

Summer Arts & Learning Academy:
Results for 2018

uXSWn
b|G|d

Guiding Questions for the Analyses

- Was participation in SALA associated with change in:
 - Scores on SALA math, reading comprehension, or writing assessments?
 - DIBELS tests administered during SALA?
 - Socioemotional development, as rated by:
 - Parents?
 - Students?
- Is the degree of change contingent upon:
 - Student's grade in school?
 - ESY classification?
 - Current (2018) or prior attendance at SALA?
 - Relative placement of benchmark status?

Basic Information About the Sample

Total Sample Size ($N = 2119$)

Distribution by: Gender, Race, Grade, & Language

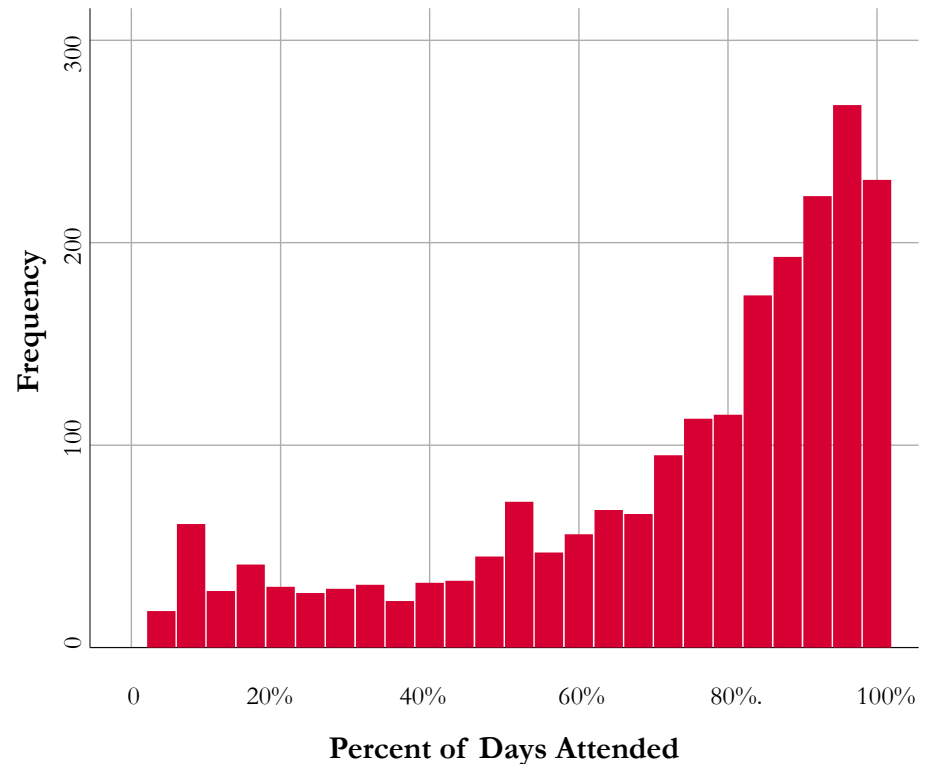
Gender	<i>n</i>	%
Female	1016	47.9
Male	1103	51.4
Race	<i>n</i>	%
American Indian	5	0.2
Asian	11	0.5
Black/African American	1957	92.4
Native Hawaiian	7	0.3
White	134	6.3
Multiple	5	0.2
Ethnicity	<i>n</i>	%
Hispanic/Latinx	190	9.0
Not Hispanic/Latinx	1929	91.0

Grade	<i>n</i>	%
Pre-K	162	7.6
Kindergarten	369	17.4
1 st grade	402	19.0
2 nd grade	338	16.0
3 rd grade	335	15.8
4 th grade	280	13.2
5 th grade	233	11.0
Language	<i>n</i>	%
English	1853	87.4
Spanish	117	5.5
Other	15	0.7
Missing	134	6.3

Distribution by: ELL, IEP, ESY & Prior Attendance

ELL Classification	<i>n</i>	%
No	1977	93.3
Yes	142	6.7
IEP Classification	<i>n</i>	%
No	1720	81.2
Yes	399	18.8
ESY Classification	<i>n</i>	%
No	1994	94.1
Yes	125	5.9
Reading Partners	<i>n</i>	%
No	2020	95.3
Yes	99	4.7
Prior Attendance	<i>n</i>	%
None	1761	83.1
One year	296	14.0
Two years	62	2.9

- Prior attendance
 - $M = 72.9\%$
 - $SE = 0.6\%$
 - Range = [4 – 100%]



**Math, Reading Comprehension,
and Writing Assessments:
Was There an Effect of SALA on Scores?**

Analytic Approach: Multilevel Models

For a given outcome, with points of measurement i (before SALA) and j (after SALA) for each student, what is the effect of *time*, after accounting for all relevant covariates (gender, race, SALA classroom, etc...) and measurement error?

$$outcome_{ij} = intercept + time_{ij} + gender_{ij} + \dots + error_{ij}$$

If the coefficient for *time* is statistically significant and positive, it means the given outcome increased over the course of SALA. We can then obtain model-implied or adjusted estimates of the before- and after-SALA values of the outcome that account for covariates.

