Boston Public Schools

Summer Learning Academy Impact Analysis

Office of Data & Accountability and
Office of Expanded Learning & Opportunities
Winter 2026

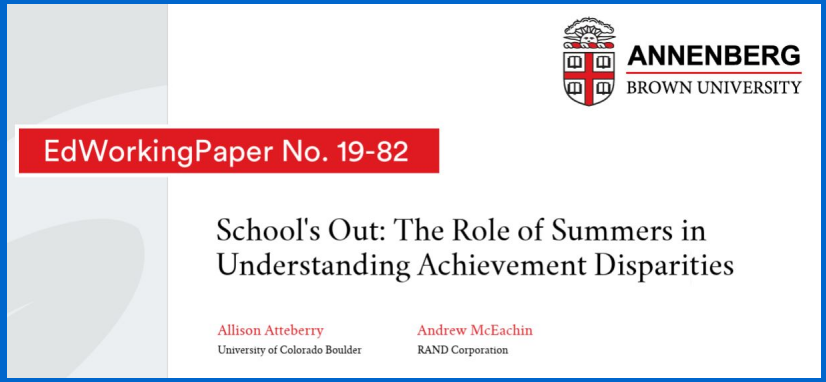
Evaluation Questions

1. What is the academic impact of participation in Summer Learning Academy (SLA) in Summer 2025, measured by Fall 2025 MAP Growth RIT scores?
2. How does this impact vary by grade, economic disadvantage (ED), or multilingual learner (ML) status?
3. Among SLA participants, how do attendance and program type impact academic outcomes?

Analytic Approach

Compare the fall 2025 MAP Growth Reading and MAP Growth Math performance of SLA participants to a comparison group of non-participants, controlling for prior test scores and demographics, using model published by NWEA.

Model Papers



Findings Overview

Participating in SLA is associated with a positive, **significant impact on student math** scores across student groups.

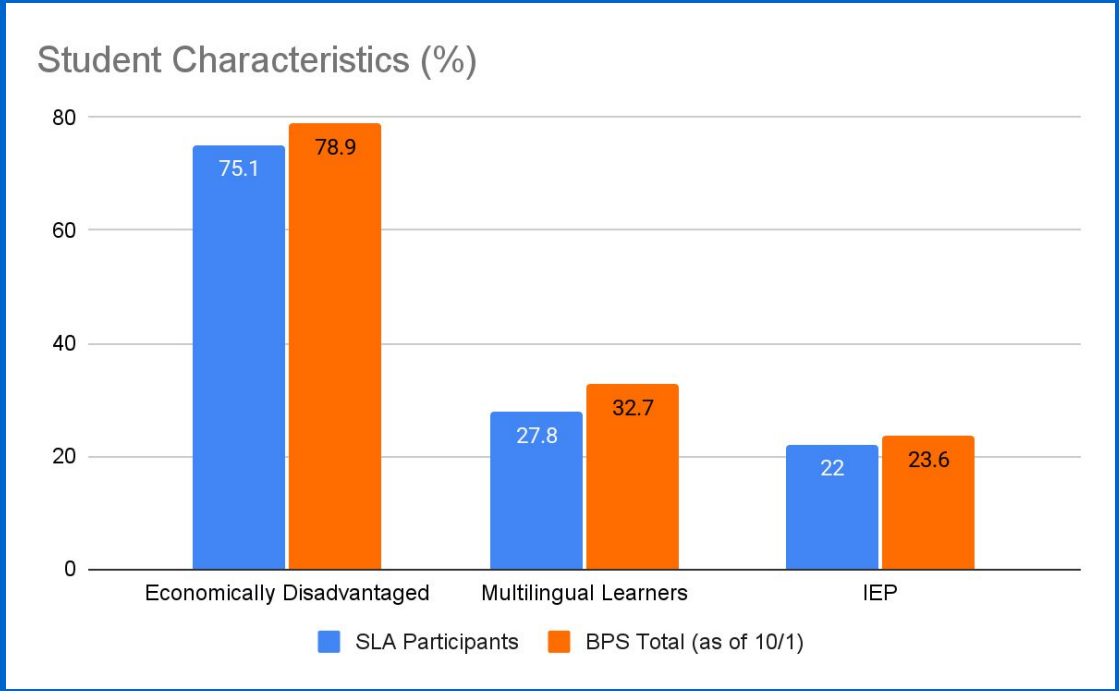
Participating in SLA is associated with a **positive, significant impact in reading** for students who are **economically disadvantaged or multilingual learners.**

Description of the Sample

- 47,060 students enrolled in BPS in Nov. 2025
- 5928 students participated in SLA
- Of those populations, 17,779 students (2459 SLA participants) met the study inclusion criteria:
    - had viable MAP Growth data in either **math or reading** for three testing periods: **Fall 2024, Spring 2025, and Fall 2025;**
    - **were enrolled in BPS November 2025; and,**
    - **were rising grade 3-11 in Summer 2025**.
- Final analytic sample includes 16,816 students for reading and 17,147 students for math.

