

Springboard Collaborative: Financial Impact Analysis

UPDATE FOR SPRINGBOARD LEADERSHIP TEAM

July 2023

AGENDA

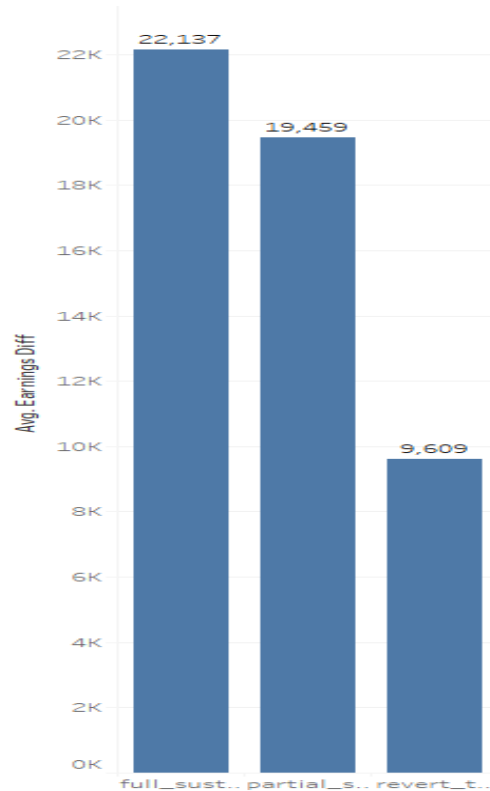
1. Summary
2. Methodology
3. Subgroup Analysis
4. Open questions

SUMMARY

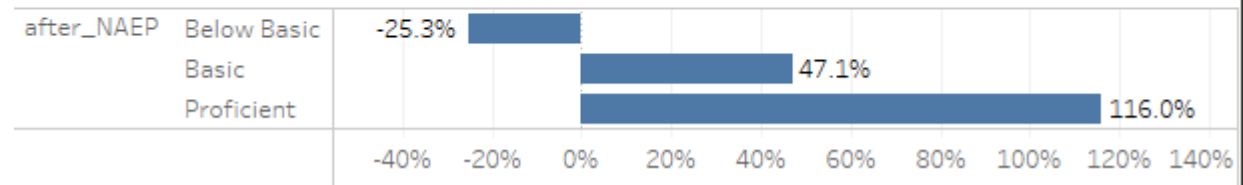
- Springboard Reading Intervention benefits per student exceed ~\$9k over a lifetime, while costs are ~\$1,000
- Springboard intervention reduces # of kids in Below Basic category by 25%, by raising reading levels to Basic/Proficient

Estimated Average Intervention Benefits per Kid (USD)

Scenarios: Full Sustain, Partial Sustain, Revert to Avg



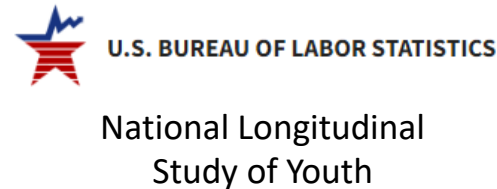
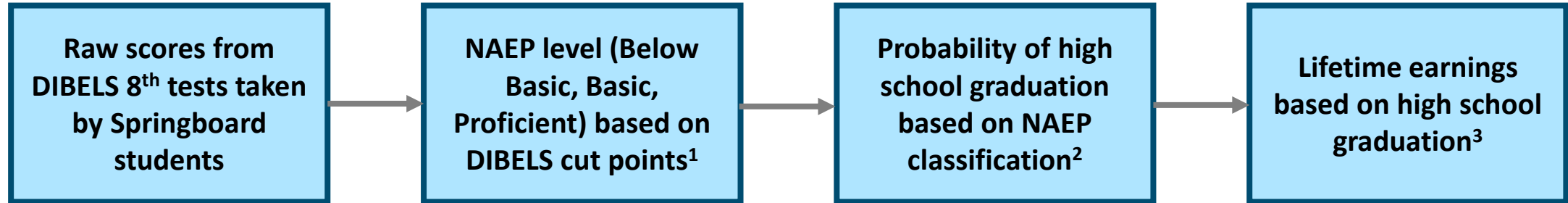
Percentage Chg in Number of Students in a NAEP category post vs. pre-intervention



Methodology

KEY INFORMATION AND DATA SOURCES

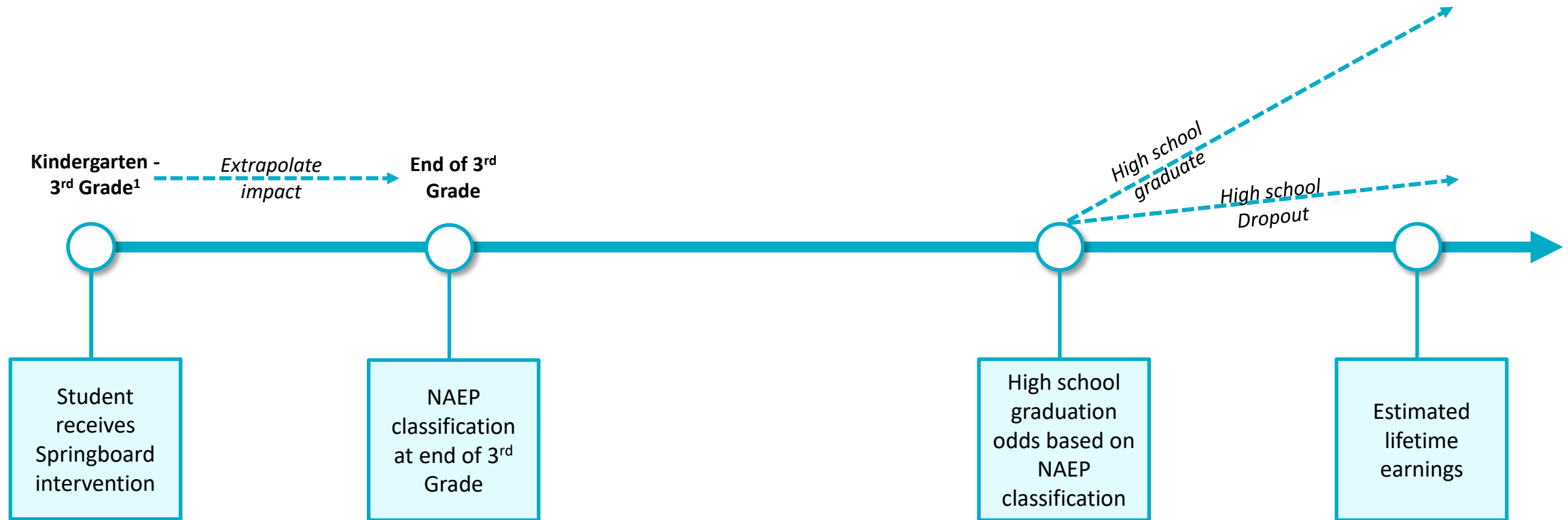
Key study links reading proficiency in 3rd grade to likelihood of High School graduation



1. Cut points provided by Springboard team via DIBELS (<https://dibels.uoregon.edu/about-dibels>)
2. <https://www.bls.gov/opub/mlr/2015/article/the-national-longitudinal-surveys-of-youth-research-highlights.htm>
3. <https://www.ssa.gov/policy/docs/research-summaries/education-earnings.html>

EXAMPLE STUDENT EXTRAPOLATION TIMELINE

Benefit estimation process requires extrapolation of intervention effects to the end of 3rd Grade



