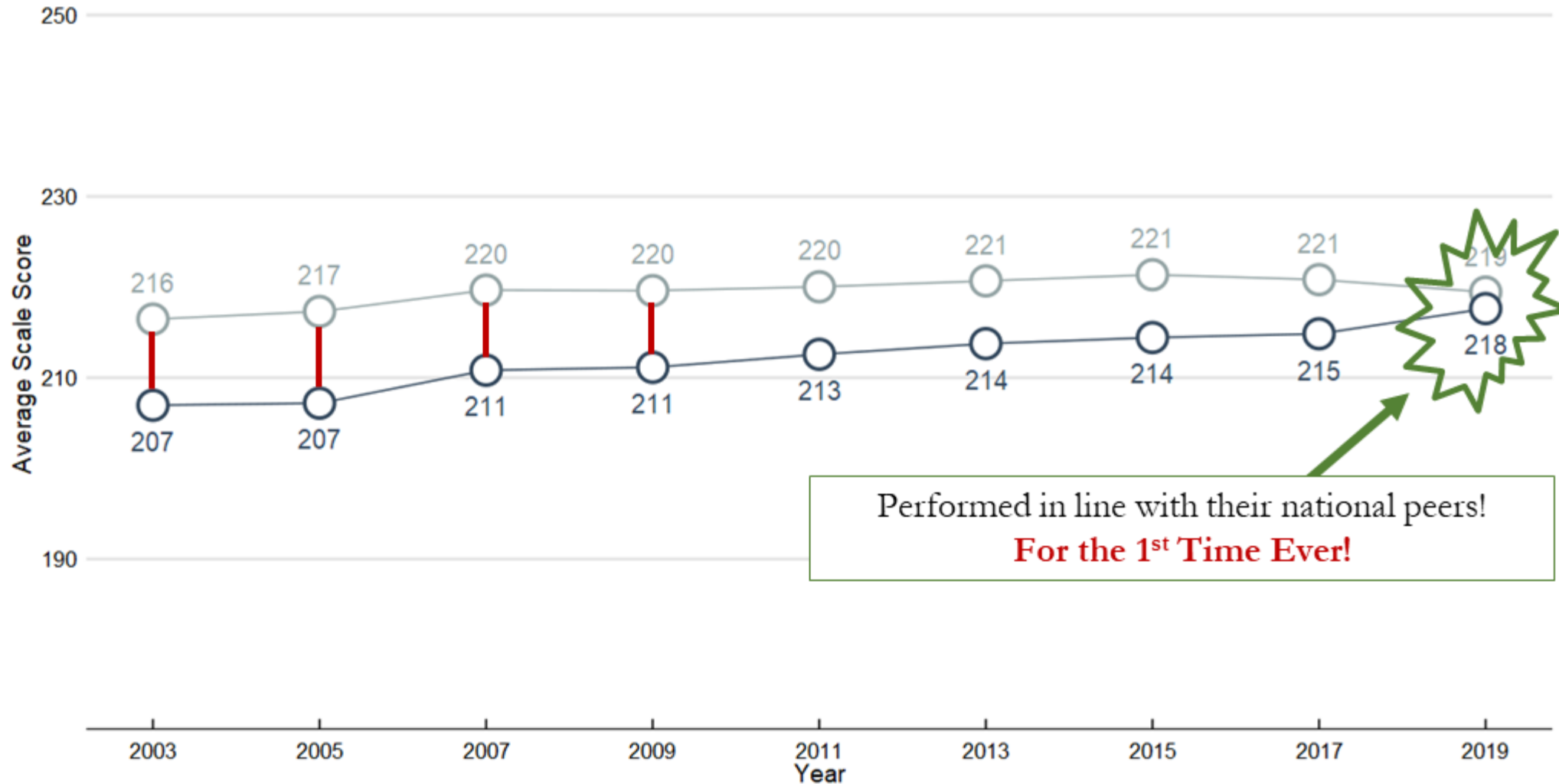
Score-point change between 2009 and 2019 for fourth-grade public school students assessed in NAEP reading, by state/jurisdiction



Nevada is improving significantly faster than the Nation!

Only 3 states have made more progress than Nevada in 4th grade reading achievement over the last decade.

Nevada Education Is a System Worth Investing In



Performed in line with their national peers!
For the 1st Time Ever!

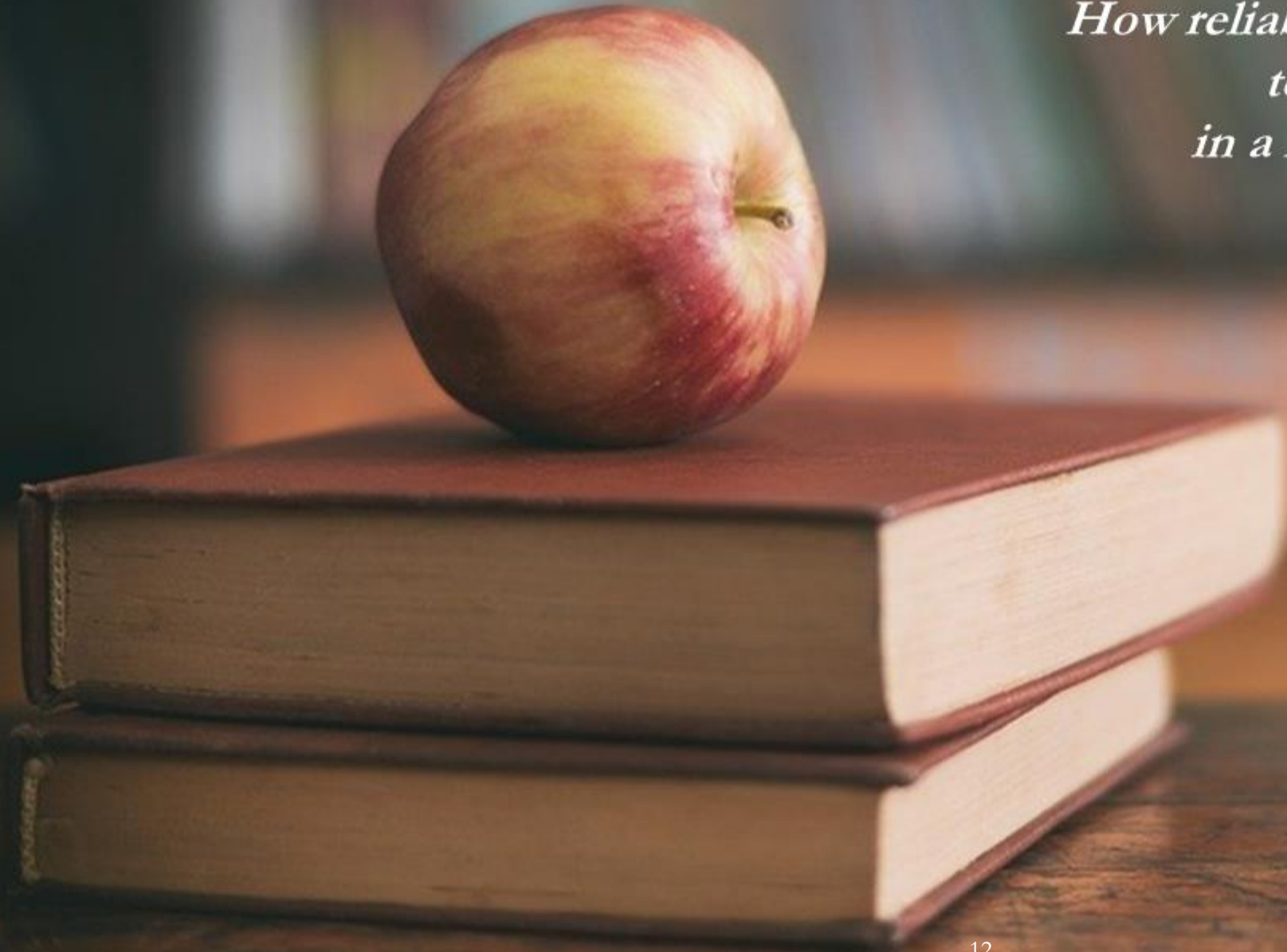


What We Know

The most important factor affecting student learning is the classroom teacher.

What We Don't Know

*How reliable is every student's access
to a quality teacher
in a reasonable class size?*



Context

Nevada declares teacher shortage emergency to boost out-of-state hiring

- Las Vegas Sun, February 5, 2016

Context

Study shows Nevada schools have largest average class sizes

- Las Vegas Review-Journal, August 11, 2018

Context

WCSD can now hire emergency substitutes with only a high school diploma

- Reno Gazette Journal, November 30, 2020

“The Washoe County School District has said staff shortages are a main reason it cannot keep all schools open for in-person learning.”

What class sizes are Nevada's students experiencing?