Crucial Point About the Analyses

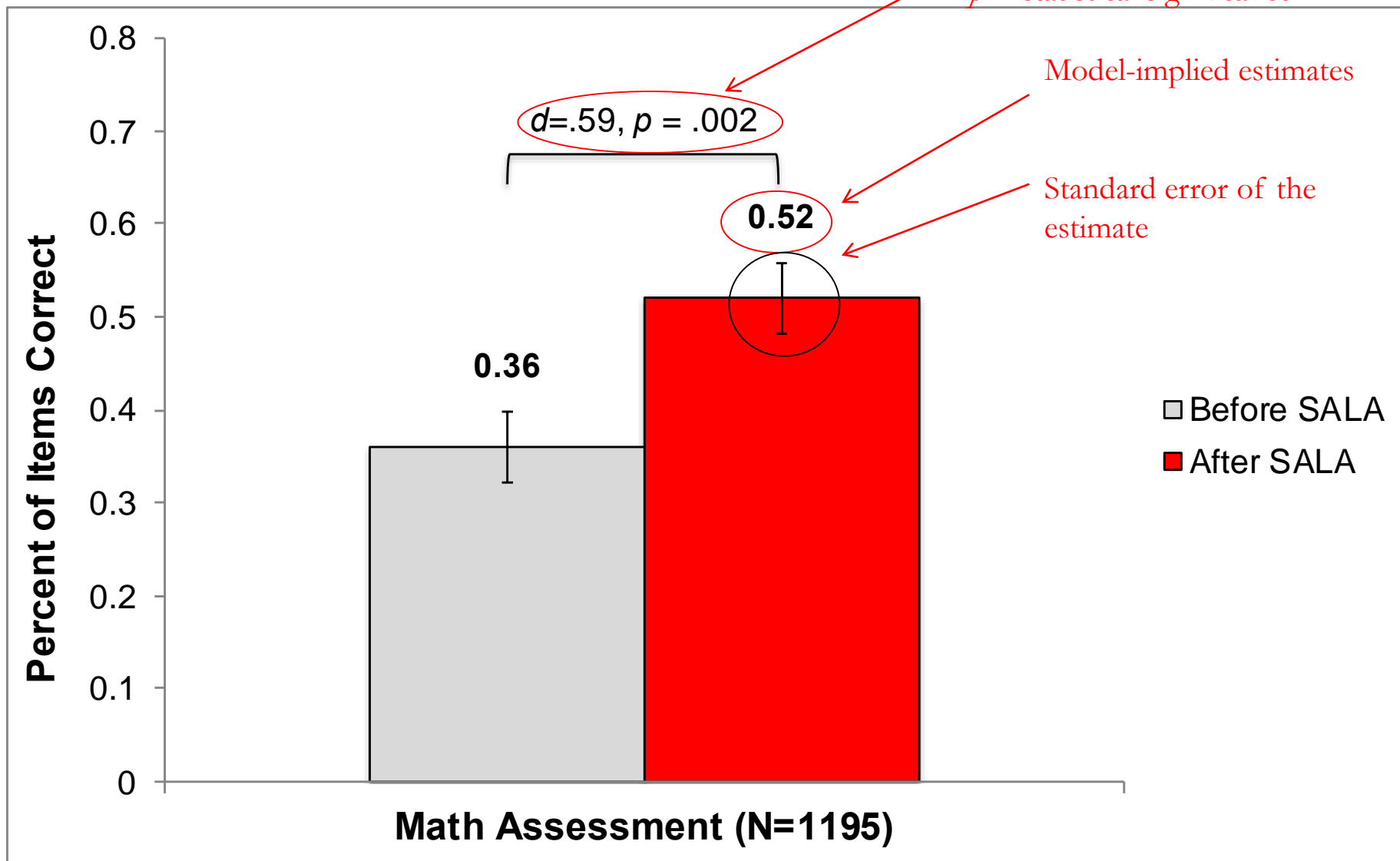
In this presentation we often use the phrases:

- The “effect of SALA,” or
- The “effect of time.”

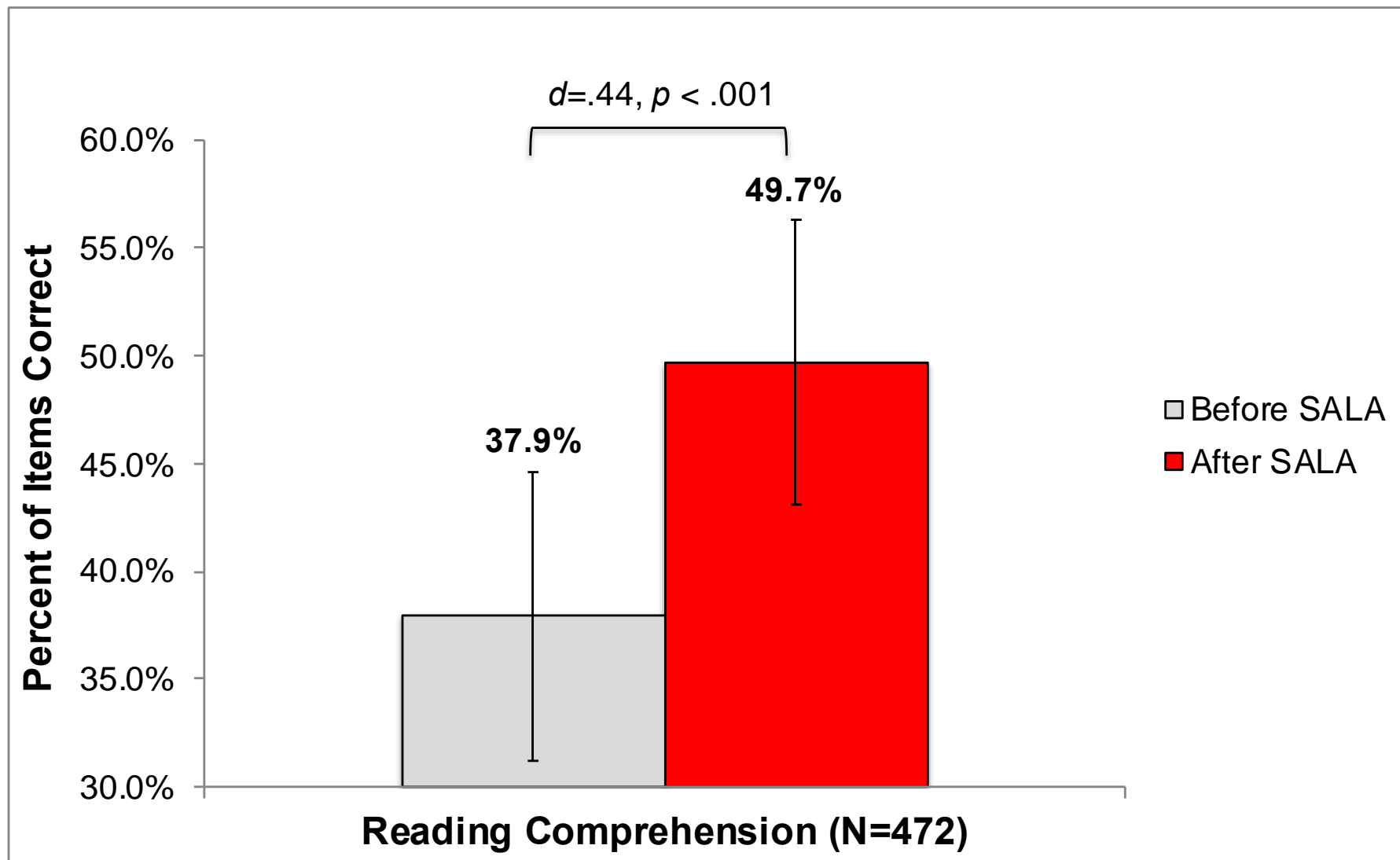
This is a convenient shorthand. In point of fact, without a randomly-assigned control group we **cannot** definitively establish that SALA *caused* the effects we observed.