1. Some students received intervention in in 4th of 5th grade, results were not extrapolated for these students

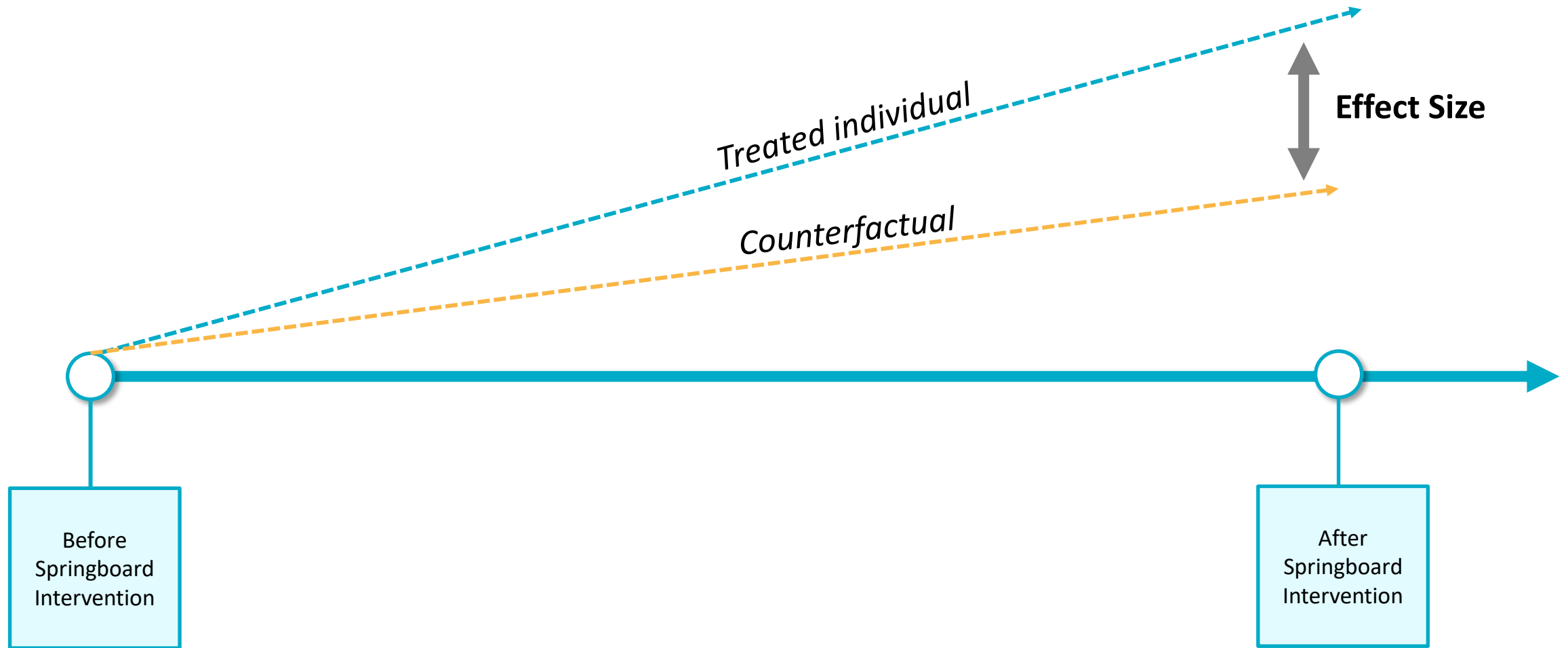
NAEP CLASSIFICATION END OF 3RD GRADE

Analysis used Reading Test Provider's (DIBELS) classification to generate NAEP reading proficiency

	EXAMPLE TEST / GRADE: 1st Grade DIBELS 8th NWF Score			NAEP Classification
	Beginning	Middle	End	
Negligible risk	47	78	87	Proficient
Benchmark (Minimal risk)	30	52	55	Basic
Some risk	25	41	45	Below Basic
At risk	24	40	44	

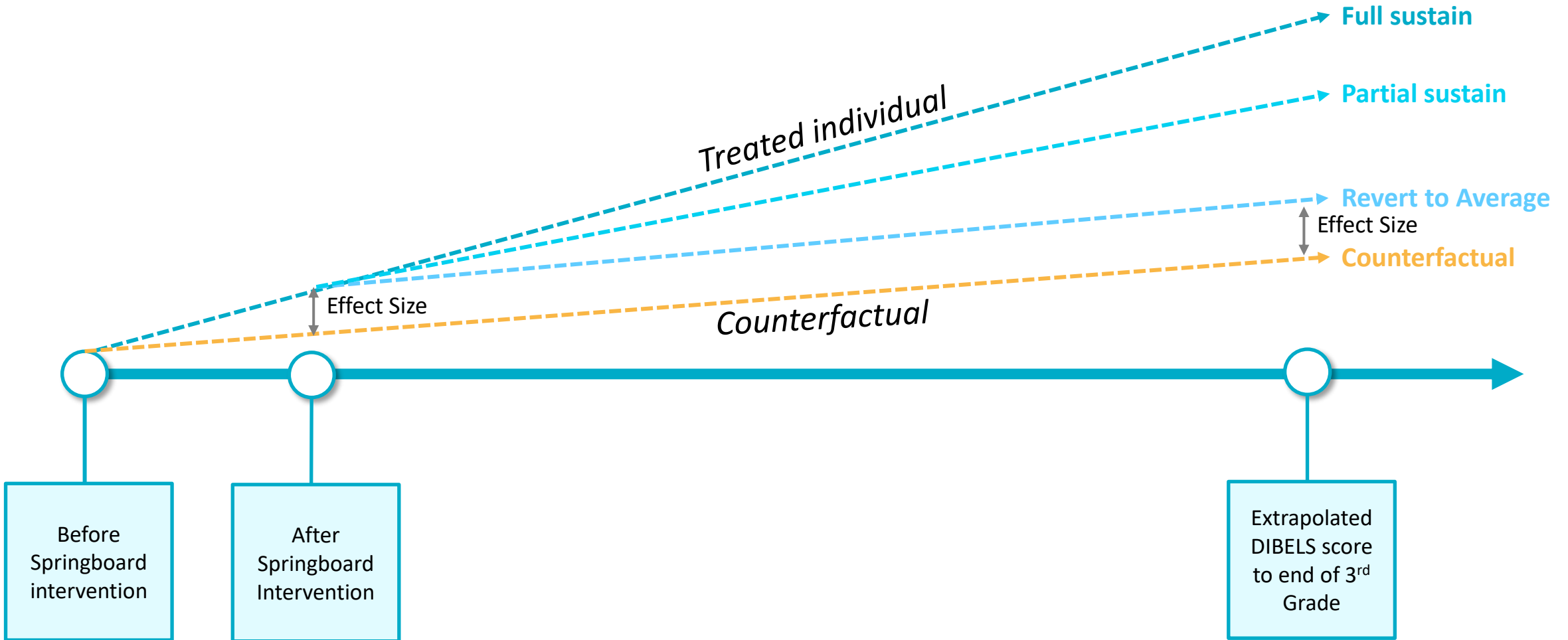
INTERVENTION EFFECT

Difference between treated student's actual improvement and expected improvement over intervention timeframe