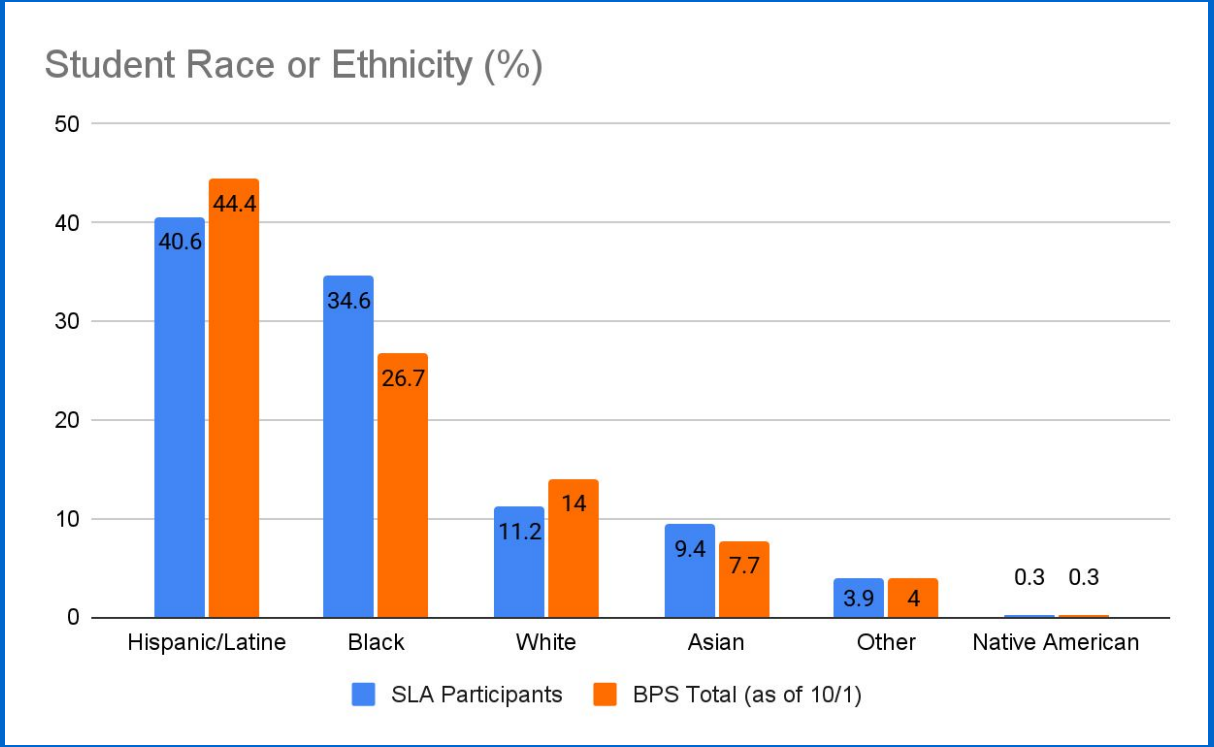
Sample Characteristics

Students who were economically disadvantaged, had an IEP, or were Multilingual Learners were slightly underrepresented among SLA participants in the sample, compared to the district overall.



Sample Characteristics

Asian and Black students were slightly overrepresented in the SLA participants sample compared to the district overall. Hispanic/Latine students were slightly underrepresented.



Analytic Methods: Why MAP Growth RIT score?

2025 reading student growth norms						
	Fall-to-winter		Winter-to-spring		Fall-to-spring	
Grade	Mean	SD	Mean	SD	Mean	SD
K	8	9	6	9	14	11
1	7	10	5	10	12	11
2	7	9	5	9	12	9
3	5	9	4	9	9	9
4	4	8	3	8	6	9
5	3	8	2	8	5	9
6	2	8	1	8	3	8
7	1	9	1	8	2	9
8	1	9	1	9	2	9
9	1	10	0	10	1	10
10	0	10	0	10	1	11
11	0	11	0	11	0	12
12	-1	13	-1	12	-1	13

- NWEA MAP Reading and Math Growth tests are **administered in both Fall and Spring** to all BPS students in grades 3-11, allowing us to isolate Summer change
- MAP Growth RIT scores are **stable, equal interval scales** that measure student achievement independent of grade level (NWEA)
- Scores can be **standardized to predicted values** on the last day of school Spring 2025 and first day of school Fall 2025 (as is consistent in literature)
- Growth scores are normed to show gains over time (NWEA)

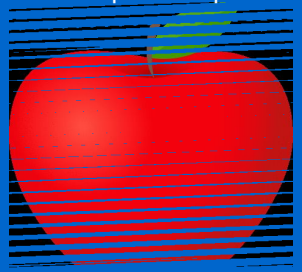
Analytic Methods: Why use a value added model?

Just analyzing averages compares two distinctly different groups (like apples and oranges).

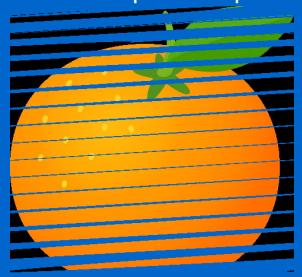
To identify the impact of SLA participation, we need to use other methods to create two groups that are as similar as possible (apples and apples) except for participation in SLA.

Comparing of averages

SLA participants

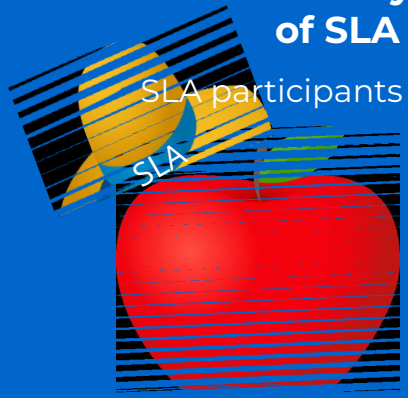


All non-participants

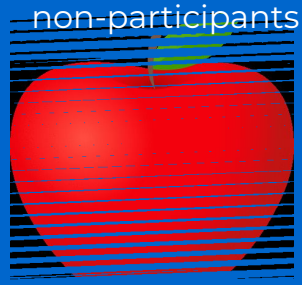


Identifying impact of SLA treatment

SLA participants



Matched non-participants



Analytic Methods*: Why value-added model?