Rather, we can say that participation in SALA co-occurred with the changes in different measures we observed.

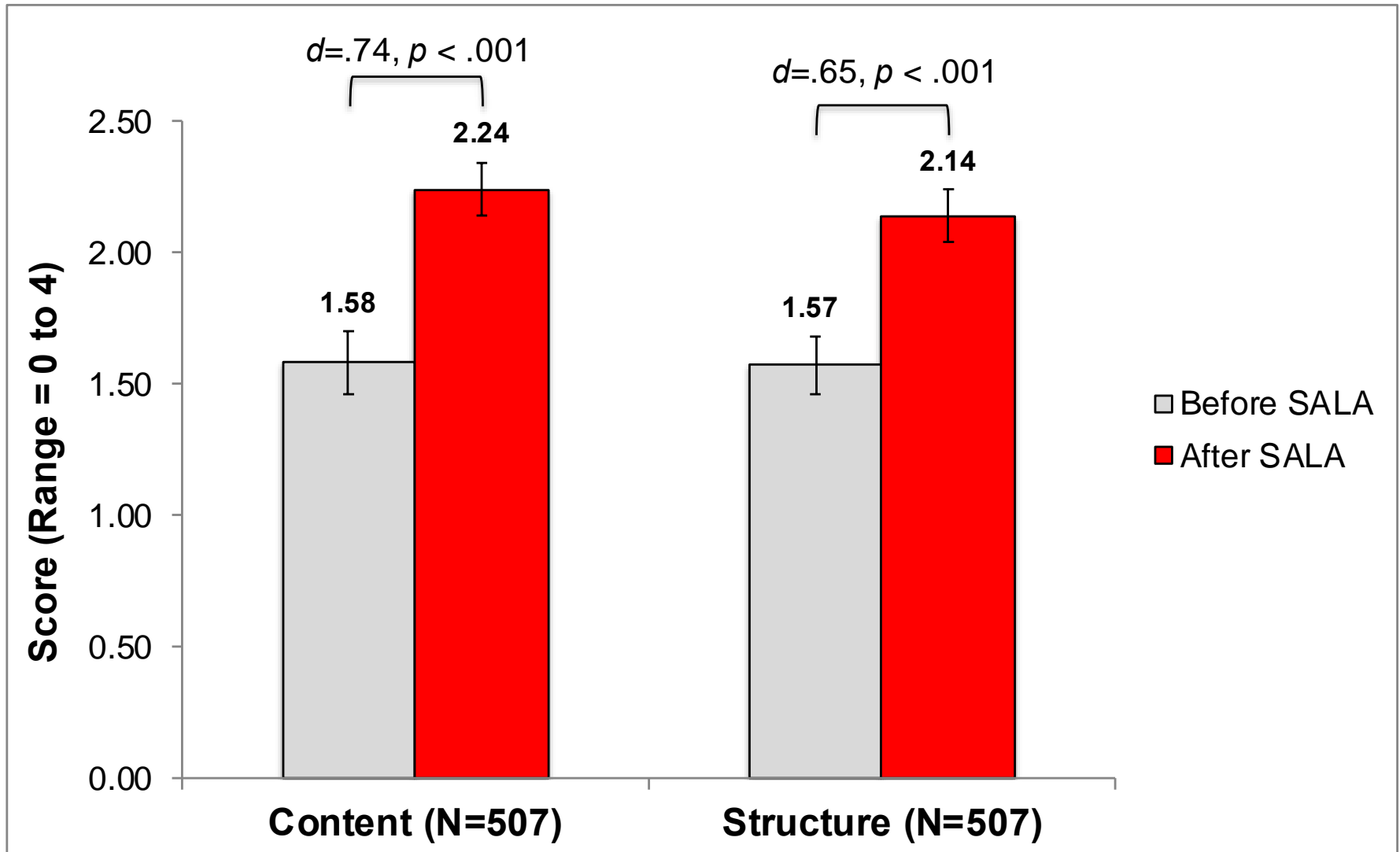
Math Scores



Reading Comprehension Scores



Writing Scores

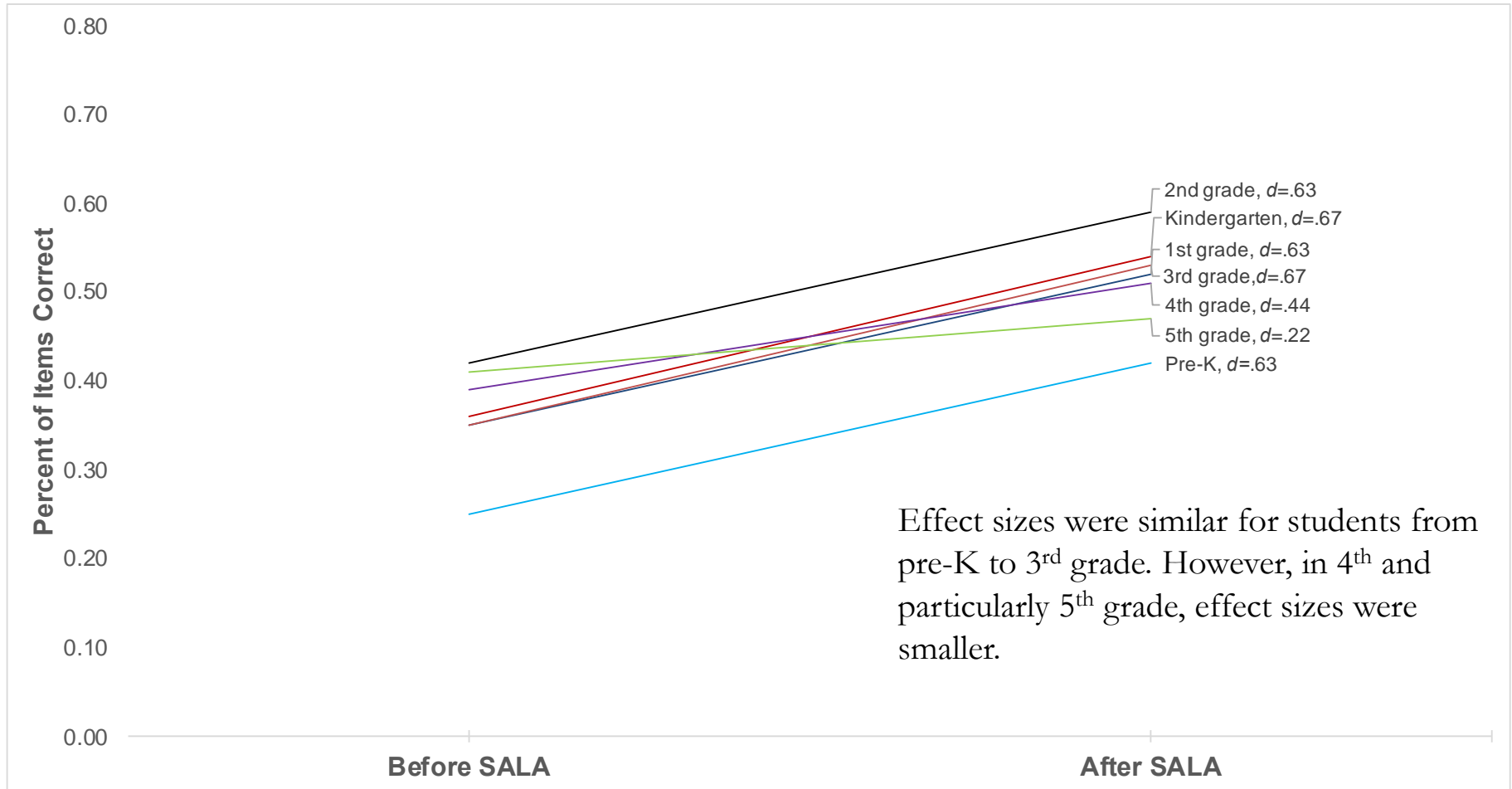


Was There an Effect of SALA on...

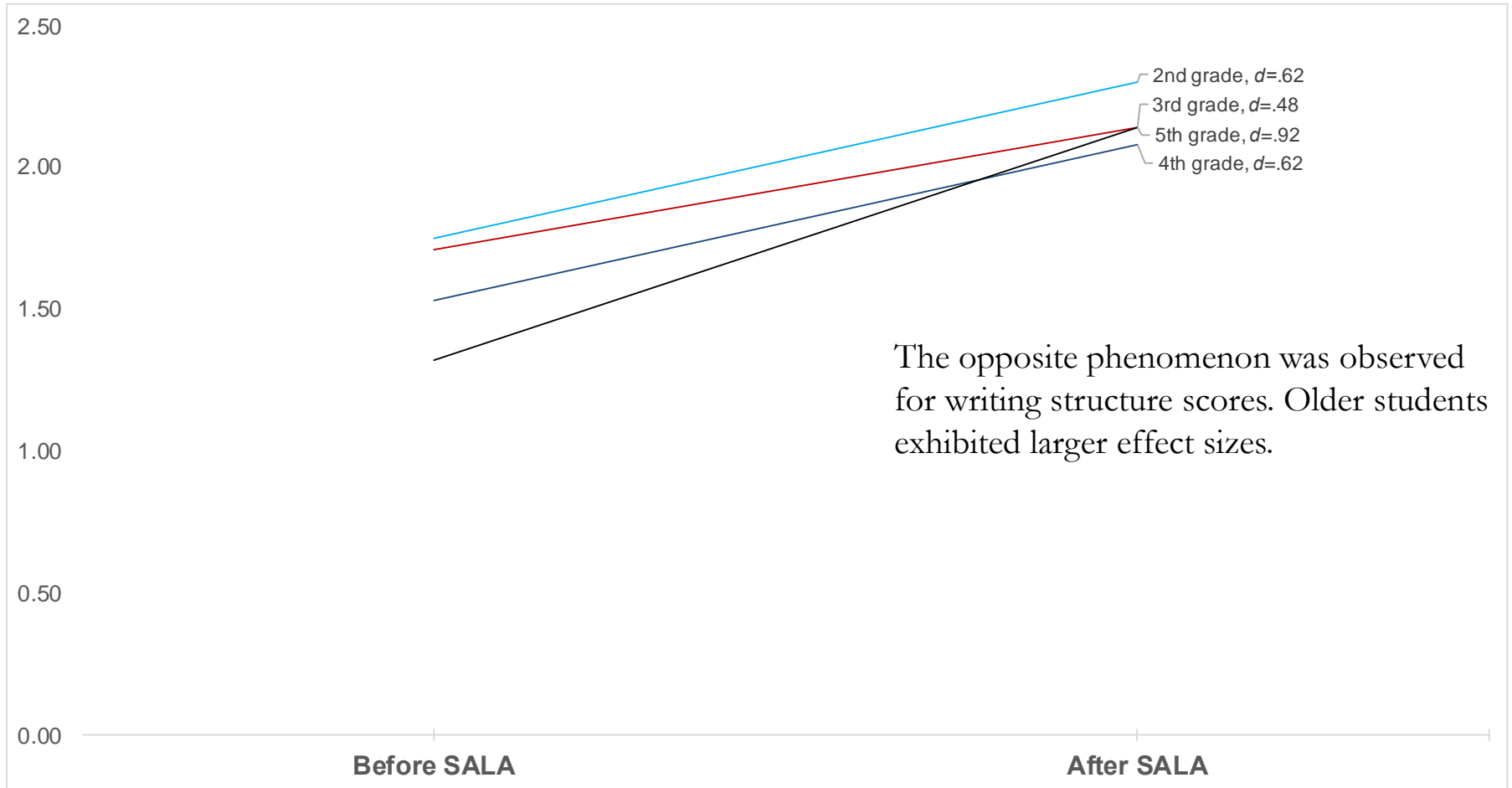
- Math Scores?
 - Yes.
 - The effect size was approximately twice the DoE threshold.
- Reading Comprehension Scores?
 - Yes.
 - The effect size was again twice the DoE threshold.
- Writing Scores?
 - Yes, for both structure and content.
 - The effect size ranged from over twice to three times the DoE threshold.