Recommended Class Sizes in Nevada

Grades 1st - 3rd = 15

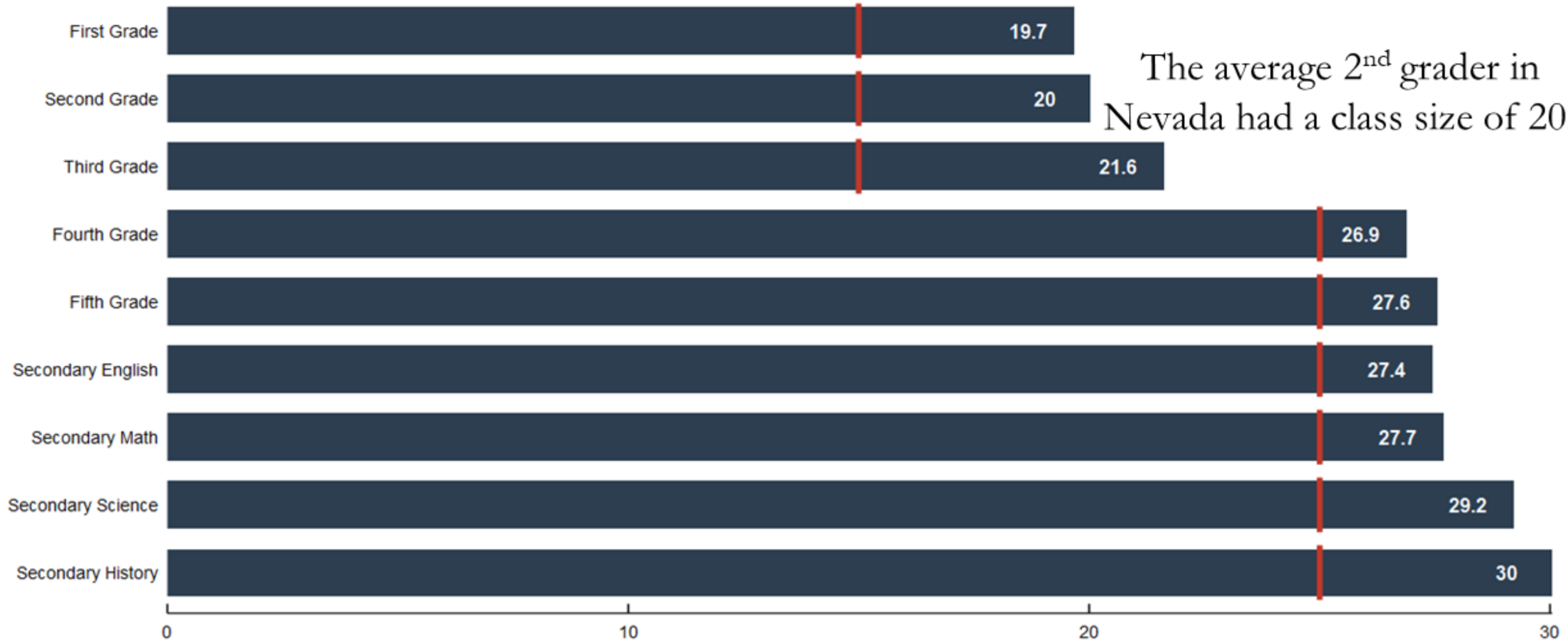
Grades 4th - 12th = 25

In 2018, the State Board of Education passed a non-binding suggested ratio of pupil per licensed teacher for each classroom and course of instruction, except choir, orchestra, and band.

How does this compare to actual class sizes experienced by students?

Average Class Sizes Experienced by Nevada Students

2019-2020

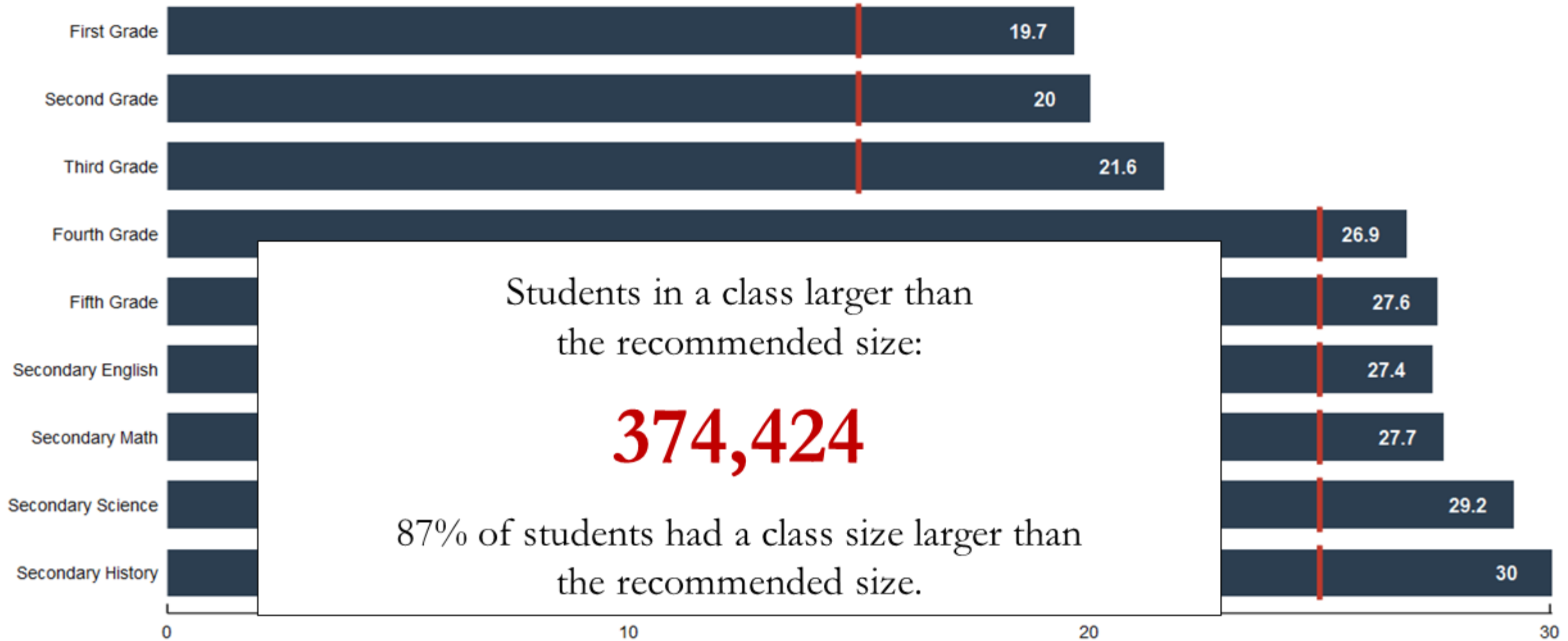



The average 2nd grader in Nevada had a class size of 20.

SBOE recommended class sizes

Source: Infinite Campus. Secondary is defined as grades 6 through 12. Analysis based on students enrolled on October 1, 2019 and enrolled in the school for a total of at least one week. Section enrollments of 50 or greater excluded from elementary analysis and 70 or greater from secondary analysis. There were 430,807 students included in this analysis.

Average Class Sizes Experienced by Nevada Students 2019-2020



 SBOE recommended class sizes

Source: Infinite Campus. Secondary is defined as grades 6 through 12.
Analysis based on students enrolled on October 1, 2019 and enrolled in the school for a total of at least one week.
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Where Are We?

Approximately **9 in 10** students have a class size larger than the recommended class size

How many teachers would we need to reduce class sizes?

Classroom Teachers

Teachers Needed

	Total Current Teacher Count	Estimated Additional Teachers Needed	Teacher Cost for Difference
Grades 1-5	8,315	2,133	\$181 Million
Secondary Core Subjects	11,212	930	\$79 Million
<hr/>			
Total:		3,063	\$260 Million

To get to recommended class sizes for elementary grades 1-5 and core secondary courses, a very conservative estimate would require over