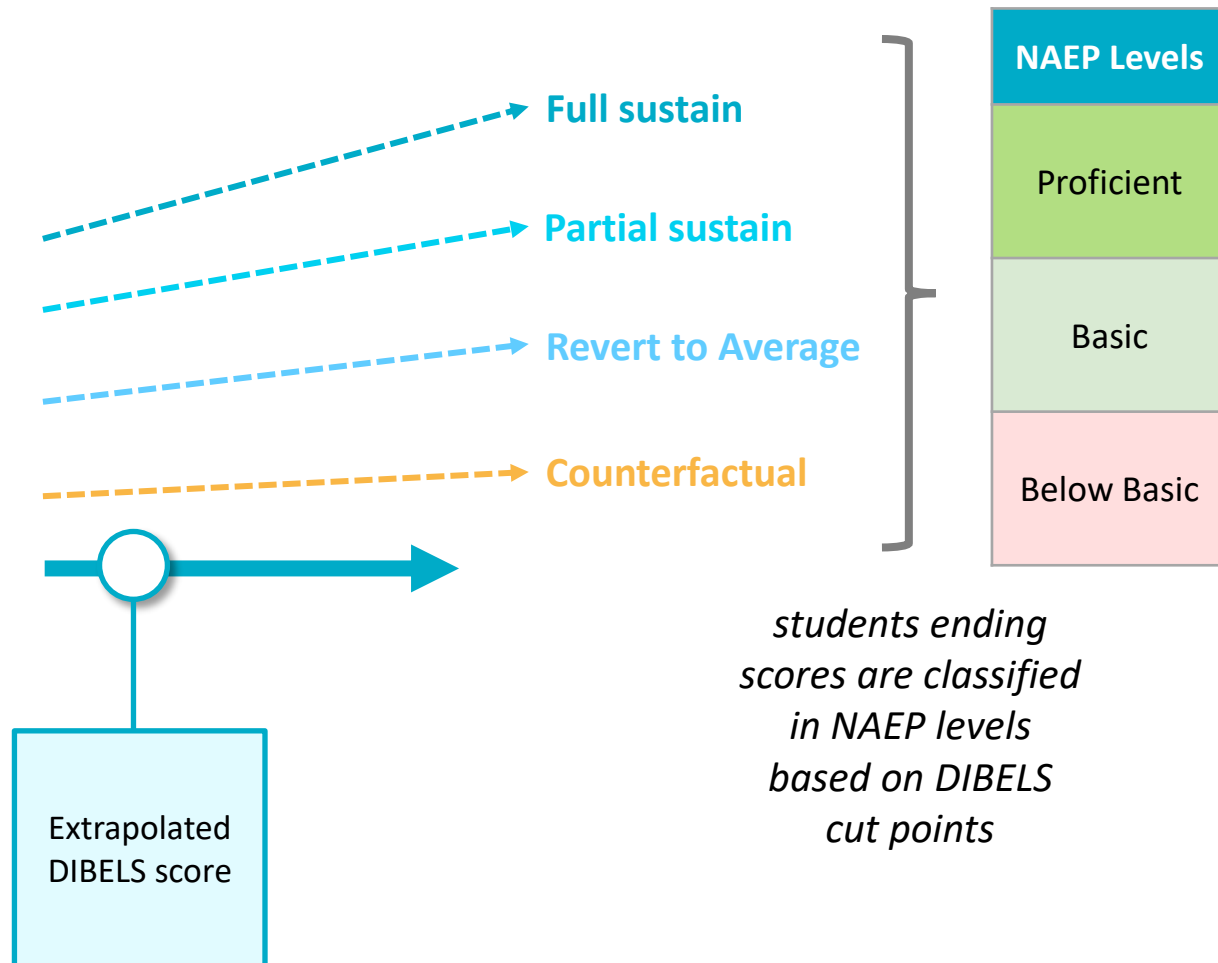
NAEP CLASSIFICATION END OF 3RD GRADE

Analysis used extrapolation scenarios to generate end 3rd Grade Scores



NAEP CLASSIFICATION END OF 3RD GRADE

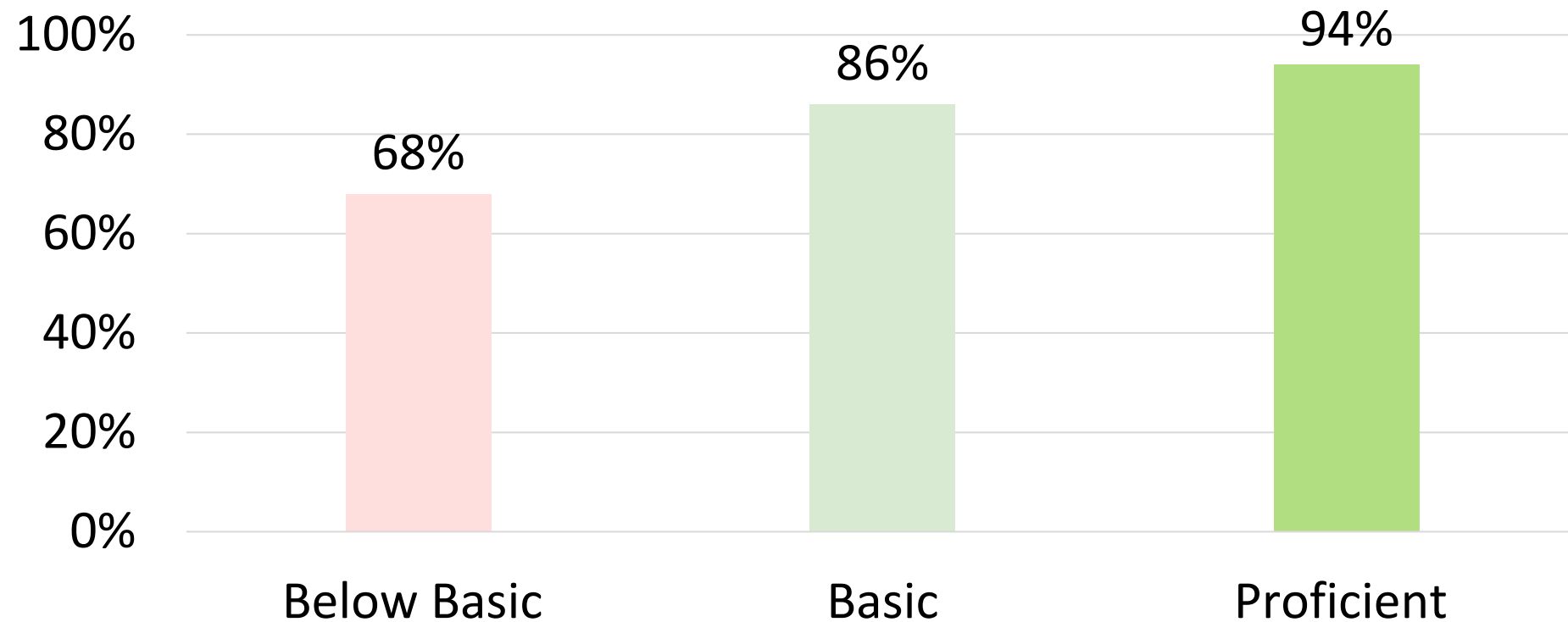
After extrapolation, DIBELS scores are classified into NAEP levels