**Math, Reading Comprehension,
and Writing Assessments:
Does SALA Effect Vary by Grade, ESY, Current
or Prior Attendance, Relative Placement, or
Teacher Experience?**

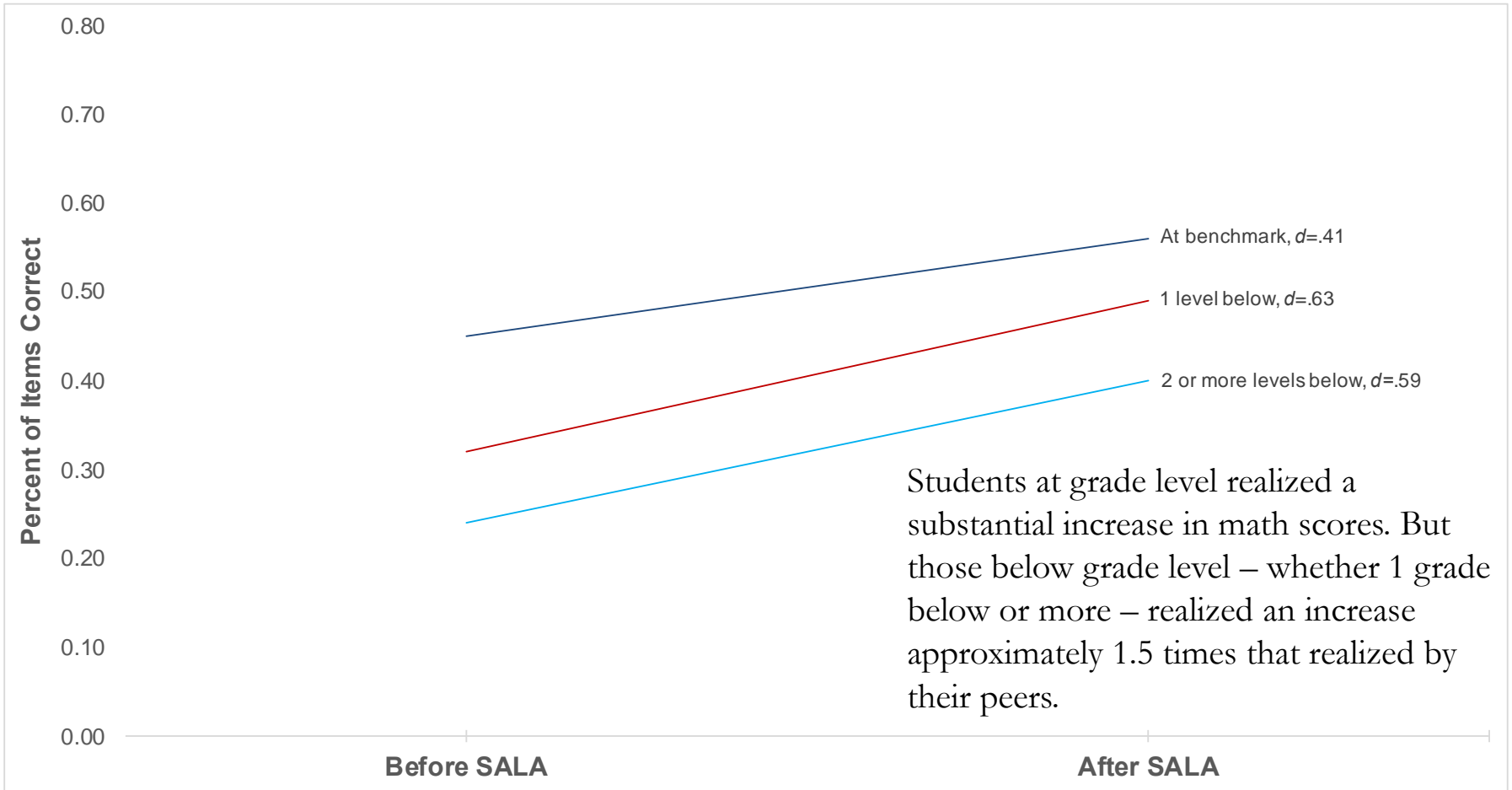
Math Scores: Differences in Effect Size by Grade