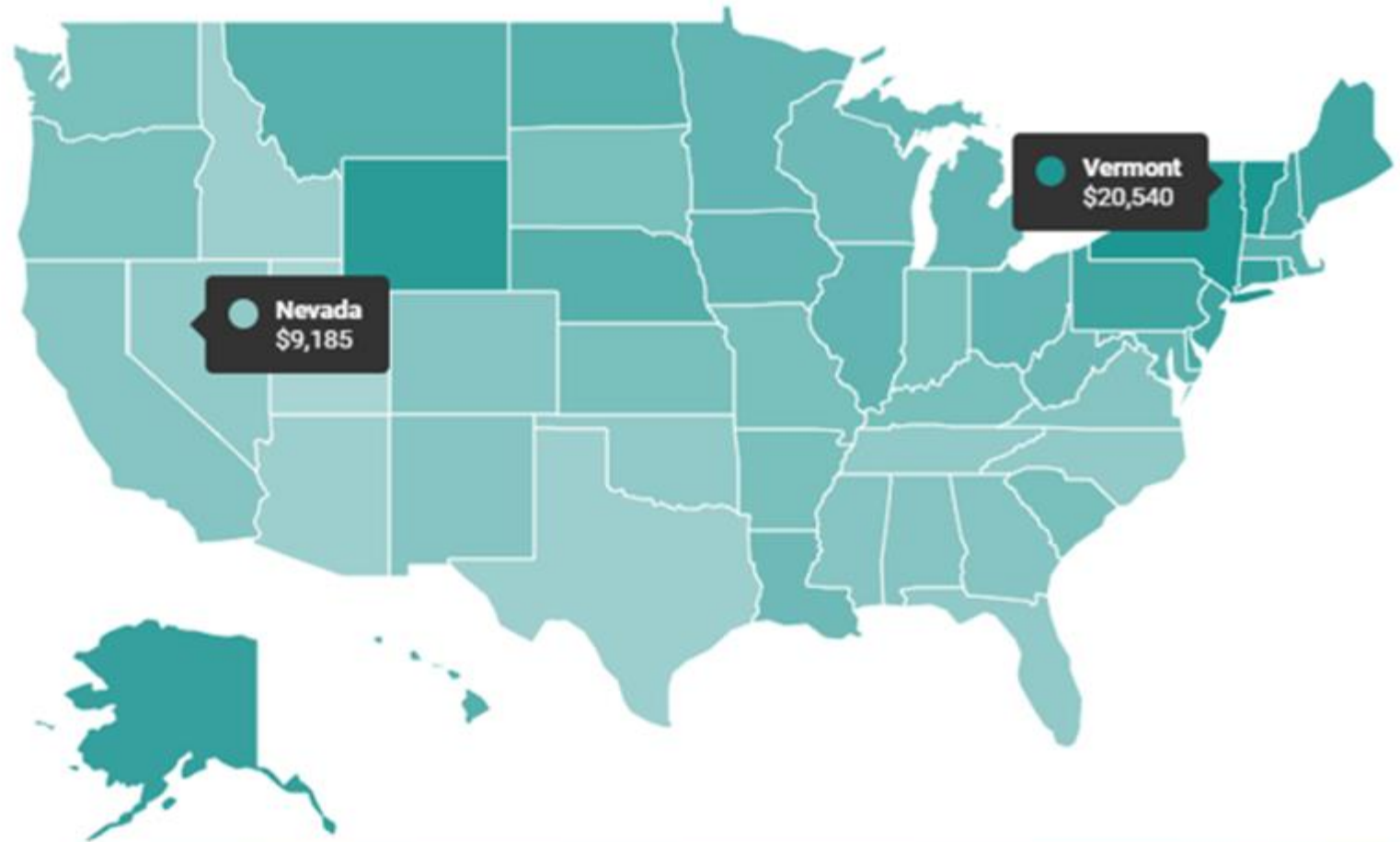
3,000 more classroom teachers at an approximate cost of **\$260 Million annually!**

Per-Pupil Expenditures



\$12,756

National Average



\$0 \$2000 \$4000 \$6000 \$8000 \$10000 \$12000 \$14000 \$16000 \$18000 \$20000

SOURCE: Education Week Research Center, 2019

Classroom Teachers

National Student-Teacher Ratios

	<u>Student-Teacher Ratio</u>	<u>Additional Teachers Needed in Nevada</u>	<u>Teacher Cost for Difference</u>	<u>Budget Increase if Spending Matched</u>
National Average	14.9-to-1	9,823	\$833 Million	\$1.78 BILLION
Vermont (lowest in nation)	10.5-to-1	23,678	\$2.0 BILLION	\$5.6 BILLION

If Nevada matched the national average per-pupil expenditure of \$12,756, the state education budget would increase by **\$1.78 BILLION**.

That makes the \$833 Million much more believable.

Summary

Nevada Needs More Teachers.

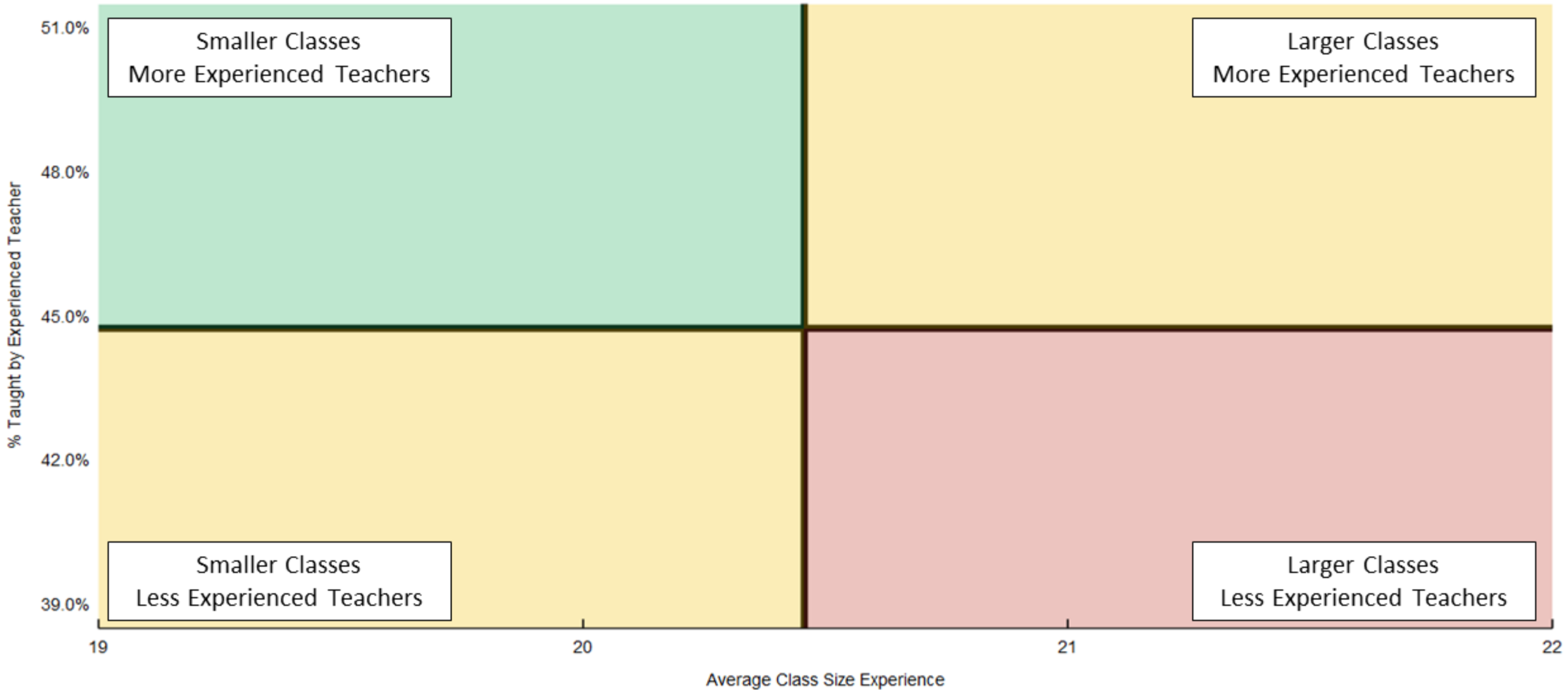
	Teachers Needed	Annual Cost*
Improve Core Class Sizes	3,000+	\$260 Million
Meet national system-wide student-teacher ratios	9,800+	\$800 Million
Lead the nation in student-teacher ratios	23,000+	\$2.0 BILLION

*Annual costs is limited to the estimated costs of teacher salaries and benefits based on \$84,807 per teacher. It does not account for other costs associated with decreased class-size ratios, which may include the need for more physical space, instructional materials, etc.

Do students in NV have equitable access to teachers?

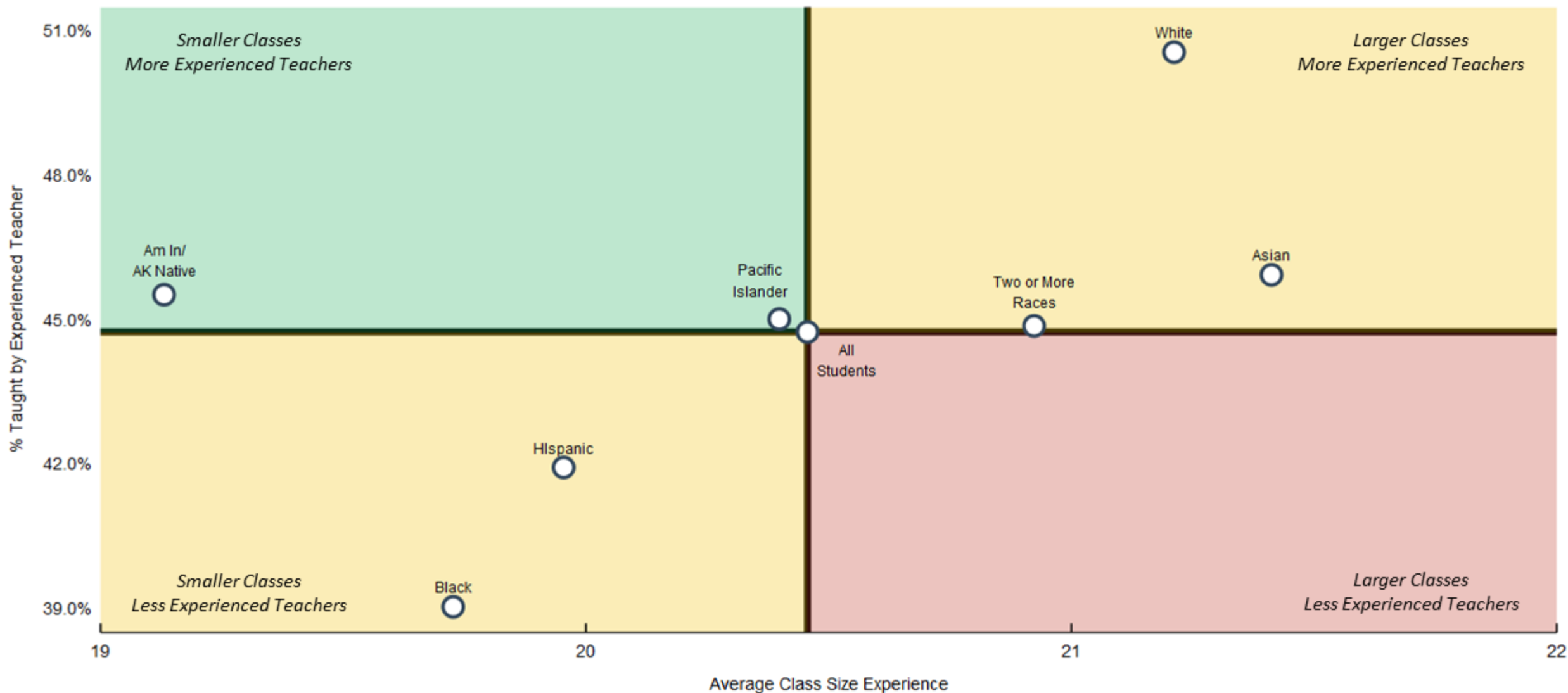
First Through Third Grade Classroom Experience