How are the variables created?

Value-added model predicts standardized fall RIT score, controlling for prior year reading and math scores and student demographics, to best isolate the effects of SLA

Variable notes:

- MAP Growth RIT scores are adjusted by test date and converted to z-scores (measuring how far each student scores from the grade-level average, in standard deviations); results reported in SD/converted RIT
- Rising grade level in Summer 2025 used to account for grade retention and promotion differences

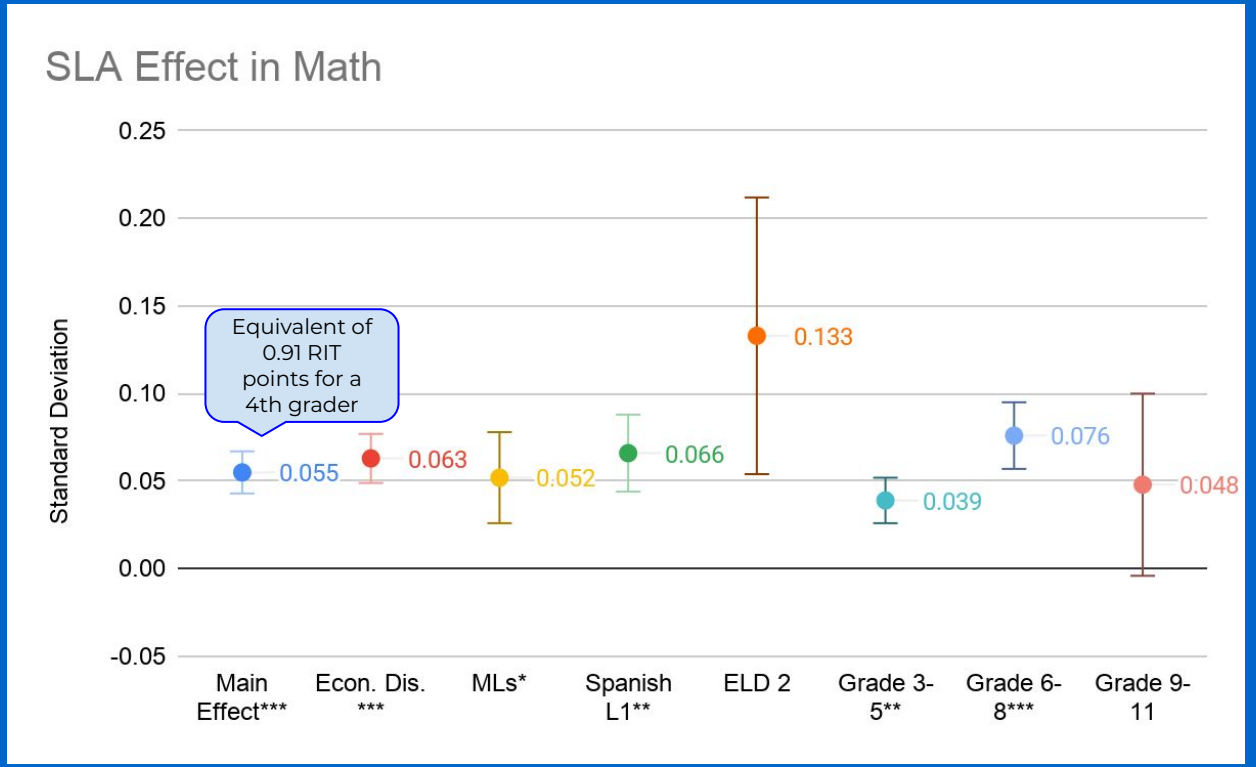
Despite these controls, unobserved factors (e.g., parental influence) may affect both SLA participation and MAP Growth scores. Results reflect a strong association — not a purely causal relationship.

*Follows the models in Callen et al., 2025 and Atteberry & McEachin, 2020

MAP Growth Impact Findings

MAP Math Growth

Participation in **SLA is associated with a significant, positive impact in math**; this effect has little variation by student group.