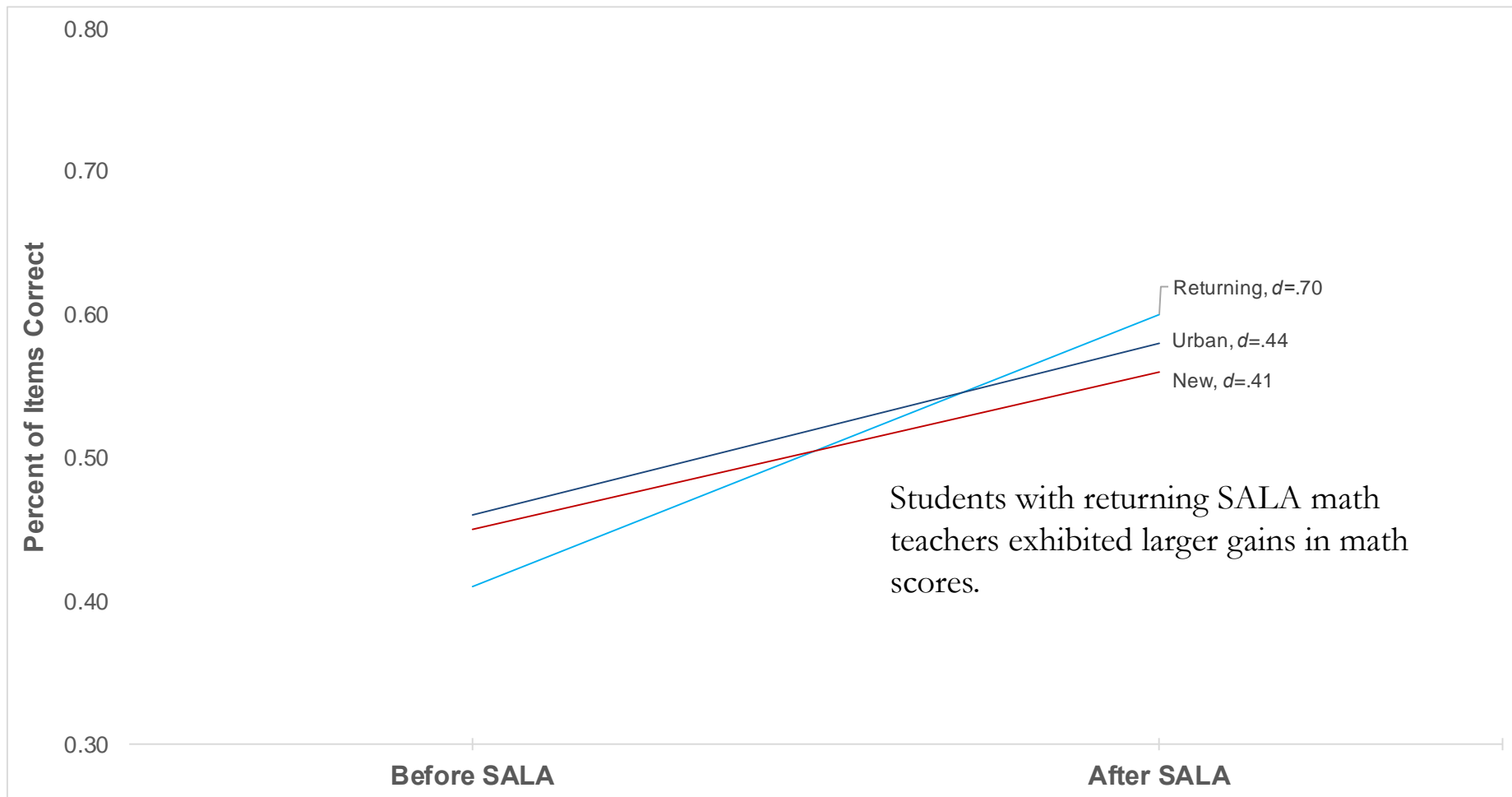
Writing Structure Scores: Differences in Effect Sizes by Grade



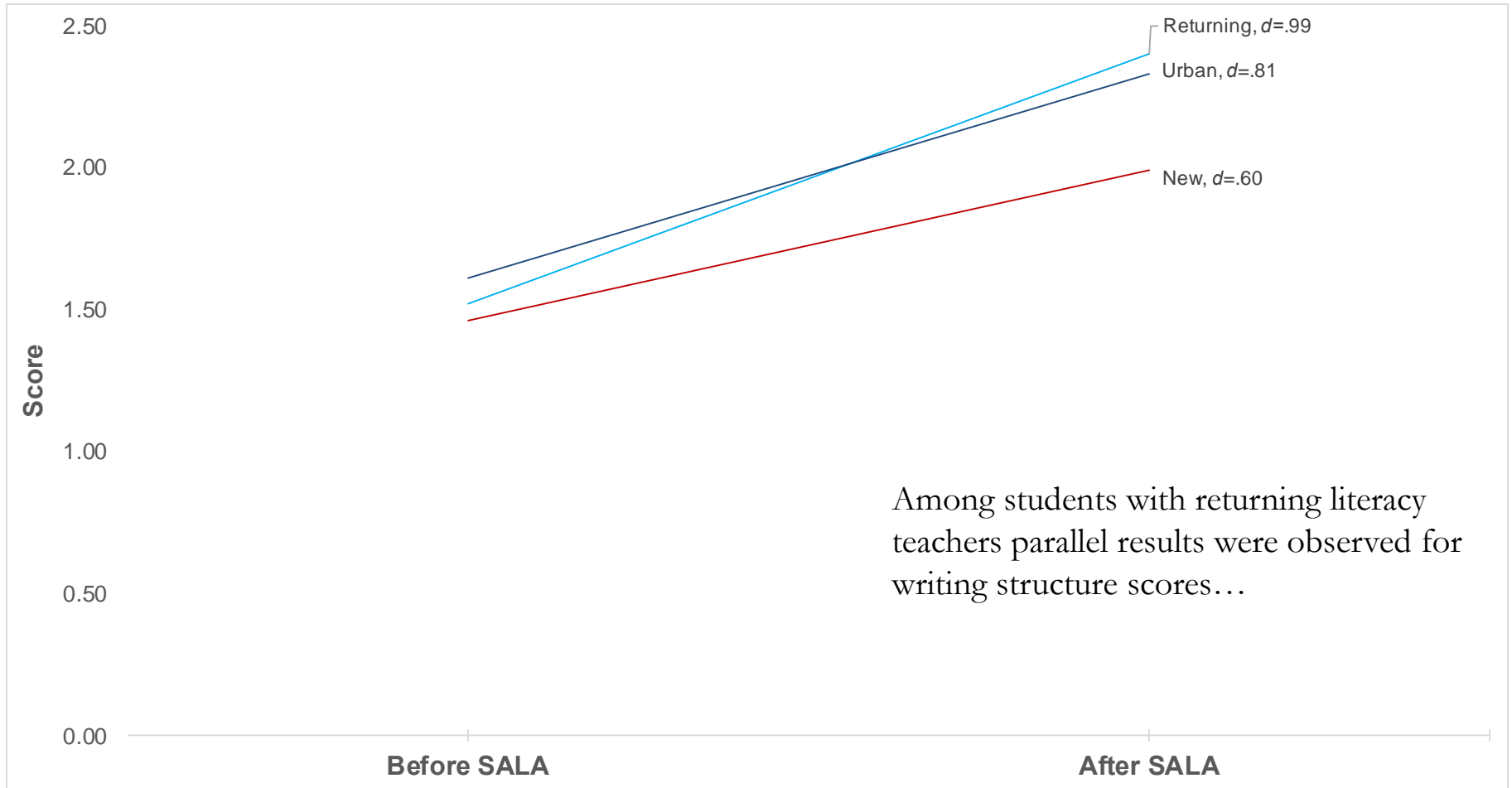
Math Scores: Differences in Effect Size by End of Year Grade Level (iReady)