1. Some students received intervention in in 4th of 5th grade, results were not extrapolated for these students

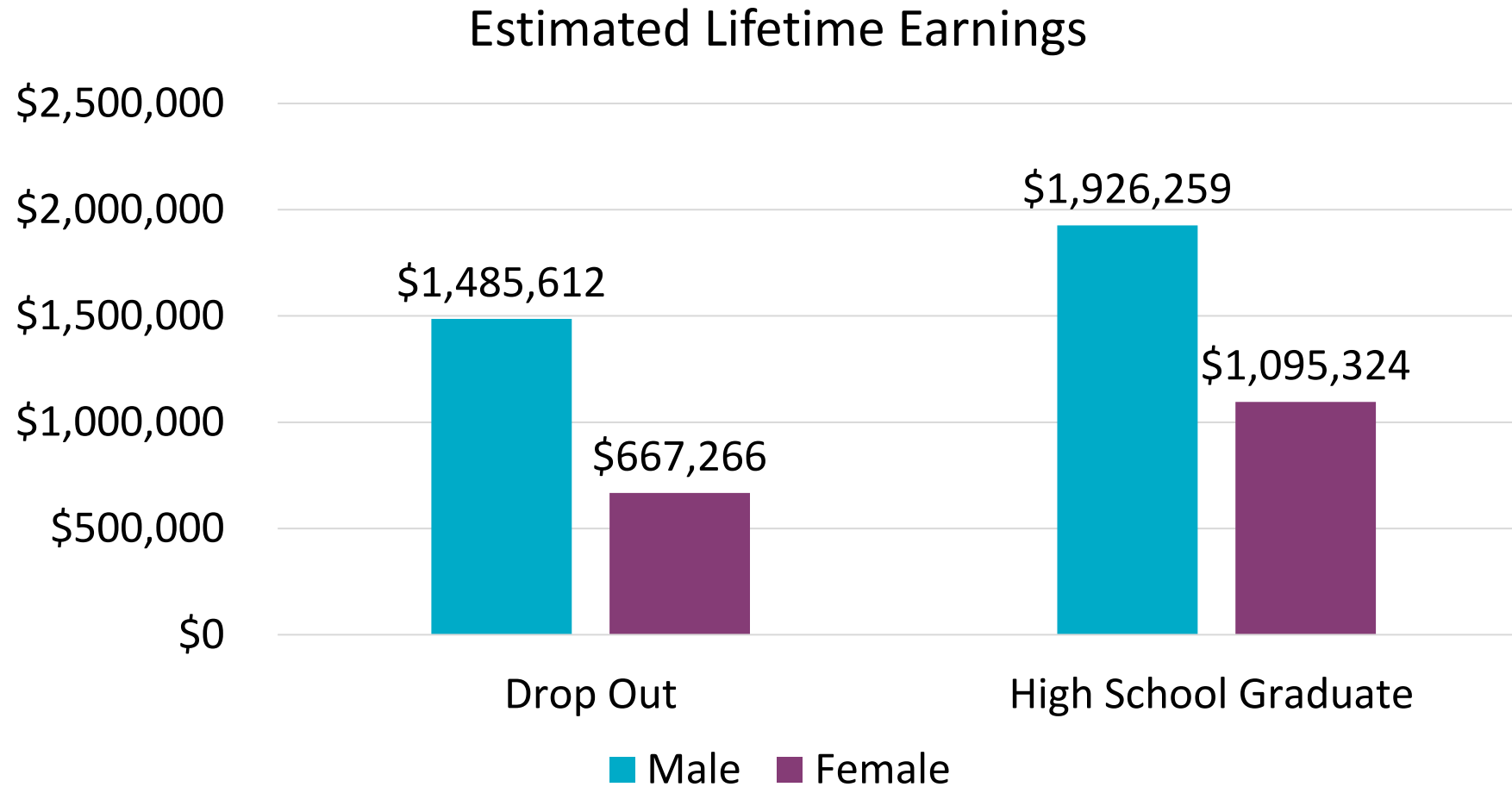
ADJUSTED ODDS OF HIGH SCHOOL GRADUATION

National Longitudinal Survey of Youth



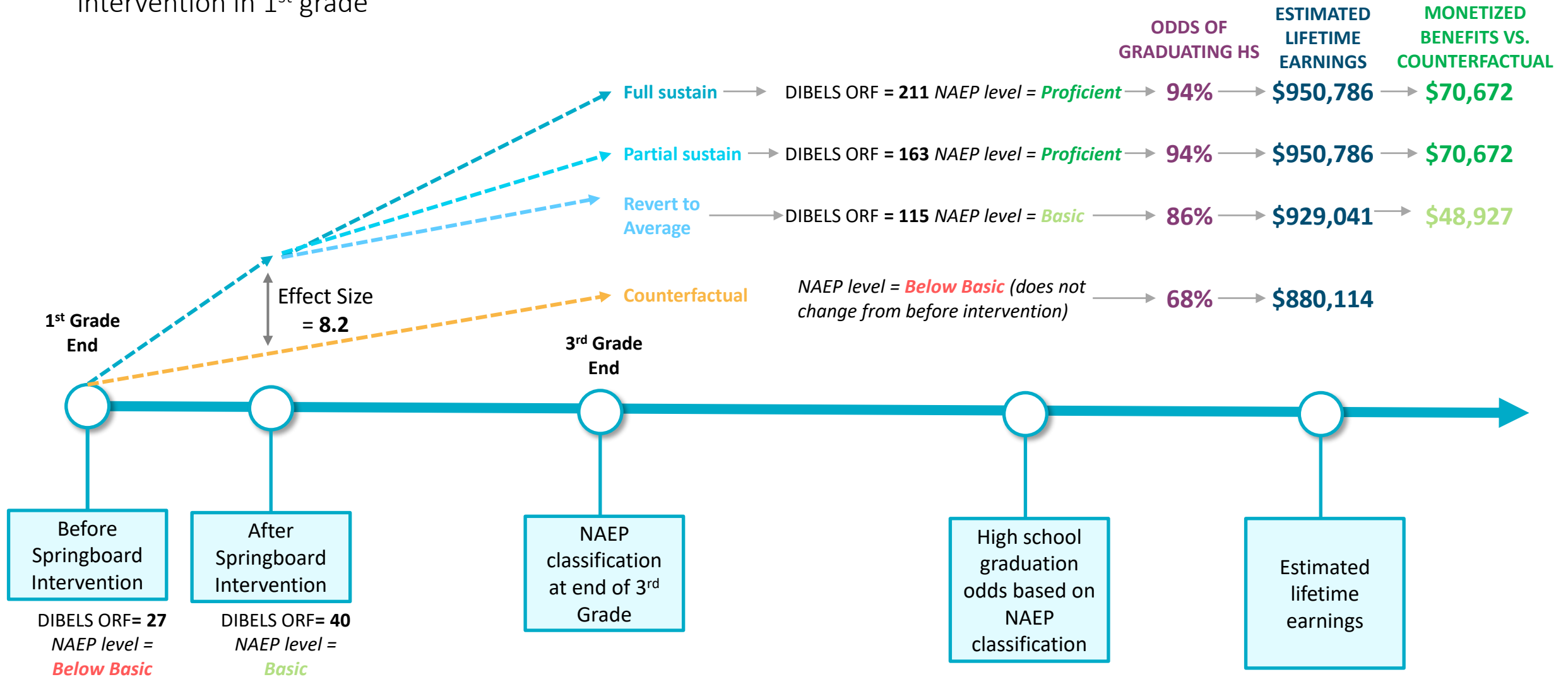
LIFETIME EARNINGS

Social Security Administration and the 2004 Survey of Income and Program Participation (SIPP)



MONETIZED BENEFIT: EXAMPLE

This example student is estimated to produce \$49K-\$70K in lifetime benefits based on receiving the Springboard intervention in 1st grade



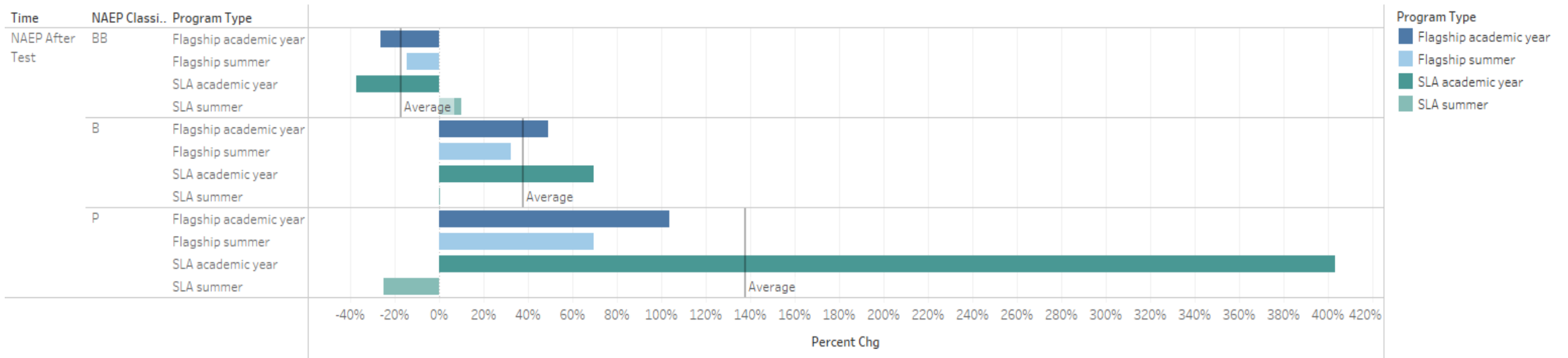
Impacts: Deeper Dive

RESULTS BY PROGRAM TYPE

- Using NAEP classifications Flagship impact is not significantly different than SLA
- Summer programs have less impact than during the school year

Pct change in # Kid's NAEP Reading classification

Before -> After intervention

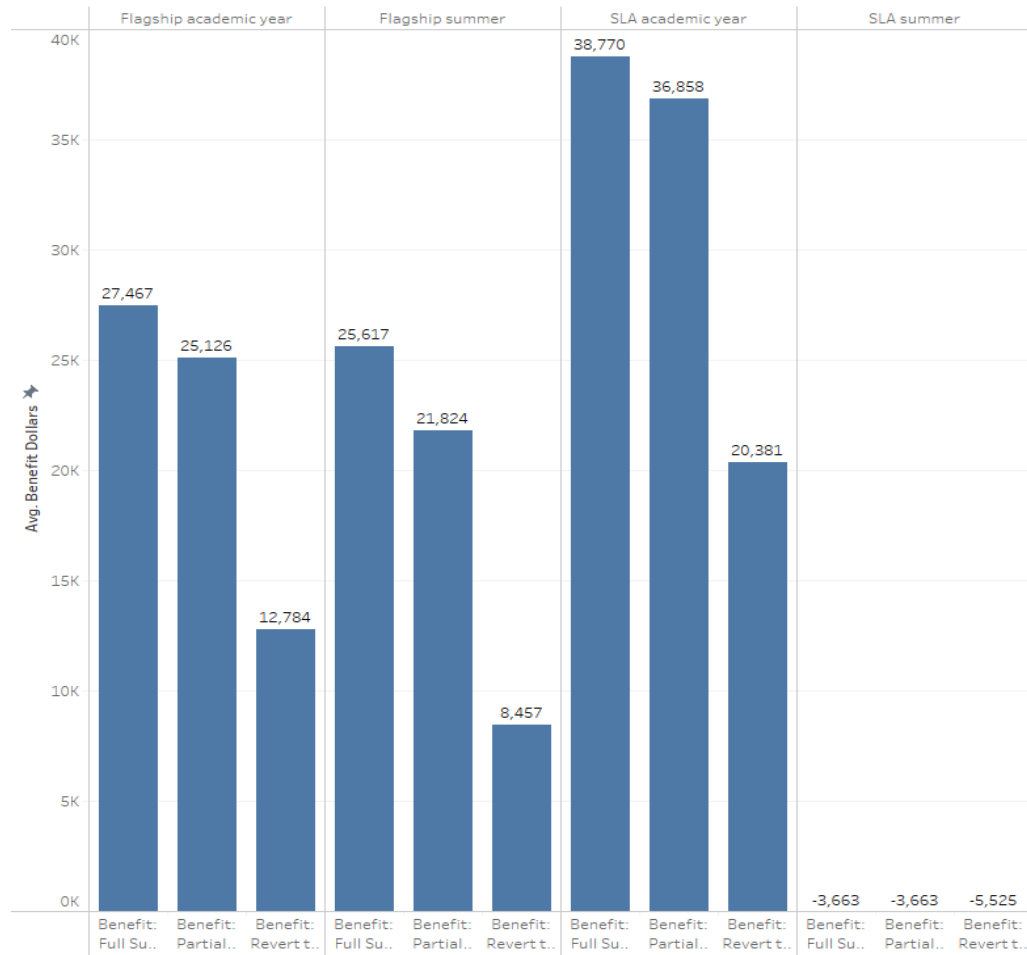


BENEFITS BY PROGRAM TYPE

Academic year results broadly show better results vs. the counterfactual than summer programs