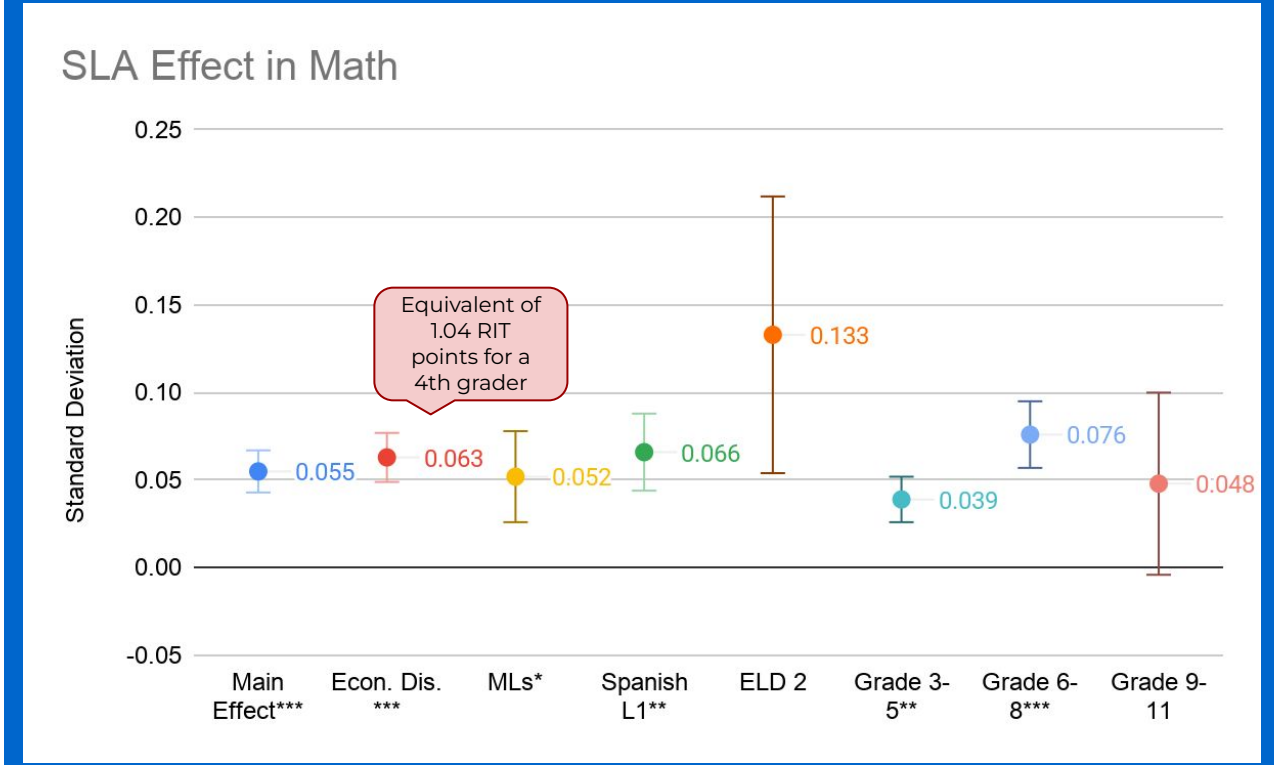


* = p< 0.05; ** = p < 0.01; *** = p < 0.001
Bars represent standard error

Impact for Economically Disadvantaged Students

ED students benefit from SLA; however not at rates significantly different from non-ED students participating in SLA.

ED students participating score 0.063 SD higher than peers that did not participate in SLA.



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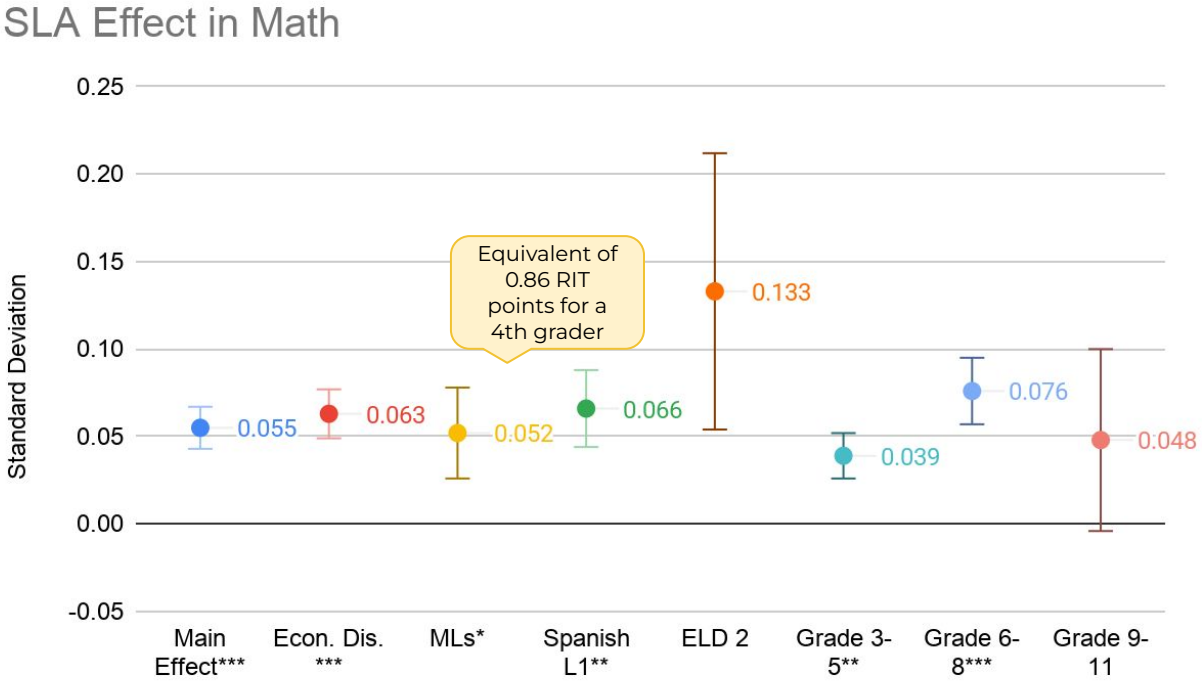
Impact for Multilingual Learners

MLs benefit from SLA; however not at rates significantly different from non-MLs participating in SLA.

MLs participating score 0.052 SD higher than peers that did not participate in SLA.