2019-2020



Source: Infinite Campus. Experienced teacher defined as three years teaching in the grade and the school. Analysis based on students enrolled on October 1, 2019 and enrolled in the school for a total of at least one week. Section enrollments of 50 or greater excluded from elementary analysis.

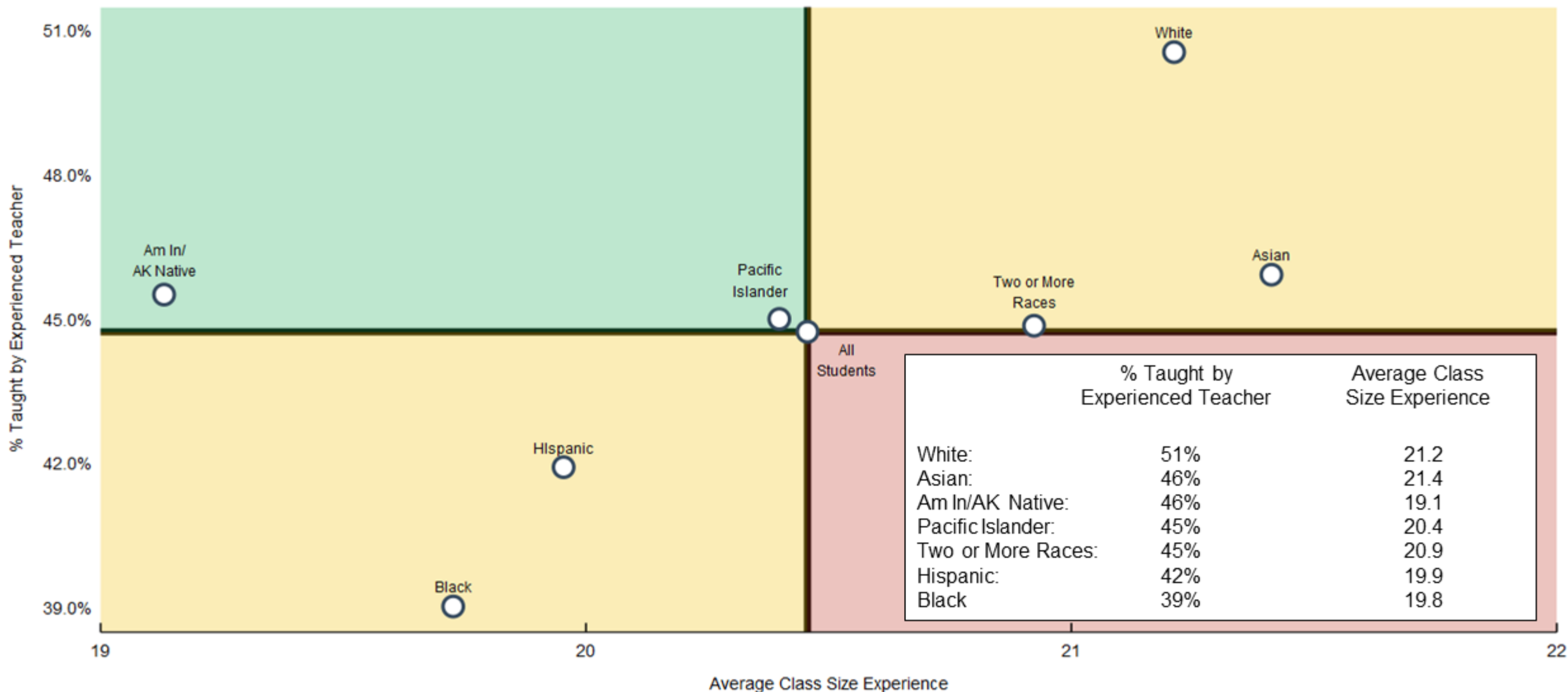
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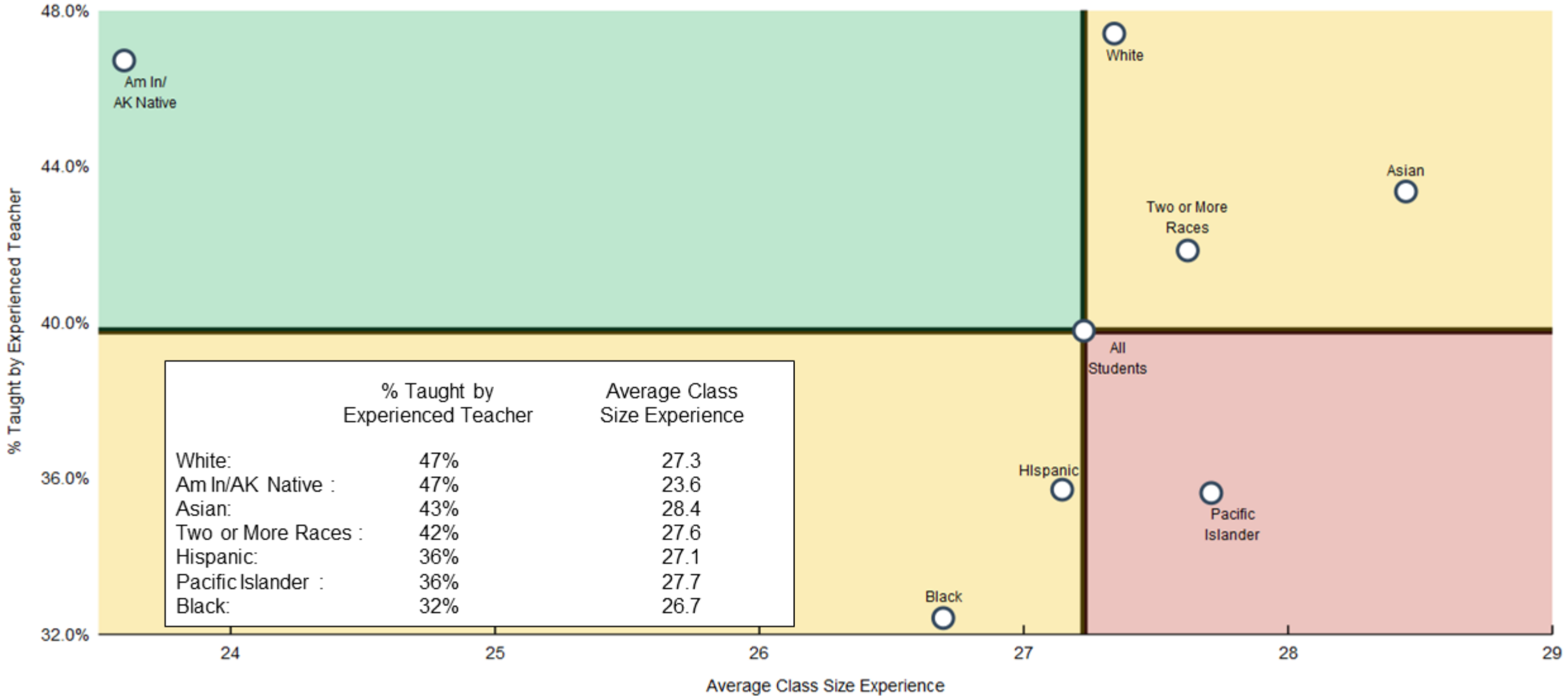
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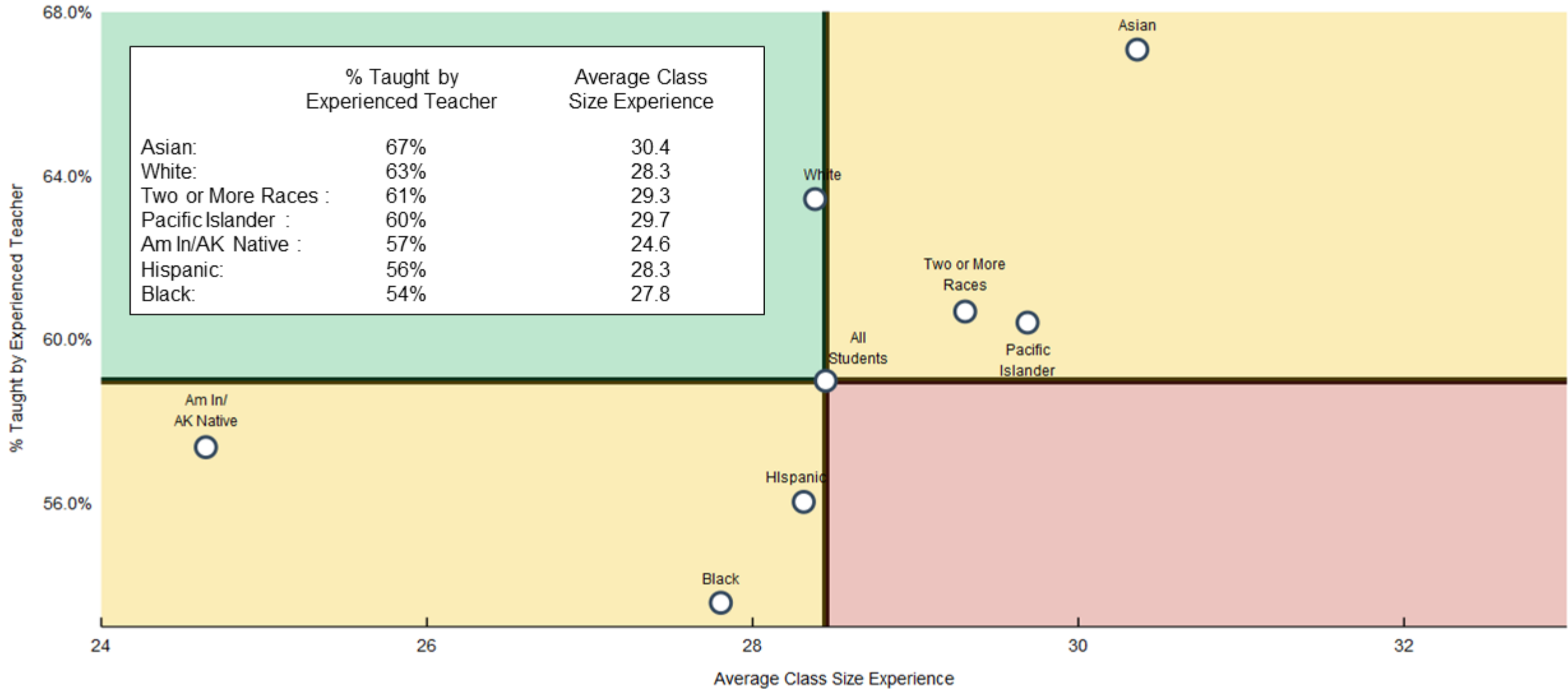
Fourth Through Fifth Grade Classroom Experience 2019-2020