Estimated Average Intervention Benefits per Kid (USD) by program

Scenarios: Full Sustain, Partial Sustain, Revert to Avg

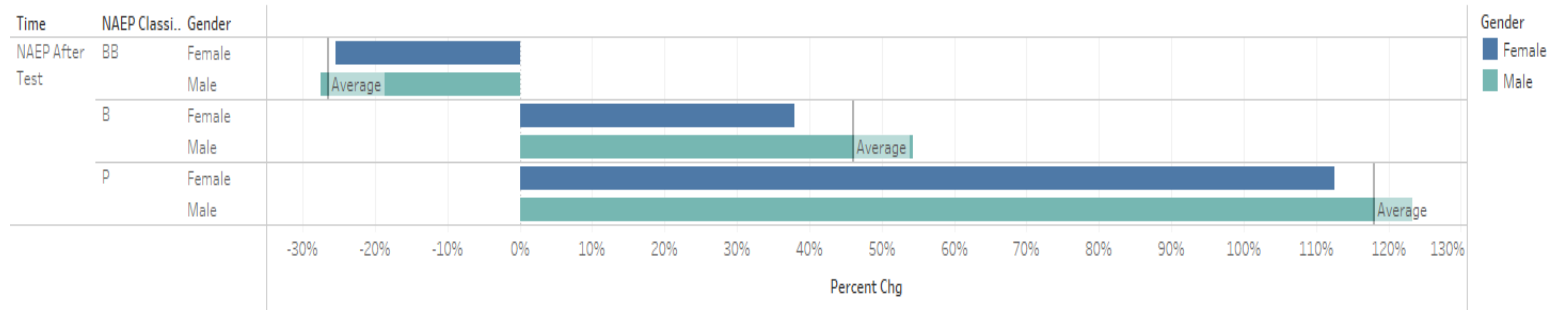


RESULTS BY GENDER

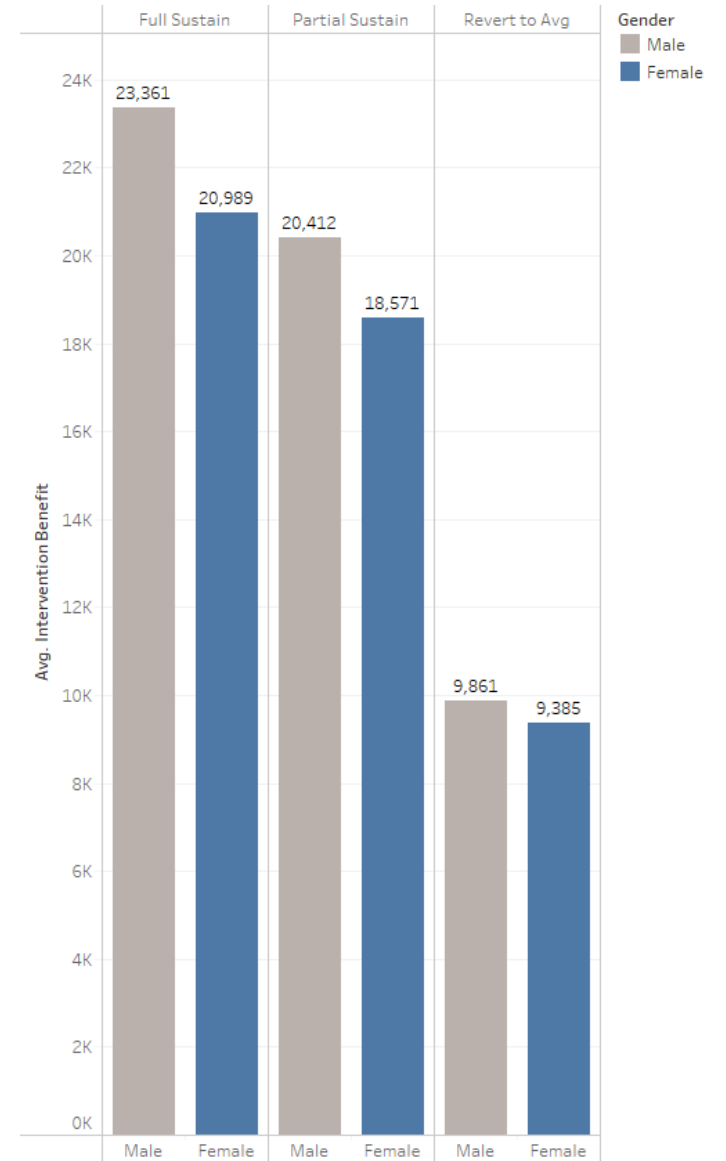
Larger impact on boys than girls

Pct change in # Kid's NAEP Reading classification

Before -> After intervention



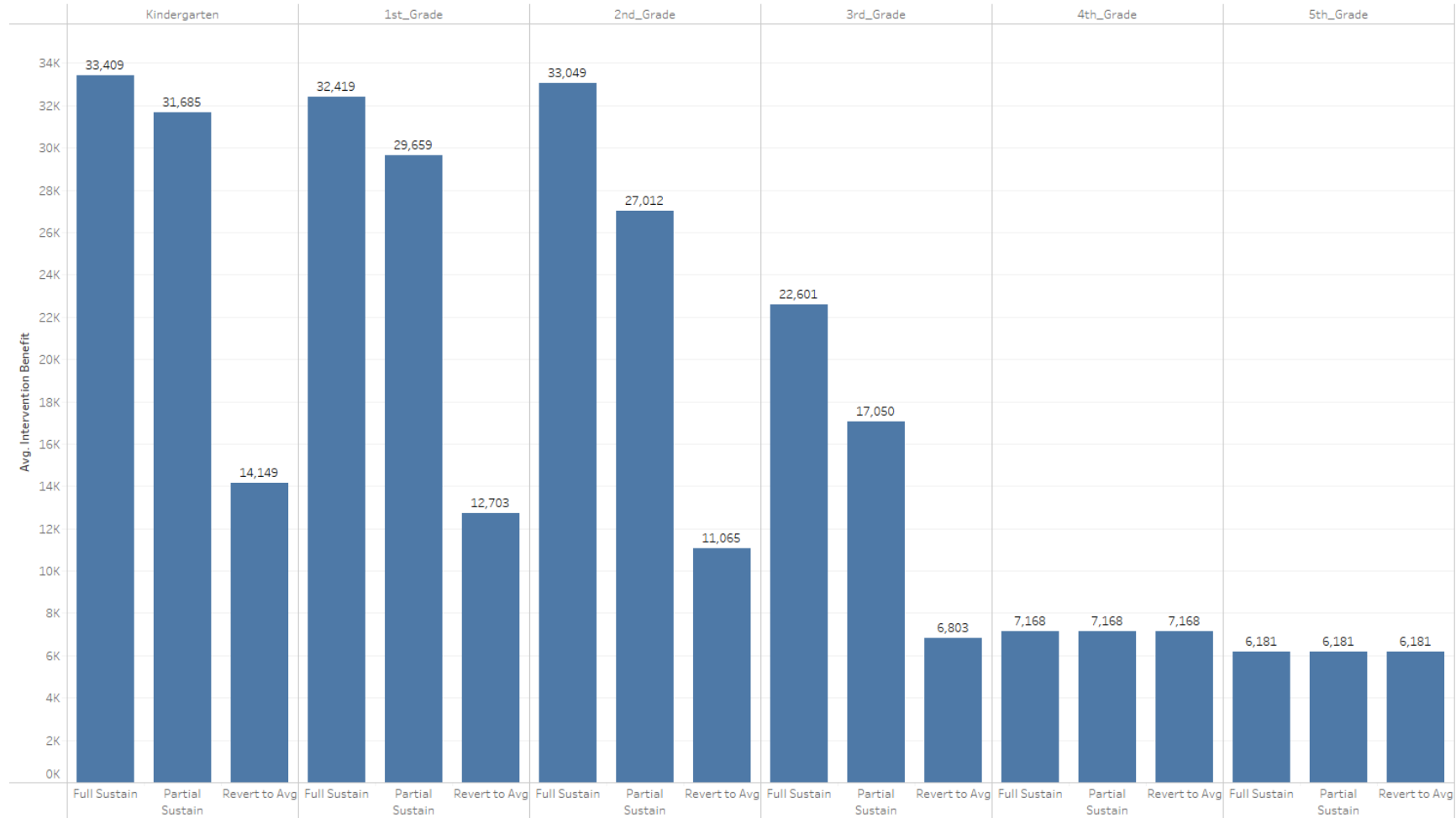
Estimated Average Intervention Benefits per Kid (USD) by gender



BENEFITS BY GRADE

- Benefits generally are the greatest in earliest years, and decrease as grade level increases
- Note: 4th and 5th grade results require no extrapolation; as such Full Sustain and Partial Sustain are equal to Revert to Avg