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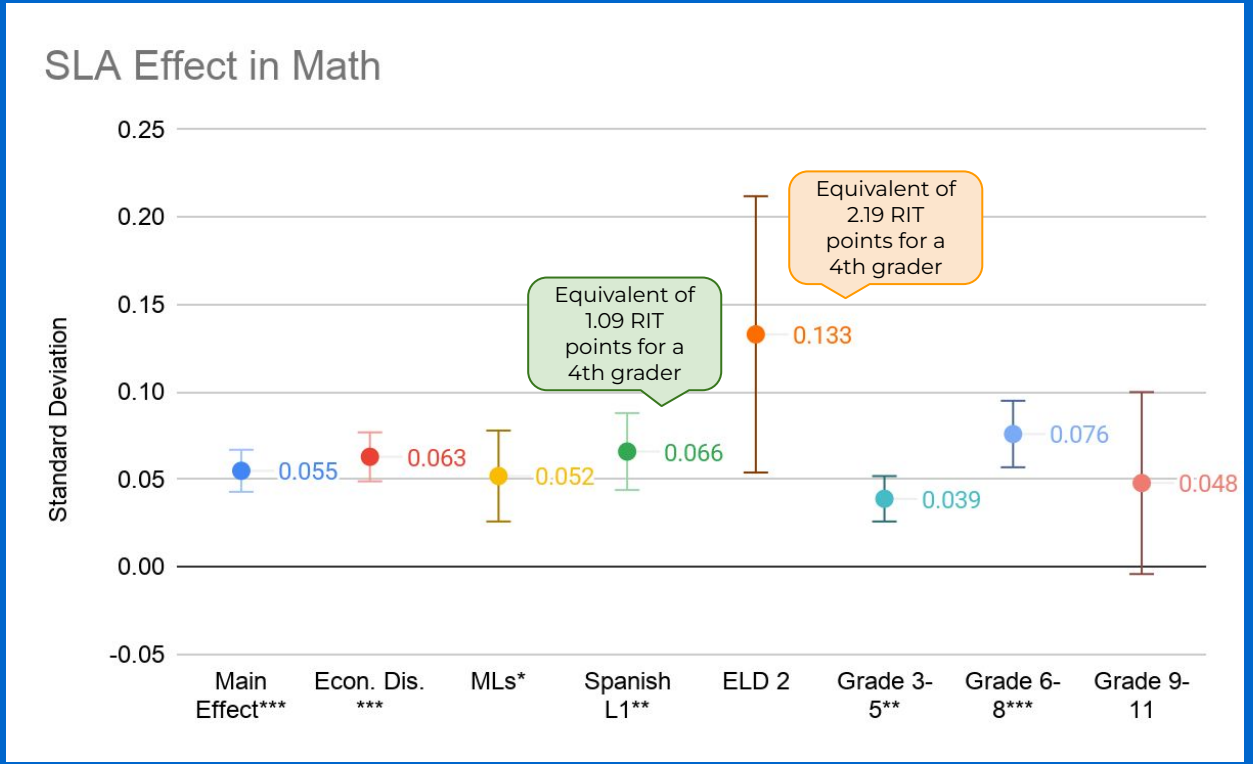
Impact for Multilingual Learners

The pattern holds within groups of MLs.

Participants with **Spanish first language score 0.066 SD higher than peers** that did not participate in SLA and **students with ELD level 2 score nearly significantly higher** than peers that did not participate.



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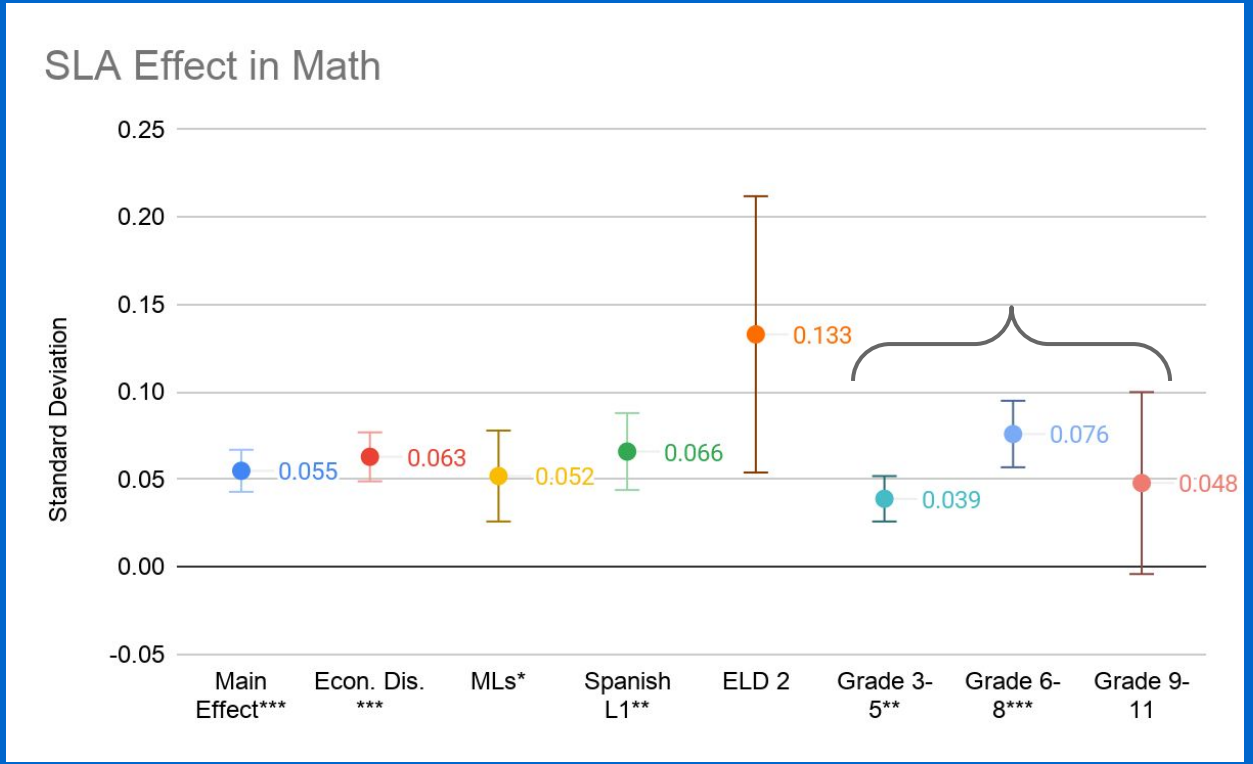
Impact across grade band