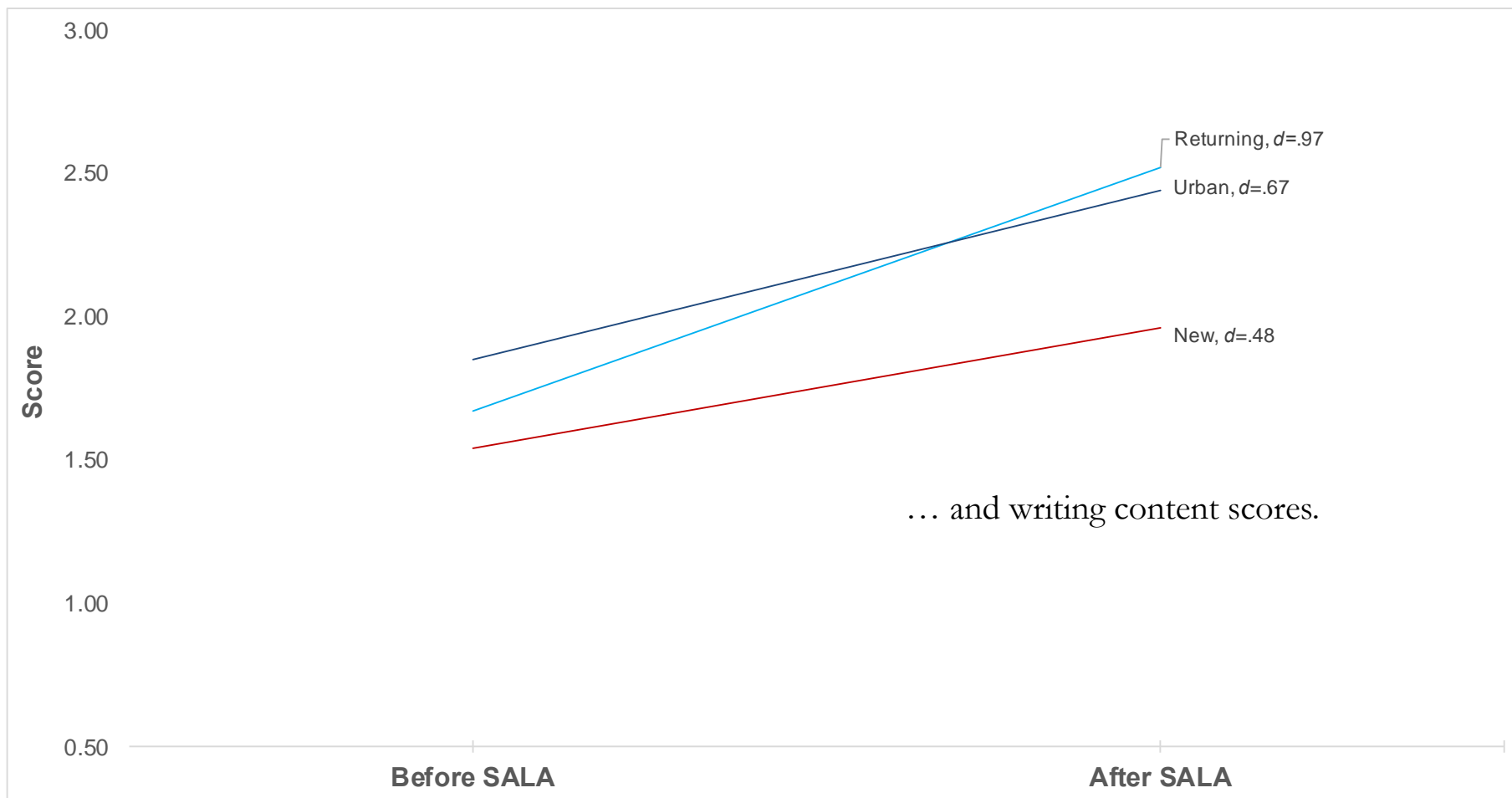
Math Scores: Differences in Effect Size by Teacher Experience