Source: Infinite Campus. Experienced teacher defined as three years teaching in the grade and the school.
Analysis based on students enrolled on October 1, 2019 and enrolled in the school for a total of at least one week. Section enrollments of 50 or greater excluded from elementary analysis.

Secondary Core Subject Classroom Experience

2019-2020

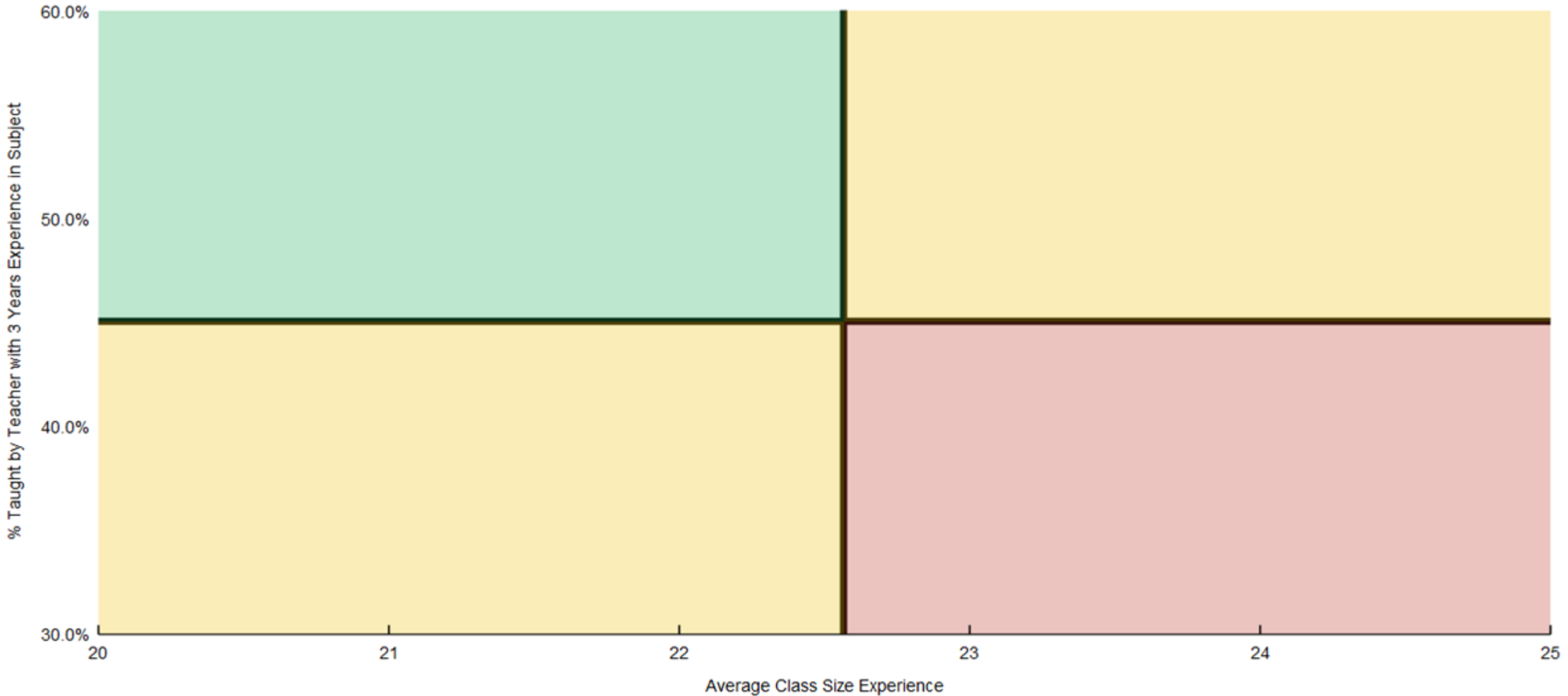


Source: Infinite Campus. Experienced teacher defined as three years teaching in the subject and the school. Analysis based on students enrolled on October 1, 2019 and enrolled in the school for a total of at least one week. Section enrollments of 70 or greater excluded from secondary analysis. Core subject areas include: Mathematics, English, Science, and History.

Is classroom experience associated with disparate student outcomes?