SLA similarly affects students across grade bands in math (the impact on grades 9-11 is nearly significant).



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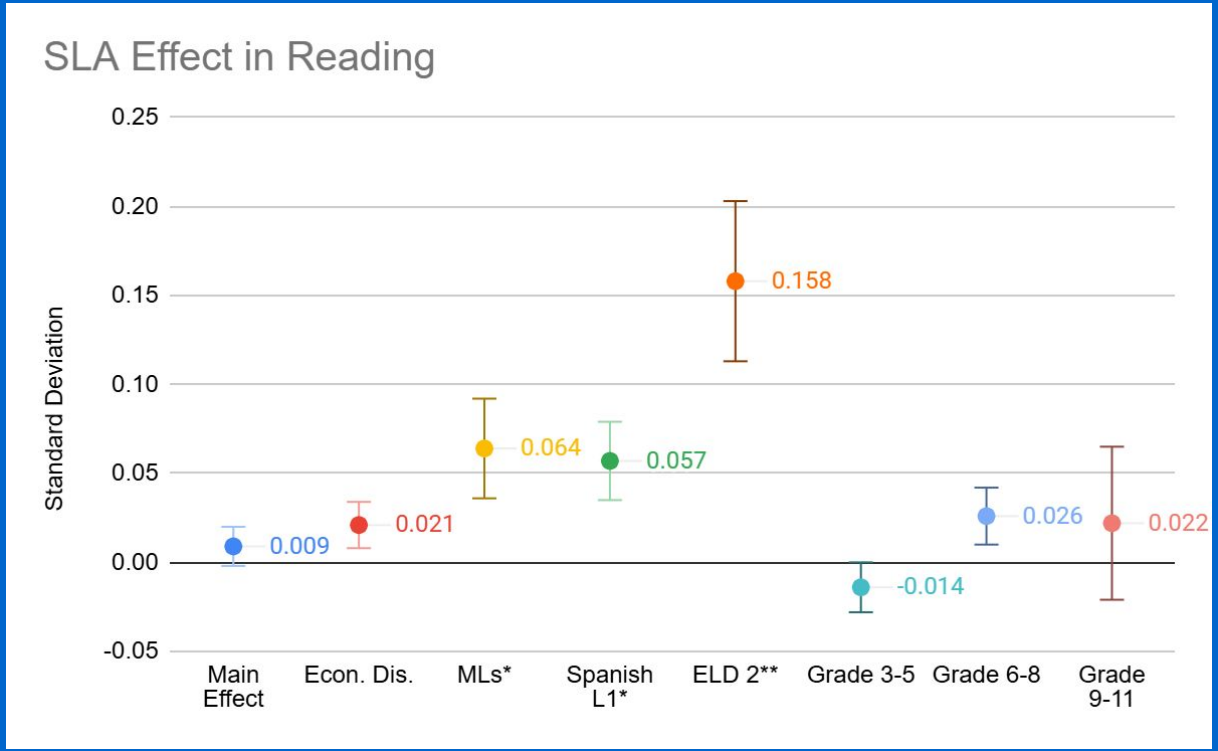
Math Takeaway

SLA participation is associated with **strong, positive effects in math**. This impact is consistent across student groups, showing that all groups are benefitting equally in math.

MAP Reading Growth

No significant differences in reading scores attributed to SLA participation; however, **this varies by student group.**