Estimated Average Intervention Benefits per Kid (USD) by Grade

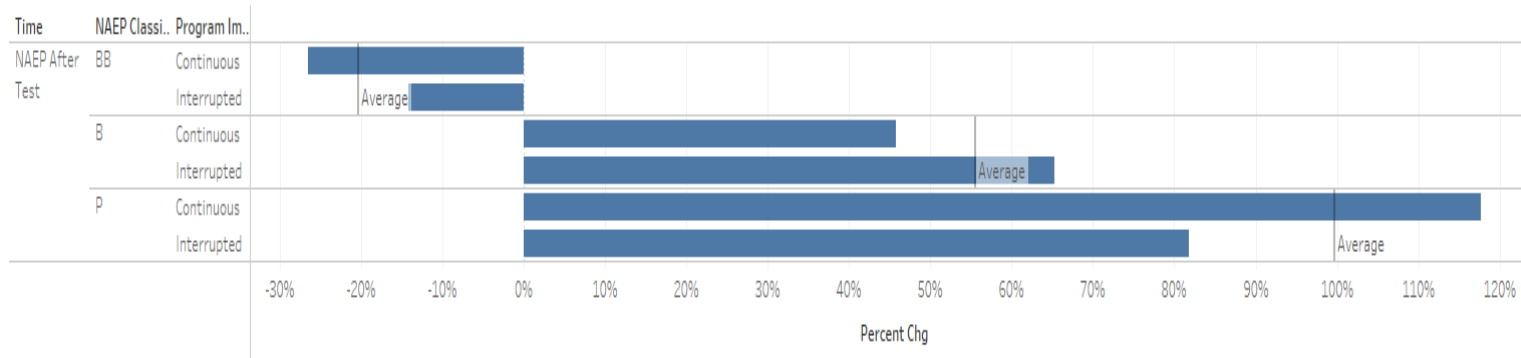


BENEFITS BY PROGRAMMING CONTINUITY

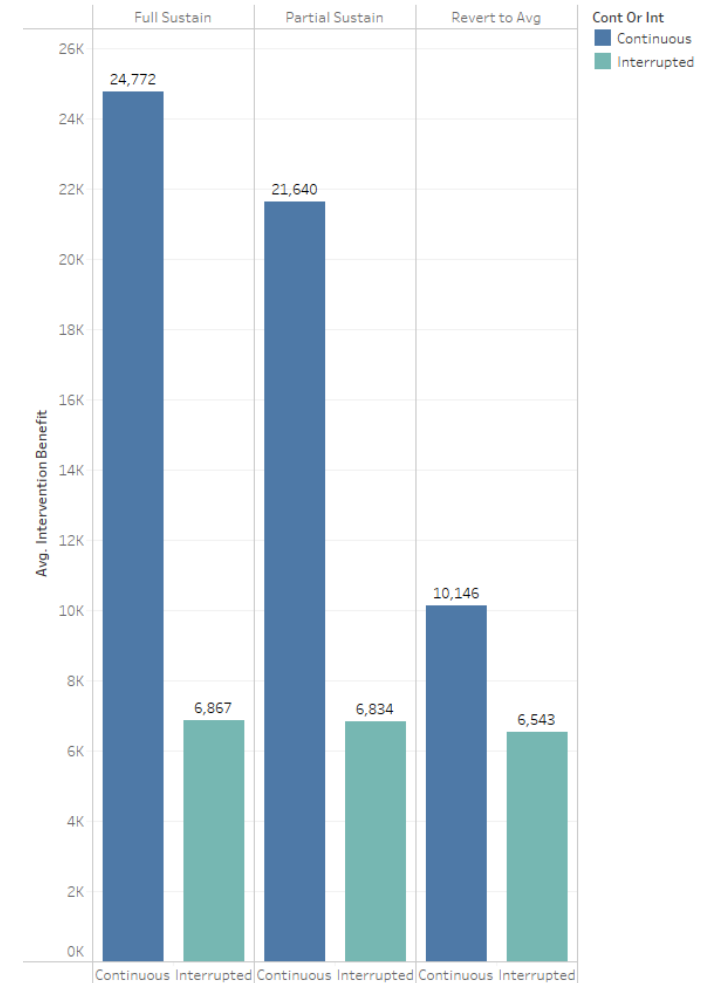
Results are stronger for continuous programming compared to interrupted programming

Pct change in # Kid's NAEP Reading classification

Before -> After intervention

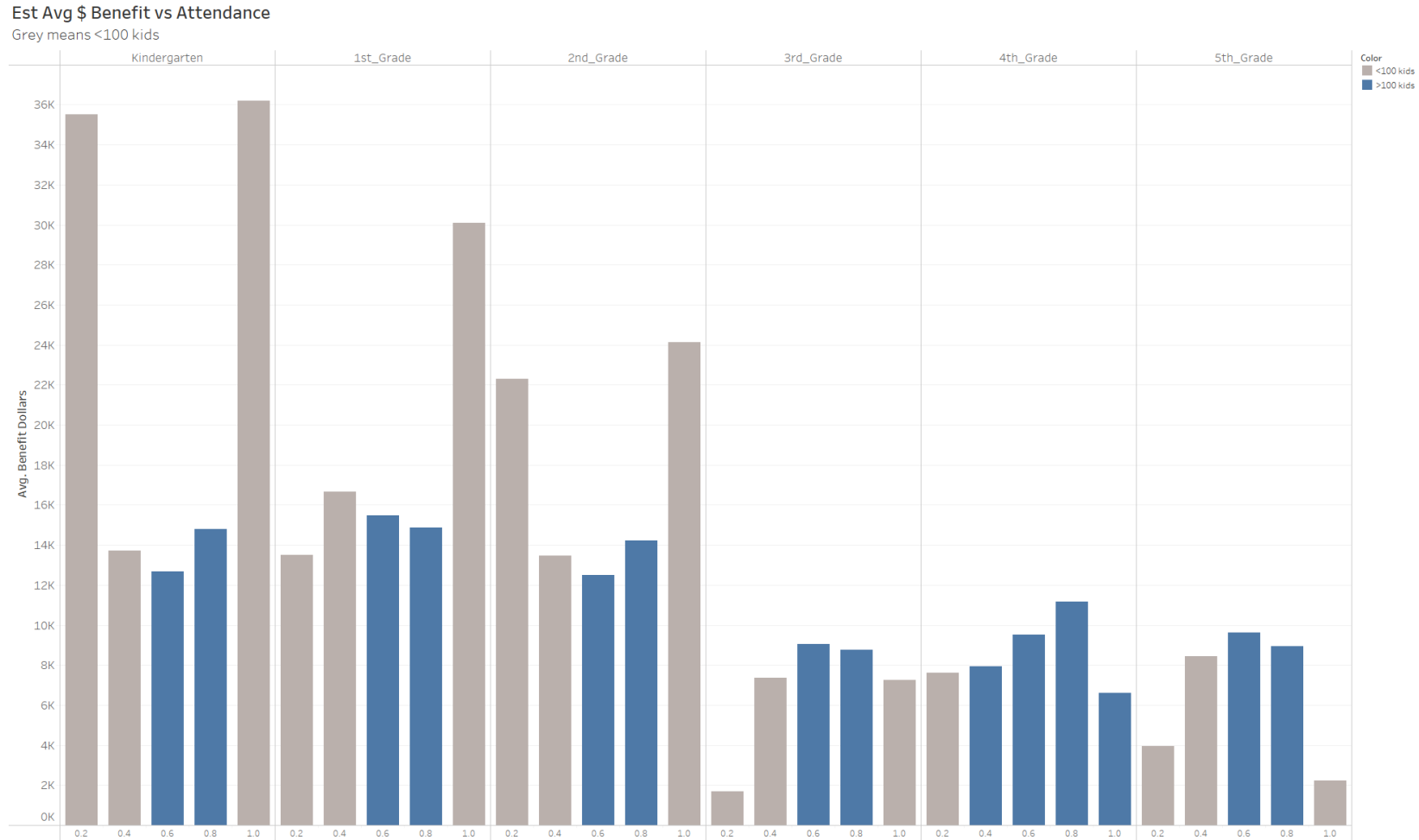


Estimated Average Intervention Benefits per Kid (USD) by Implementation



BENEFITS BY ATTENDANCE AND GRADE

Generally small but increasing benefits with higher attendance rates by grade



CONCLUSION

The estimated benefits of the Springboard Intervention exceed \$10,000, while the costs are ~\$1000

Method	<ul style="list-style-type: none">• Estimates result from incorporating 1) Springboard pre/post intervention test results with 2) US census results indicating the odds of graduating High School based on reading levels in 3rd Grade and 3) lifetime earnings of HS dropouts vs. graduates
Results	<ul style="list-style-type: none">• Springboard's program raises reading levels from Below Basic to Basic/Proficient for many kids, thus generating financial results vs. a counterfactual student• If Springboard's results are extrapolated to 3rd Grade, the estimated benefits rise to over \$20,000
Key Findings	<ul style="list-style-type: none">• Springboard's Flagship program results are not significantly different than the SLA for interventions during the school year• Springboard's program generates slightly more growth for boys than girls• Springboard's program generates better growth for younger children K-2nd Grade than 3rd-5th Grade