Elementary Classroom Experience

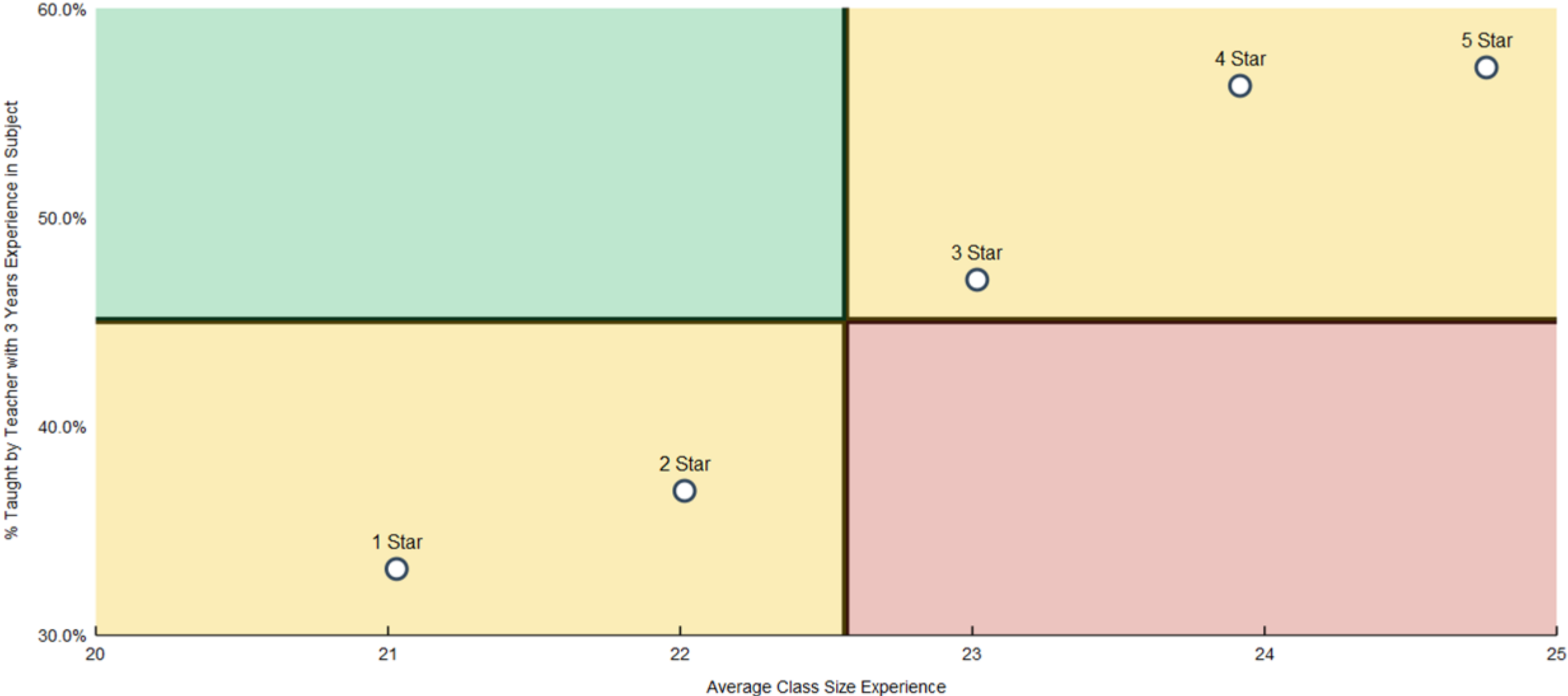
By NSPF Star Rating



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Elementary Classroom Experience

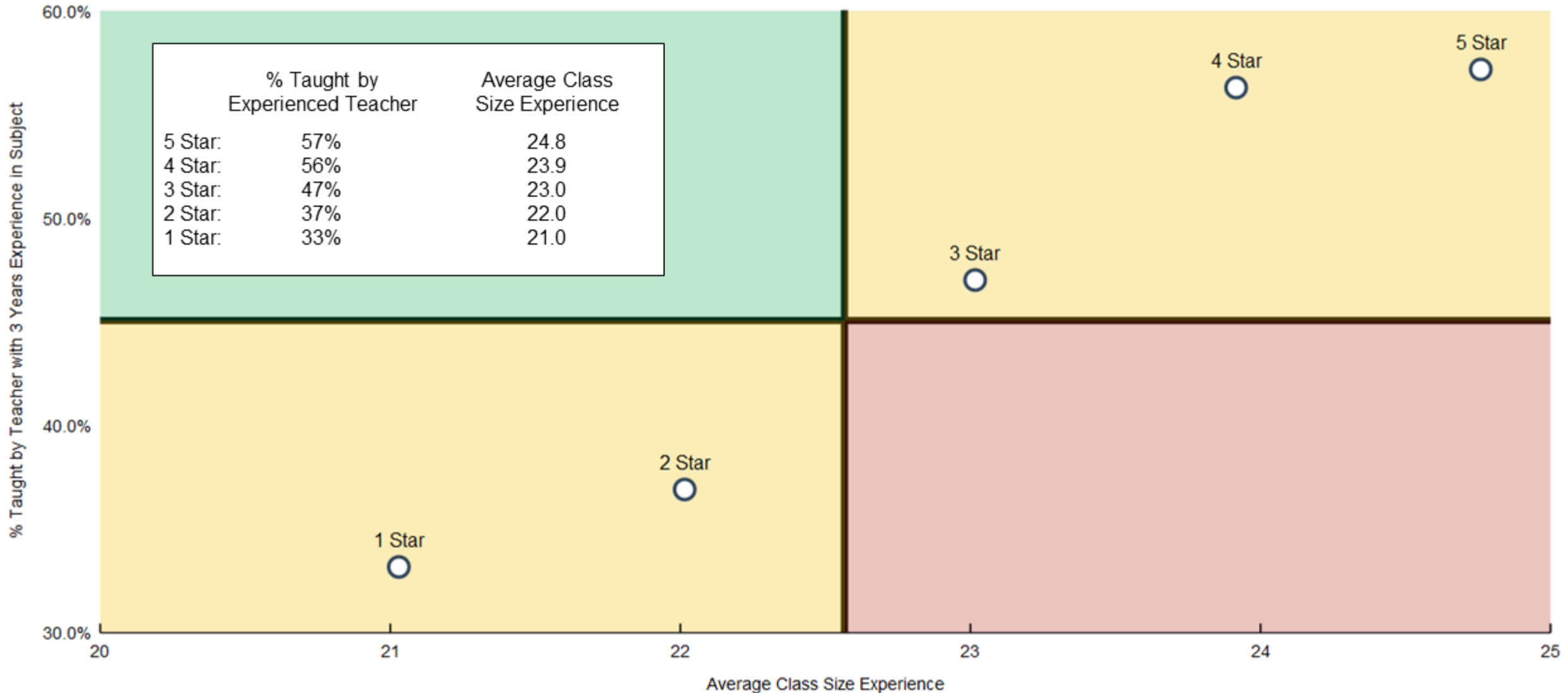
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Elementary Classroom Experience

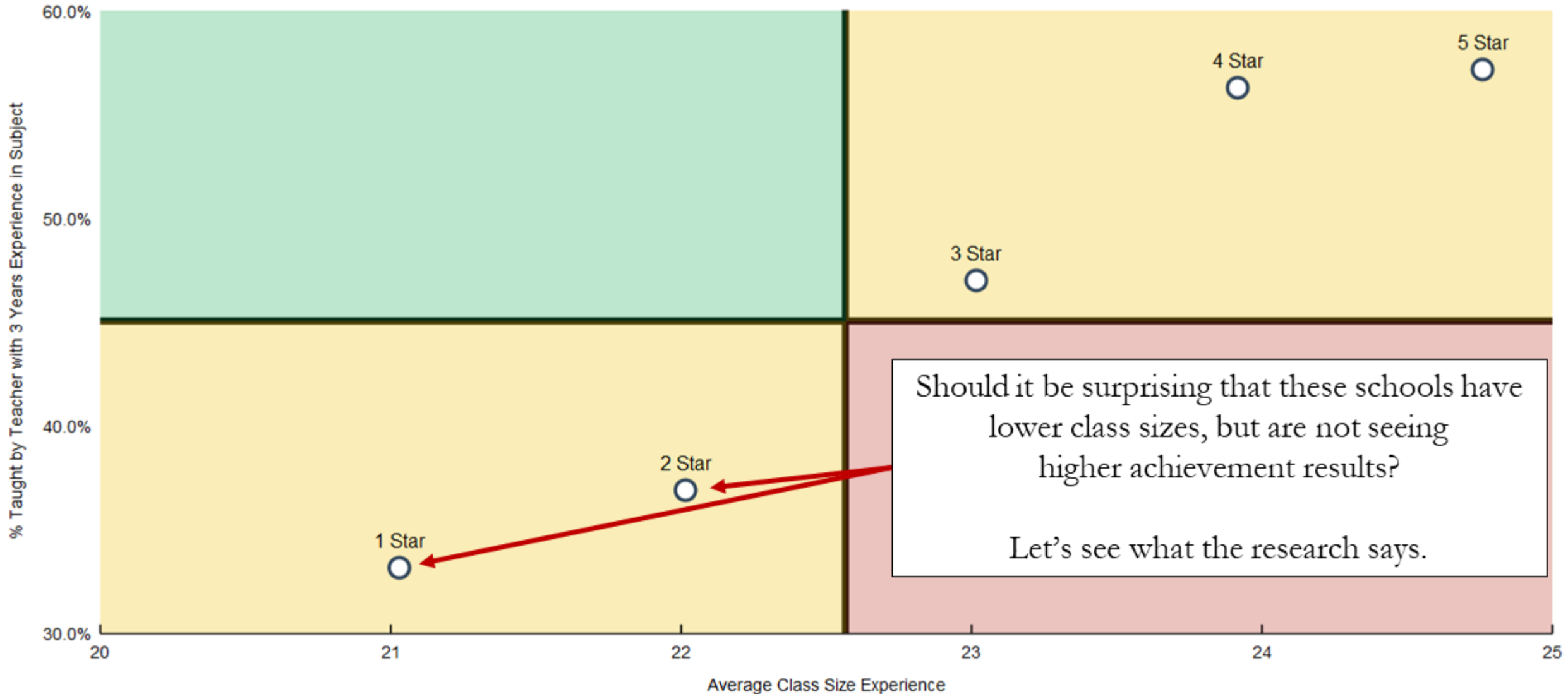
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Class Size: What Research Says and What it Means for State Policy

The most influential and credible study of CSR is the Student Teacher Achievement Ratio, or STAR, study which was conducted in Tennessee during the late 1980s.