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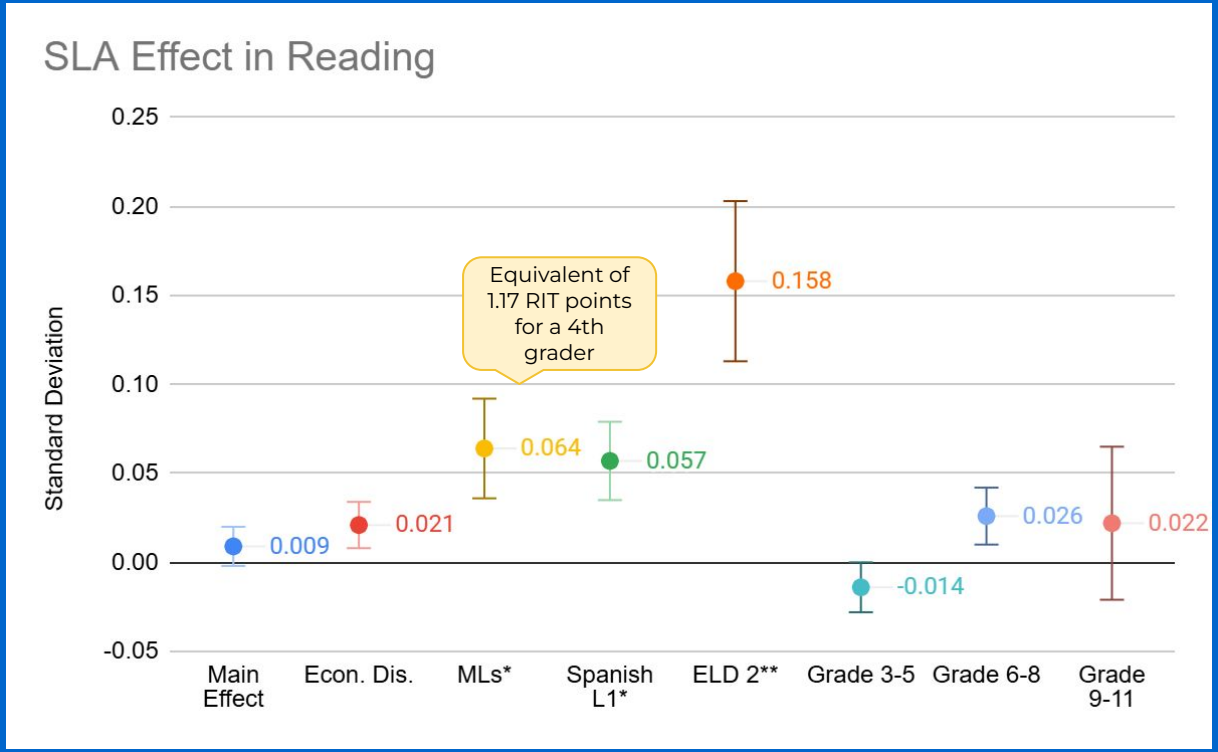
Impact for Multilingual Learners

For MLs, participating in SLA is associated with scoring 0.064 SD higher in reading compared to MLs who did not participate.

Data also indicate that there is a **larger SLA effect for ML students** than non-ML peers.



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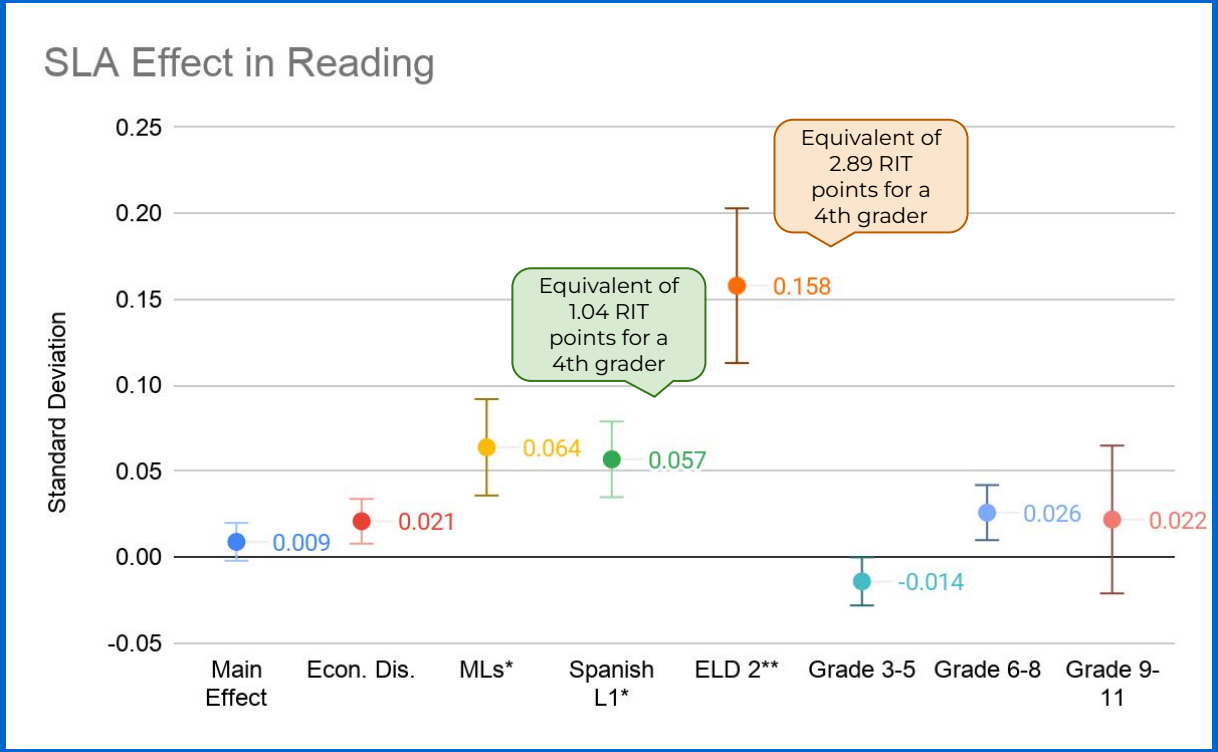
Impact for Multilingual Learners

Specifically, **SLA impacts students with Spanish as first language and ELD level 2** more than others.

Students with Spanish as a first language participating in SLA score 0.057 SD higher than non-participants; students at ELD level 2 score 0.158 SD higher than non-participants.



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Impact for Economically Disadvantaged Students

We cannot detect an effect of SLA on ED students leading to higher scores for participants than non-participants; however, data show that **SLA affects ED students more than non-ED peers** in SLA.