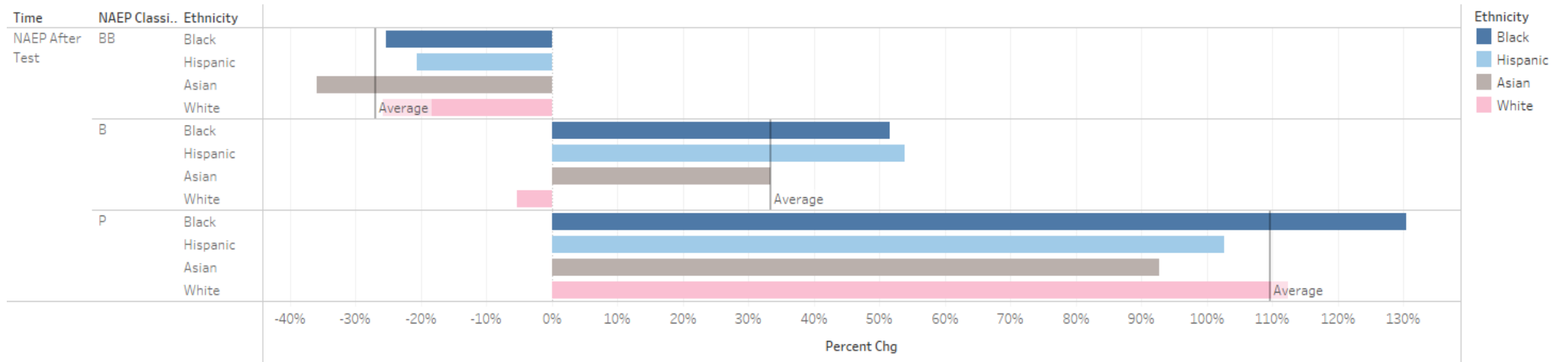
Appendix

RESULTS BY ETHNICITY

No significant differences in impact by ethnicity

Pct change in # Kid's NAEP Reading classification

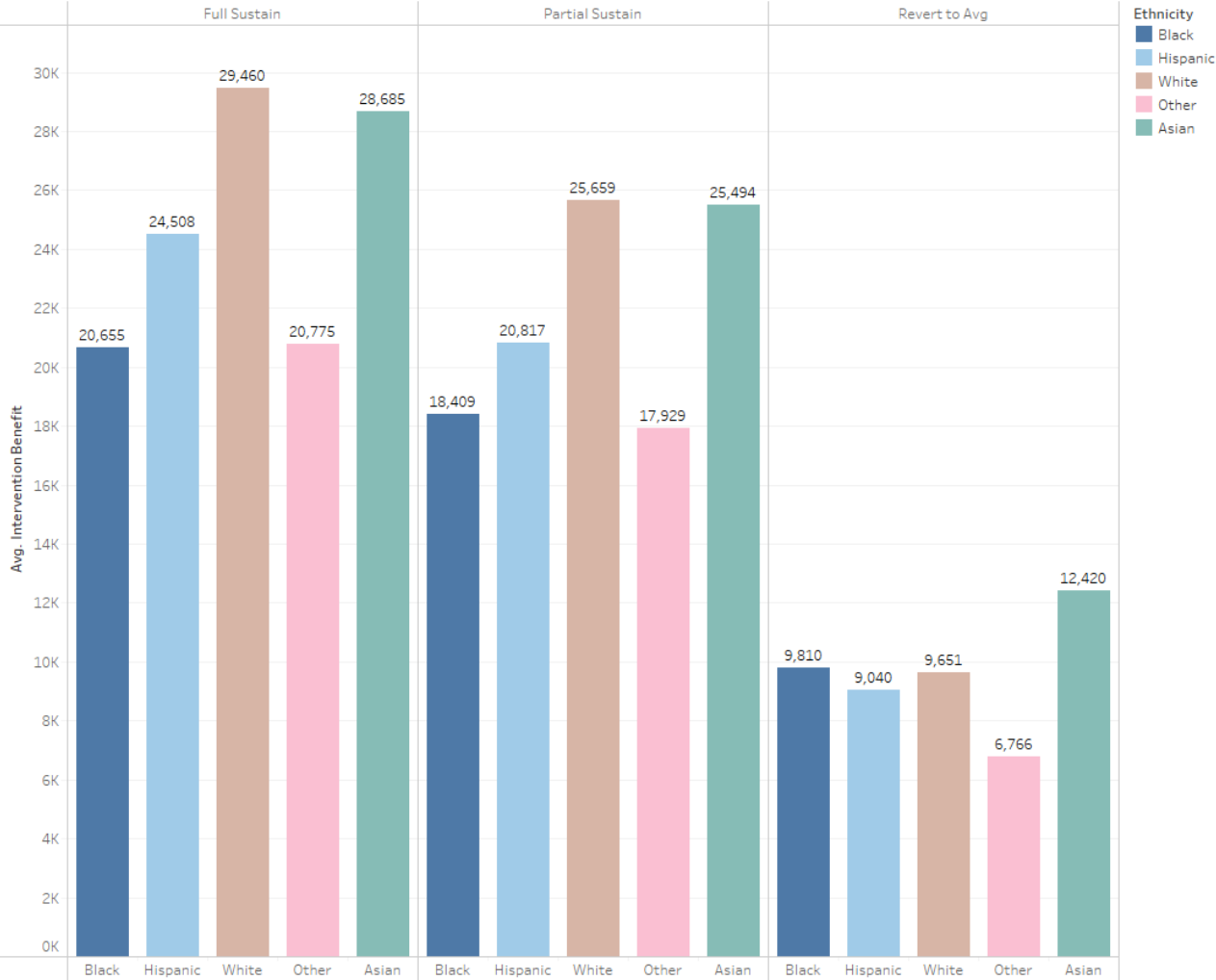
Before -> After intervention



BENEFITS BY ETHNICITY

No material differences in financial benefits by ethnicity

Estimated Average Intervention Benefits per Kid (USD) by ethnicity

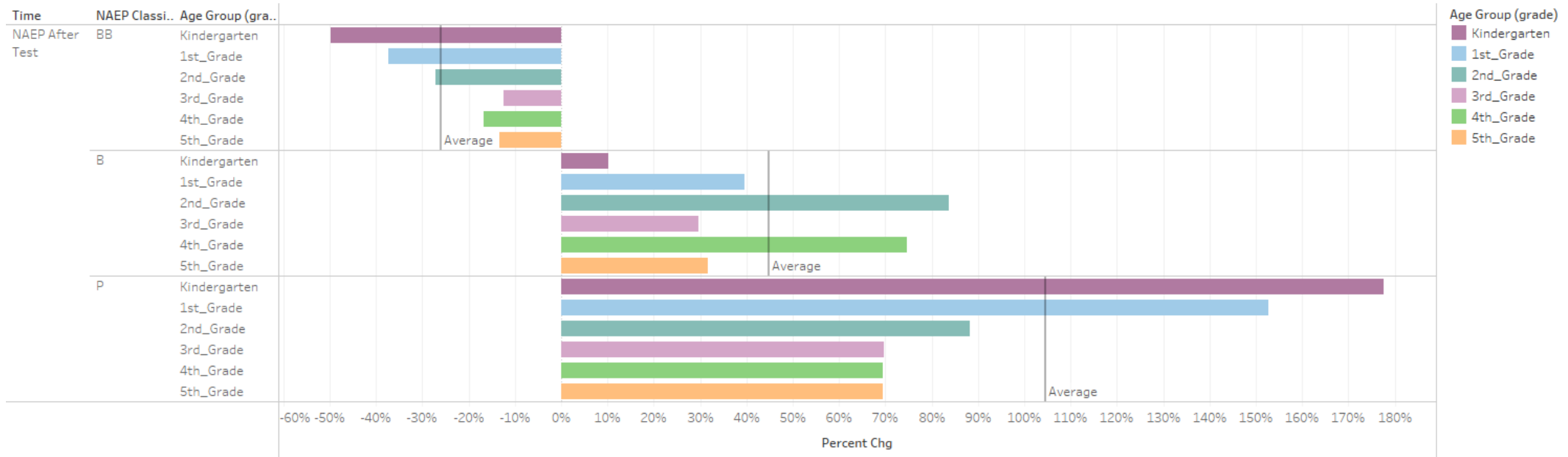


RESULTS BY GRADE

Younger students benefit more from the intervention

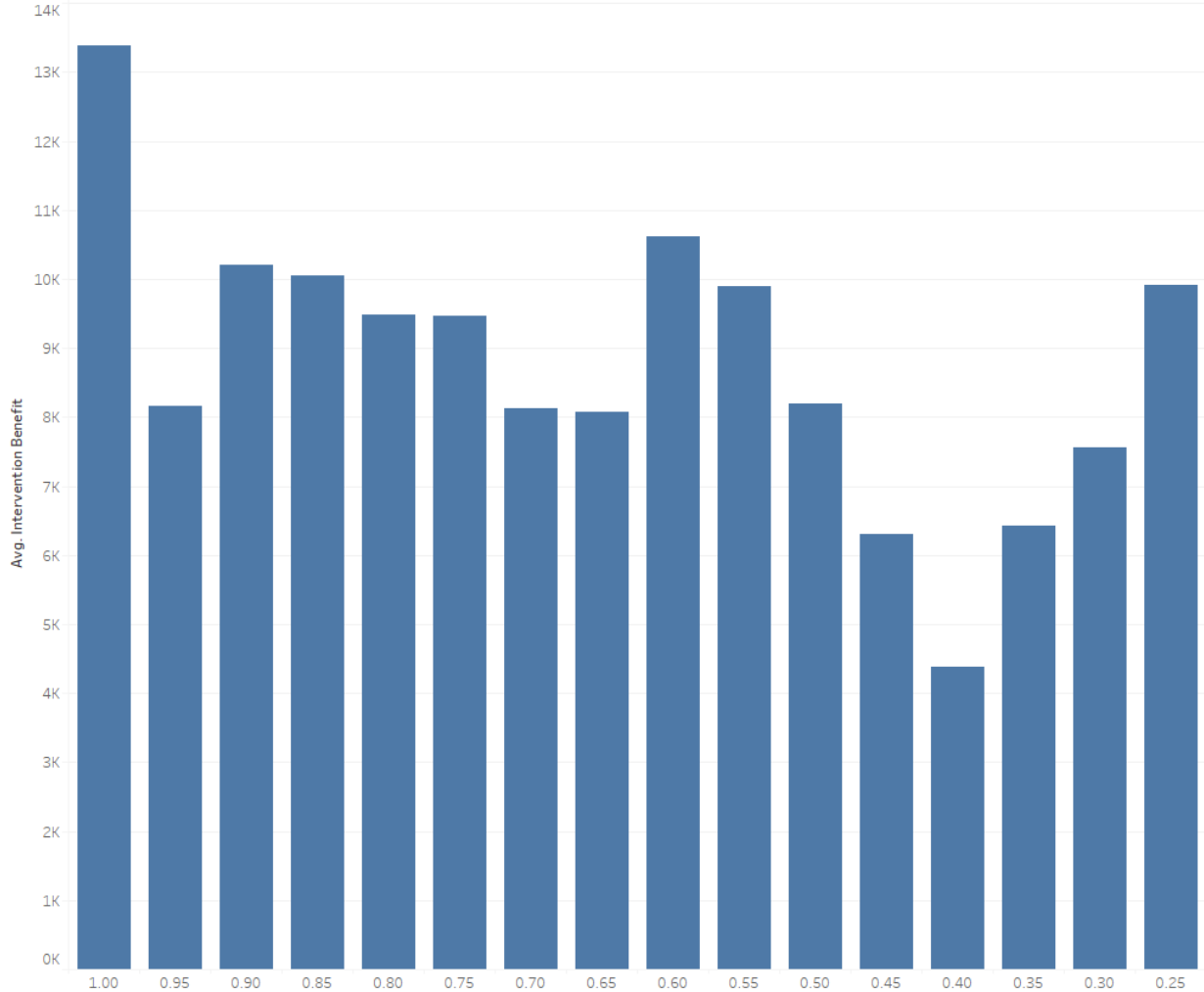
Pct change in # Kid's NAEP Reading classification

Before -> After intervention



RESULTS BY ATTENDANCE

Estimated Average Intervention Benefits per Kid (USD) by Attendance for Scenario: Revert to Avg

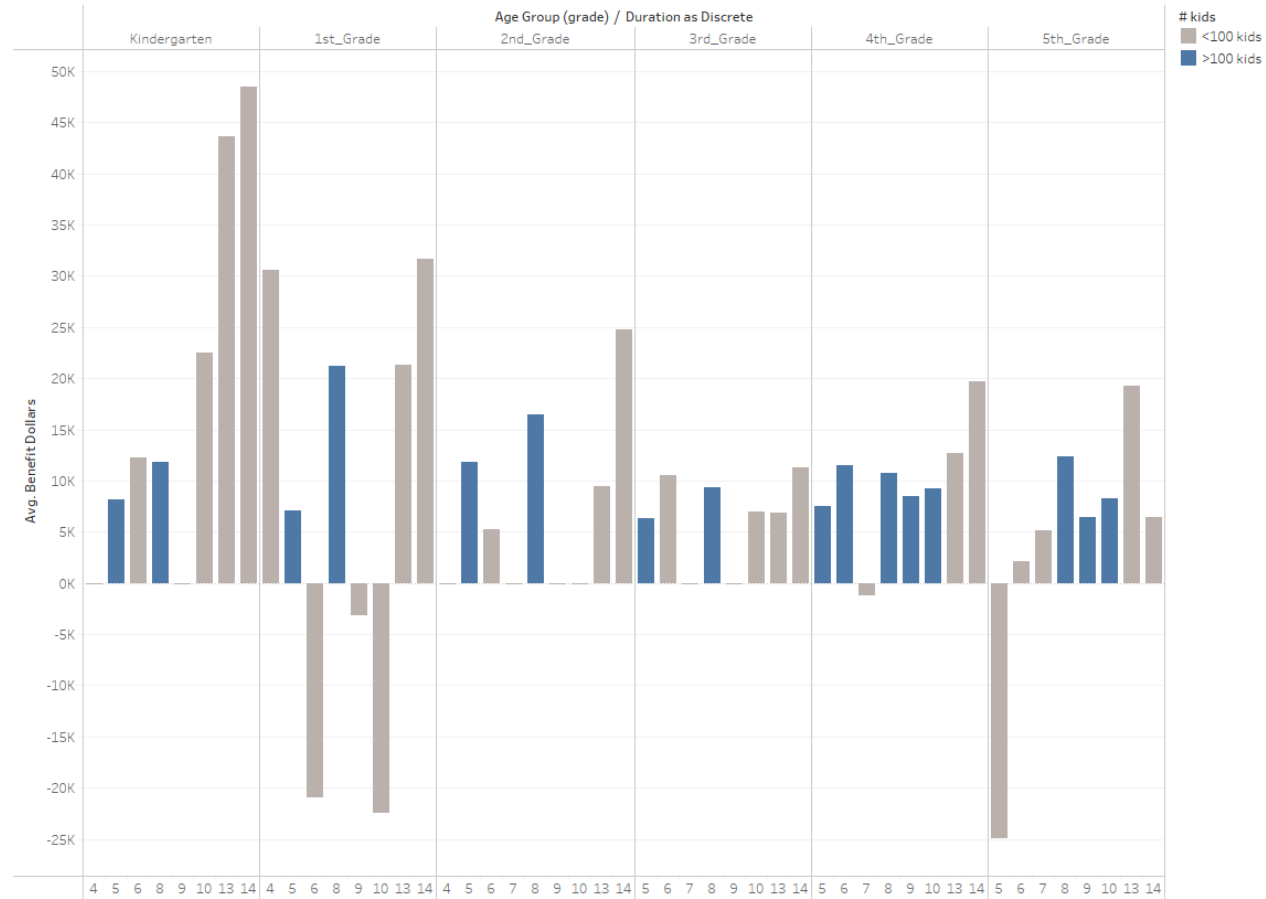


BENEFITS BY PROGRAM DURATION

Dosage effect is small

Est Avg \$ Benefit vs Avg Intervention Duration (wks)

Scenario: Benefit: Revert to Average



SOURCES

1. Public High School Graduation Rates – National Center for Education Statistics.
https://nces.ed.gov/programs/coe/pdf/2021/coi_508c.pdf#:~:text=In%20school%20year%202018%E2%80%939319%2C%20the%20national%20adjusted%20cohort,since%20the%20rate%20was%20first%20measured%20in%202010%E2%80%939311.
2. Paupers and Princes: Economic Inequality at Public Schools – Public School Review.
<https://www.publicschoolreview.com/blog/paupers-and-princes-economic-inequality-at-public-schools.>
3. Selected statistics on enrollment, staff, and graduates in public school districts enrolling more than 15,000 students in 2019: Selected years, 1990 through 2019 – National Center for Education Statistics.
[https://nces.ed.gov/programs/digest/d21/tables/dt21_215.10.asp.](https://nces.ed.gov/programs/digest/d21/tables/dt21_215.10.asp)
4. NAEP Reading: District Achievement-Level Results – The Nation’s Report Card.
[https://www.nationsreportcard.gov/reading/districts/achievement/?grade=4.](https://www.nationsreportcard.gov/reading/districts/achievement/?grade=4)