*In this study, students and teachers were randomly assigned to a **small class, with an average of 15 students,** or a **regular class, with an average of 22 students.***

This large reduction in class size (7 students, or 32 percent) was found to increase student achievement by an amount equivalent to about 3 additional months of schooling four years later.

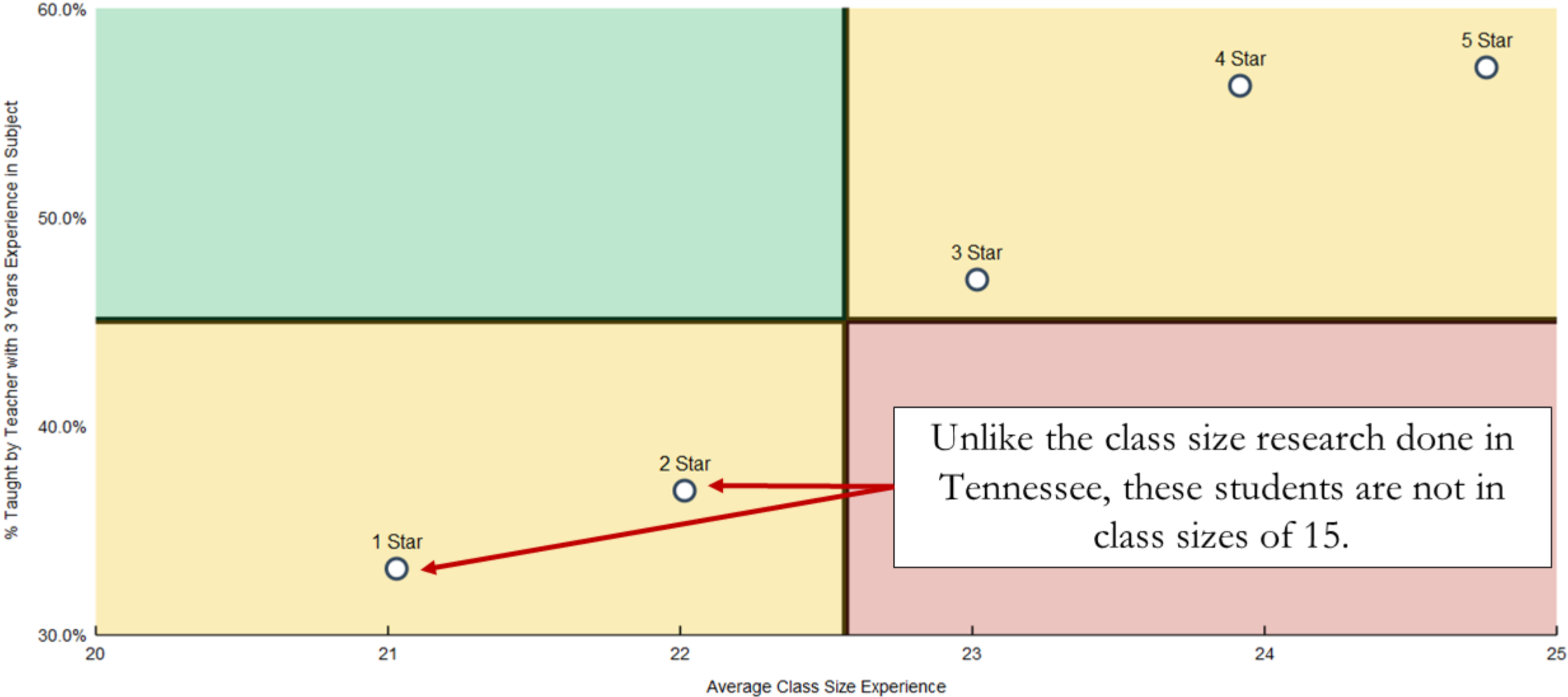
Class Size: What Research Says and What it Means for State Policy

*But it appears that **very large class-size reductions**, on the order of magnitude of **7-10 fewer students per class**, can have significant long-term effects on student achievement and other meaningful outcomes.*

These effects seem to be largest when introduced in the earliest grades, and for students from less advantaged family backgrounds.

Elementary Classroom Experience

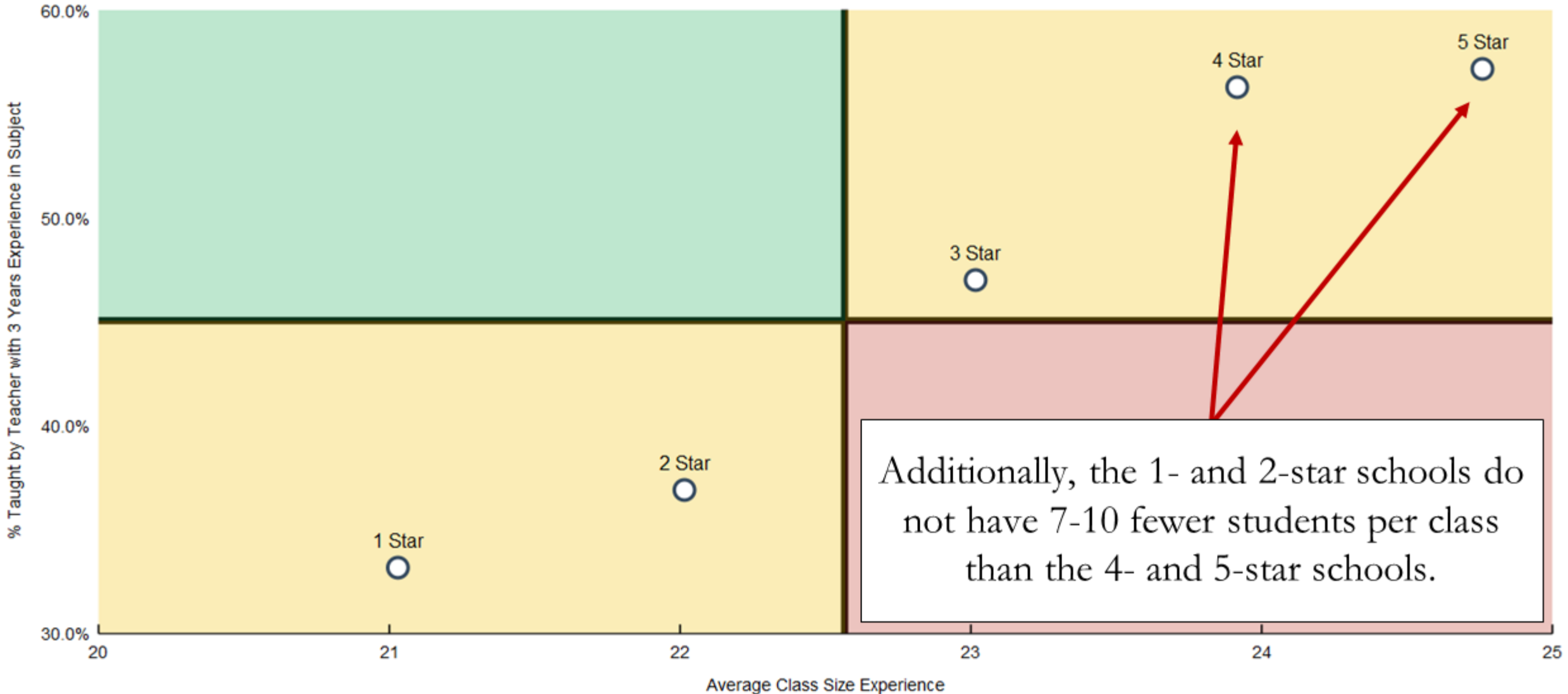
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Elementary Classroom Experience