	Reading Model
SLA effect for econ. dis. students	0.021 (0.013)
SLA effect for non-econ. dis. students	-0.026 (0.017)
Interaction effect between SLA participation & econ. dis. status	**0.0470*** (0.021)

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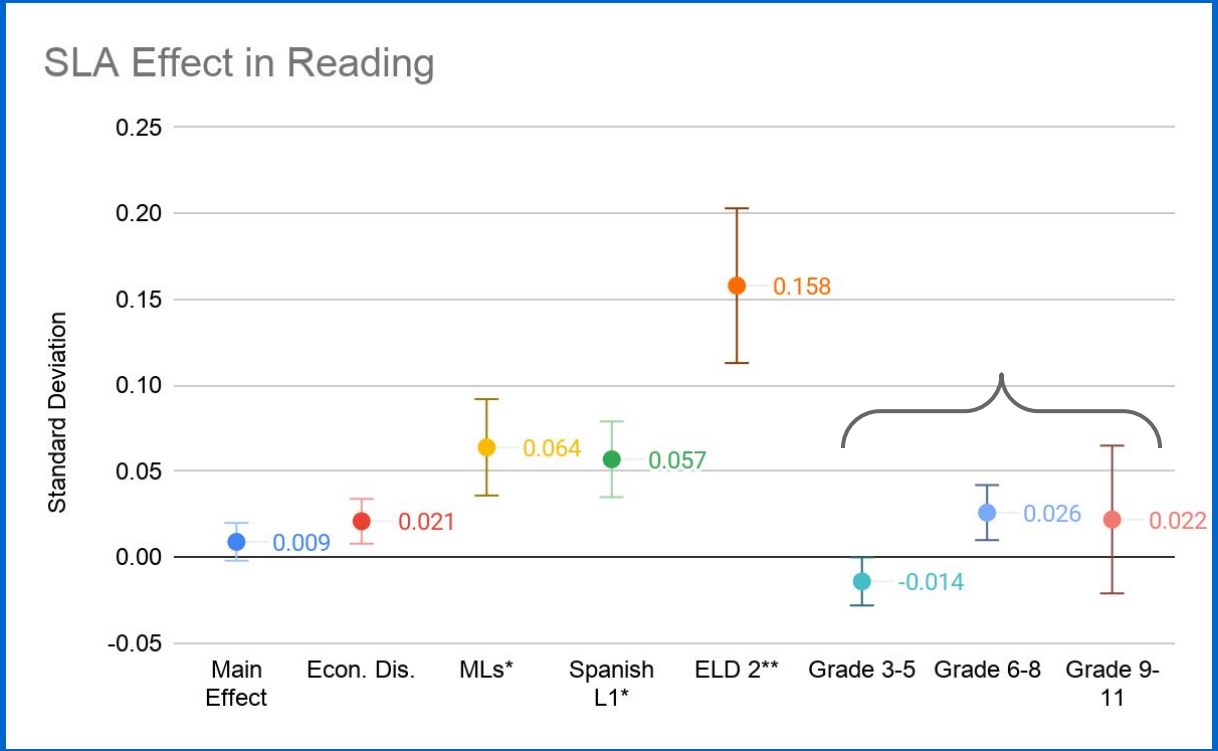
Impact across grade band

SLA is not associated with different impacts by student grade band in reading.



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Reading Takeaway

While SLA is not associated with a detectable overall effect in reading, SLA participation is associated with **strong, positive effects in reading for important student groups** (multilingual learners, specifically with Spanish as a first language or at ELD level 2).

Attendance & Program Type

Among SLA participants, on average, there is a **small, positive but not significant relationship between days of SLA attendance and MAP Growth scores** in math and reading. This may be due to the smaller sample size and limited attendance variation in SLA participants.

Similarly, there are no significant differences in MAP growth scores between students in BPS-run programs and non-BPS run programs.

Implications and Recommendations

1. BPS should continue to provide SLA (BPS and non-BPS programming), particularly for multilingual learners and economically disadvantaged students
2. Multilingual learners and economically disadvantaged students should be specifically targeted in recruitment for SLA
3. BPS and BASB should share findings with SLA teachers and families to show gains from their Summer 2025 efforts
4. ELO should investigate the mechanisms that produce outsized impacts for MLs, such that best practices can be scaled.

Appendix

Math RIT Score Conversions

Grade	Overall Effect***	ED Effect***	ML Effect*	Spanish L1 Effect**	ELD 2 Effect **
3	0.85	0.97	0.80	1.02	2.05
4	0.91	1.04	0.86	1.09	2.19
5	1.02	1.17	0.96	1.22	2.46
6	1.02	1.17	0.97	1.23	2.47
7	1.04	1.19	0.98	1.24	2.51
8	1.18	1.35	1.11	1.41	2.84
9	1.26	1.45	1.19	1.51	3.05
10	1.16	1.32	1.09	1.39	2.79
11	1.27	1.45	1.20	1.52	3.06
Total	1.08	1.24	1.02	1.30	2.62

ELA RIT Score Conversions

Grade	Overall Effect	ED Effect	ML Effect*	Spanish L1 Effect*	ELD 2 Effect **
3	0.17	0.39	1.19	1.06	2.94
4	0.16	0.38	1.17	1.04	2.89
5	0.16	0.38	1.17	1.04	2.88
6	0.16	0.38	1.17	1.04	2.90
7	0.15	0.35	1.06	0.94	2.62
8	0.16	0.37	1.12	1.00	2.77
9	0.15	0.35	1.07	0.95	2.64
10	0.14	0.34	1.03	0.92	2.54
11	0.15	0.35	1.06	0.95	2.63
Average	0.16	0.37	1.12	0.99	2.76