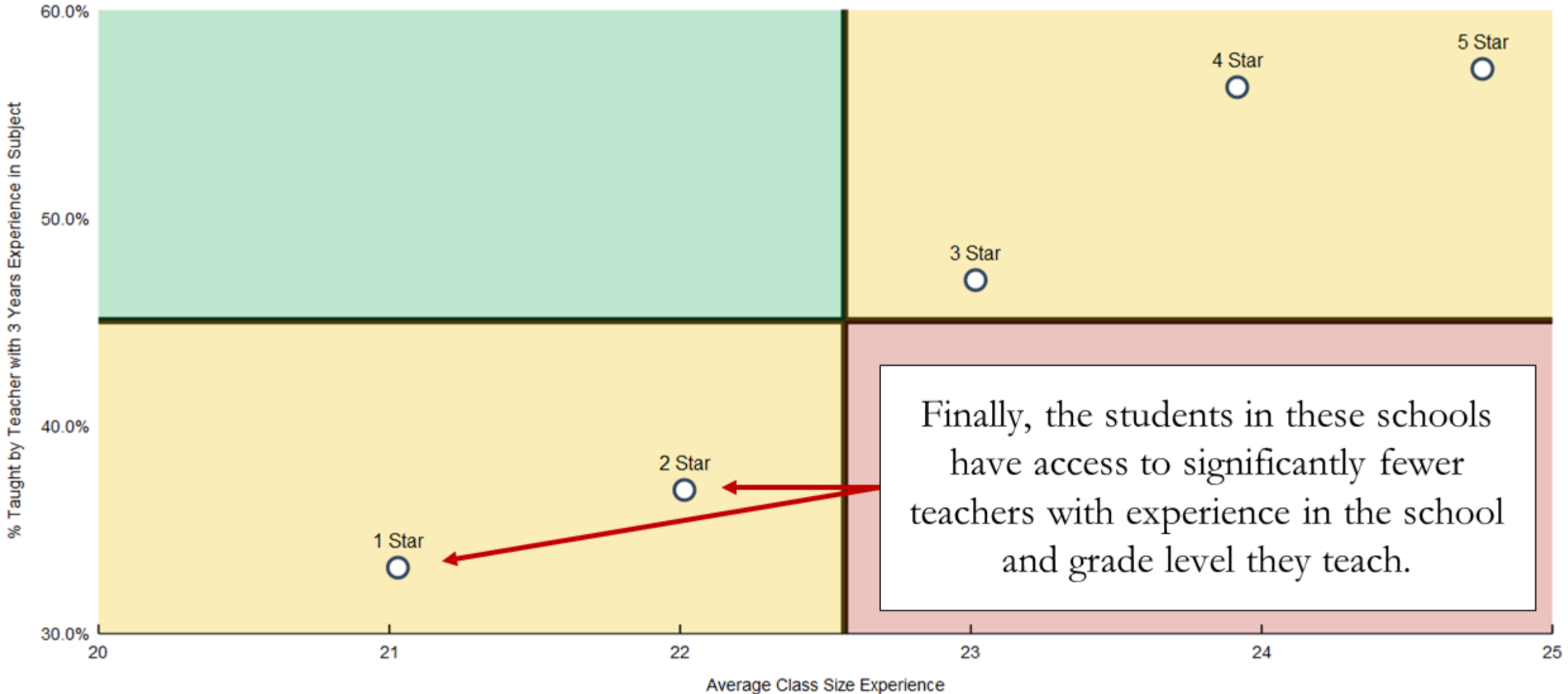
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Equity, Access, & Class Sizes

- Black and Hispanic students have significantly less access to experienced teachers compared to their Asian and Caucasian peers.
- Students in 1- and 2-star schools have significantly lower access to experienced teachers.
- Despite slightly smaller class sizes experienced by students in 1- and 2-star schools, research says the class size difference is not large enough to improve student outcomes.

What obstacles prevent equitable access to teachers for all students?

Educator Pipeline

- Nevada's teacher pipeline significantly lags national averages.
- Nevada relies on out-of-state teacher prep programs for over 60% of new teacher licenses.
- The national pipeline is significantly and consistently shrinking over time.
- Nevada's pipeline is not expanding to make up for the shrinking national pipeline.

Nevada vs. US Licensed Staffing Ratios

	<u>US Ratio</u>	<u>Nevada Staffing Equivalent</u>	<u>Nevada Staffing Actual</u>	<u>Estimated Cost Difference</u>
School Administration	262-to-1	1,897	1,518	\$51 million
Counselor	430-to-1	1,156	1,004	\$14 million
Central Administration	684-to-1	727	345	\$57 million
Library Specialist	1208-to-1	411	278	\$14 million
				\$136 million

- Nevada has significantly less staff than the national average.
- To get to the national average in these job classifications, it would cost approximately \$136 million in annual staff costs alone.

Staffing Ratios

- Non-classroom positions are making up a larger percentage of licensed staff in Nevada.
- National data suggested that staffing is not inflated outside of the classroom, but rather significantly understaffed inside the classroom.
- Nevada needs to reimagine ways to expand the education labor pool to prevent exacerbating the classroom teacher shortage.

Teacher Retention

- Nevada's teacher attrition rates have continuously exceeded national averages.
- African American teachers, teachers under 25, and teachers over 55 are the most likely to leave the classroom.
- Nevada's teacher workforce is older than it has ever been and will likely lead to an acceleration of leaver rates over the next 5 years.
- At the same time leaver rates are likely to accelerate, the national teacher pipeline is shrinking.

Specialized Instructional Support Personnel

NON-BINDING RATIOS AS RECOMMENDED BY THE STATE
BOARD OF EDUCATION IN ACCORDANCE WITH SENATE
BILL 89 (2019)

Senate Bill 89 (2019)

“The State Board of Education shall develop non-binding recommendations for the ratio of pupils to specialized instructional support personnel (SISP) in this State for kindergarten and grades 1 to 12, inclusive.” (SB 89, Section 7).

The recommendations must:

- Prescribe a suggested ratio of pupils in grades K-12 per each type of SISP;
- Be based on evidence-based national standards; and
- Take into account the unique needs of certain pupils, including English learners.

Specialized Instructional Support Personnel (SISP)

NRS 388.890: “Specialized instructional support personnel’ includes persons employed by each school to provide necessary services such as assessment, diagnosis, counseling, educational services, therapeutic services and related services, as defined in 20 U.S.C. § 1401(26), to pupils.”

SISP include:

- (1) A school counselor;
- (2) A school psychologist;
- (3) A school social worker;
- (4) A school nurse;
- (5) A speech-language pathologist;
- (6) A school library media specialist; and
- (7) Any other qualified professional.

Evidence- Based National Standards

Most national associations for Specialized Instructional Support Personnel publish recommended ratios; however, there is no single federal entity that collects data on existing or formally adopted ratios

Most ratios are per pupil, while others are per school building or per capita of the general population

There is no formal definition of “other qualified professional” (federal or state)

Best Practice Recommended Ratios

The following ratios represent national best practice recommendations for each category of Specialized Instructional Support Personnel:

- for School Counselors, one per 250 pupils
- for School Psychologists, one per 500-700 pupils
- for School Social Workers, one per 250 pupils
- for School Nurses, one per 750 pupils
- for School Library Media Specialists, one per school

Please note that there are no best practice recommendations for ratios of Speech-Language Pathologists per student or school population, as those services are provided on an as-needed basis.

Projected Staffing Needs

Specialized Instructional Support Personnel	Current Staffing Levels (statewide)	Number of professionals needed based on best practice ratios and student enrollment (2018-19 school year)
School Counselors	951	1,948
School Psychologists	239	978
School Social Workers	375	1,948
School Nurses	297	656
Speech-Language Pathologist	482	N/A
School Library Media Specialist	269	752

Specialized Instructional Support Personnel	Average Annual Starting Pay (Salary + Benefits)
School Counselors	\$74,471
School Psychologists	\$76,575
School Social Workers	\$62,294
School Nurses	\$64,178
Speech-Language Pathologist	\$64,583
School Library Media Specialist	\$41,430

Average Starting Pay

Projected Funding Needs

Specialized Instructional Support Personnel	Funding needed to meet nationally recommended best practice ratios
School Counselors	\$60,992,035.00
School Psychologists	\$49,697,148.00
School Social Workers	\$86,900,347.00
School Nurses	\$19,124,913.00
Speech-Language Pathologist	N/A
School Library Media Specialist	\$17,400,765.00
TOTAL FUNDING NEEDED	\$234,115,208.00

Optimal Teacher Workforce

The Commission may identify adequate and/or optimal class sizes based on any of the options below as presented by Data Insight Partners:

Options	Teachers Needed	Annual Cost Estimate*
Improve core class sizes	3,000+	\$260 million
Meet national system-wide student-teacher ratios	9,800+	\$800 million
Lead the nation in student-teacher ratios	23,000+	\$2.0 billion*

*Estimates do not account for other costs associated with decreased class-size ratios, which may include the need for more physical space, instructional materials, etc.

Optimal SISP Workforce

The Commission may identify adequate and/or optimal SISP ratios at State Board of Education recommended levels, which are based on national standards:

Specialized Instructional Support Personnel	Current Staffing Levels (statewide)	Number of professionals needed based on best practice ratios and student enrollment (2018-19 school year)	Funding needed to meet nationally recommended best practice ratios*
School Counselors	951	1,948	\$60,992,035.00
School Psychologists	239	978	\$49,697,148.00
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Speech-Language Pathologist	482	N/A	N/A
School Library Media Specialist	269	752	\$17,400,765.00

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SISP References

American School Counselor Association (May 7, 2019). [ASCA Releases Updated Student-to-School-Counselor Ratio Data](#).

American School Counselor Association (2018). [Student-to-School-Counselor Ratio 2017-2018](#).

National Association of School Psychologists. [Model for Comprehensive and Integrated School Psychological Services: NASP National Practice Model Overview](#).

School Social Work Association of America (2013). [School Social Workers Helping Students Succeed: Recommended School Social Worker to Student Ratios](#).

National Association of School Nurses. (2015). [School nurse workload: Staffing for safe care \(Position Statement\)](#).

American Speech-Language-Hearing Association (2019). [Supply and Demand Resource List for Speech-Language Pathologists](#).

National Education Association (2016). [Library/Media Centers in U.S. Public Schools: Growth, Staffing, and Resources](#).

National Alliance of Specialized Instructional Support Personnel. [Student Health and Well-Being](#) and [Safe and Supportive School Climate](#).