Writing Structure Scores: Differences in Effect Size by Teacher Experience



Writing Content Scores: Differences in Effect Size by Teacher Experience

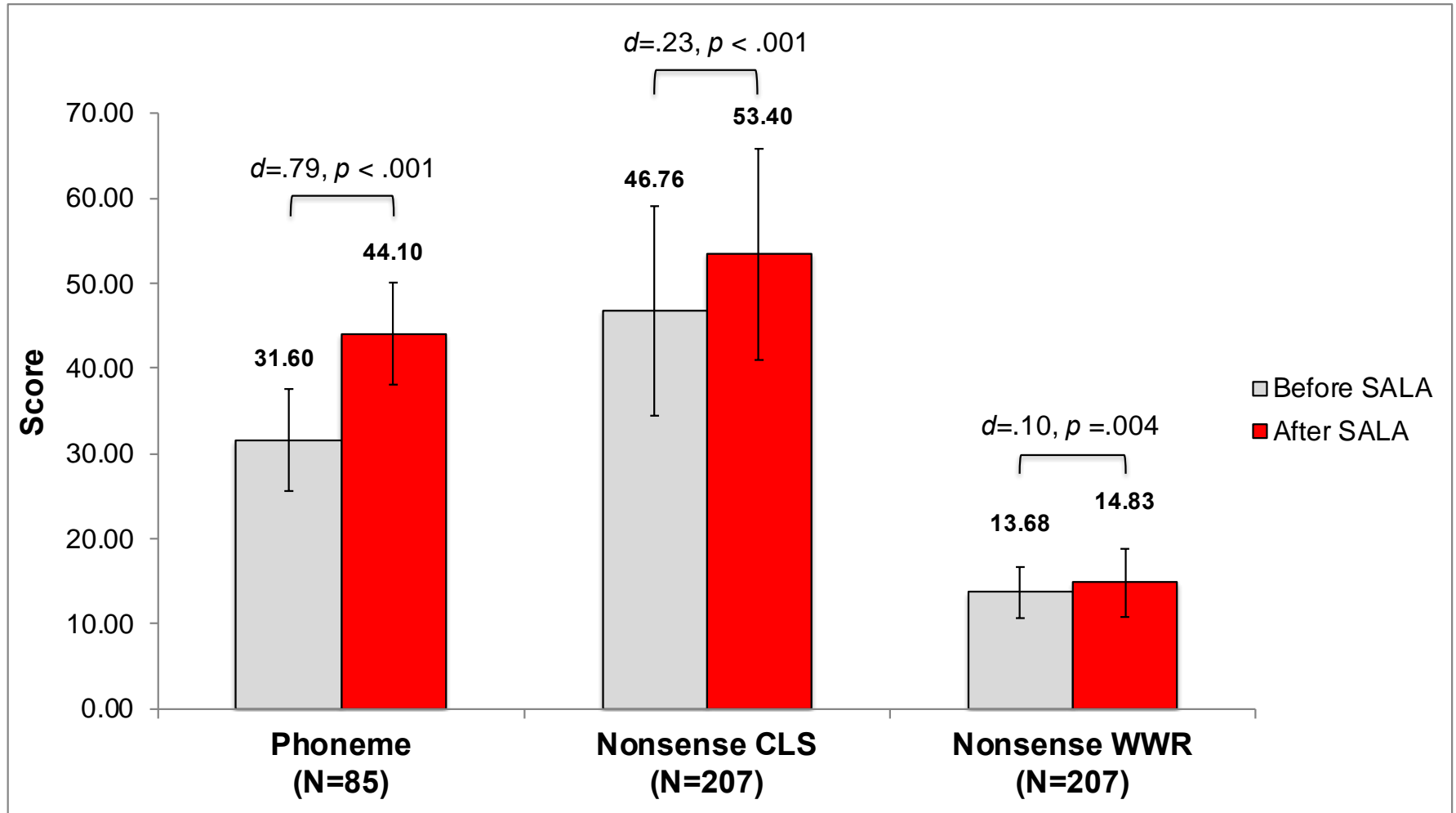


Does SALA Effect Vary By...

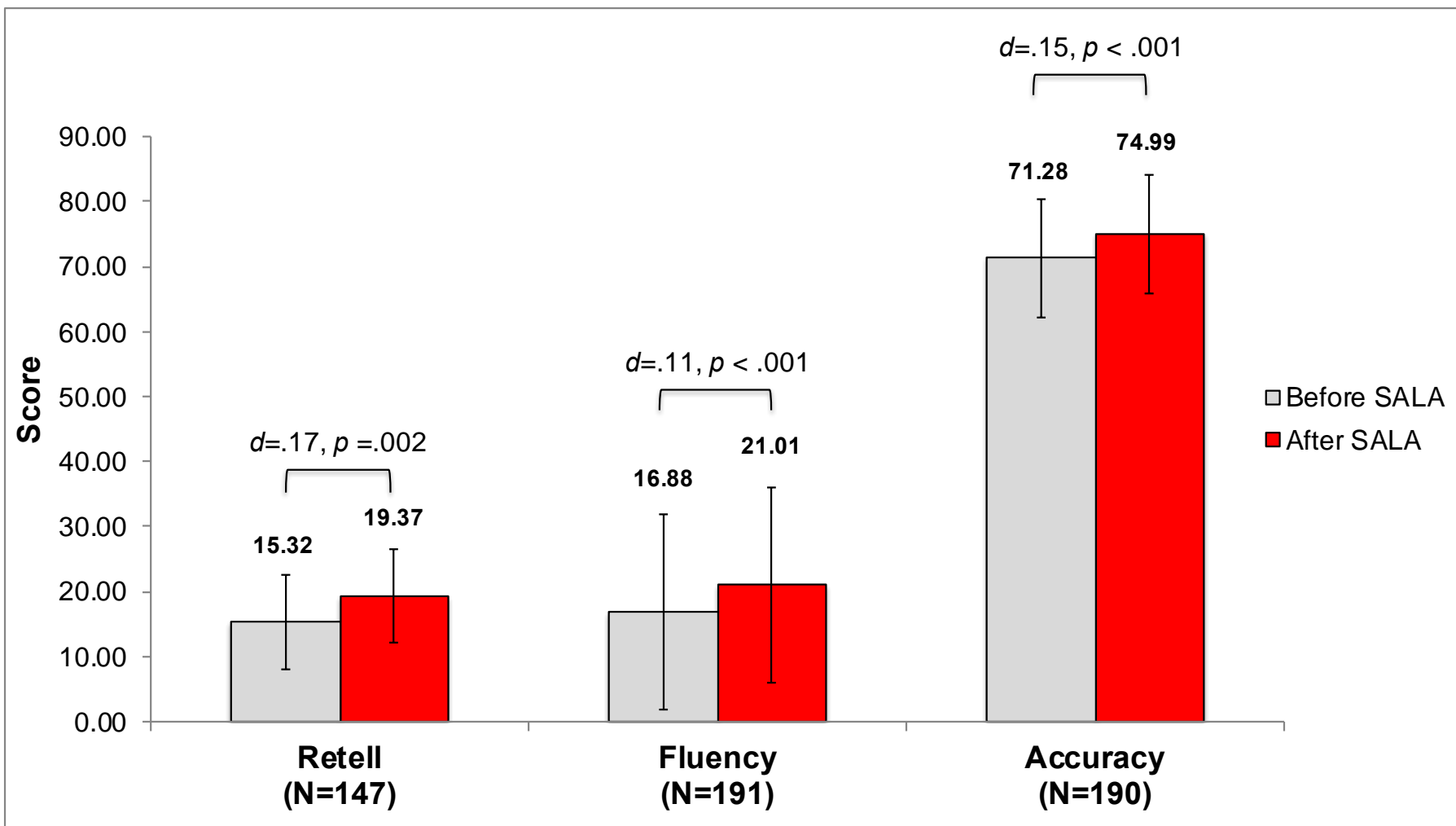
- Grade?
 - Yes, for math and writing structure score.
 - Effects were largest for younger students for math and for older students for writing structure.
- ESY Status? No.
- Reading Partners (RP) Participation?
 - Yes. Effects were largest for students in reading partners.
- Current or Prior Attendance? No.
- End of Year Grade Level?
 - Yes, for math.
 - Effects were largest for students below grade level.
- Teacher Experience?
 - Yes, effects for math and writing were largest for students with returning teachers.

**DIBELS:
Was There an Effect of SALA on Scores?**

DIBELS: Phoneme Segmentation and Nonsense Words



DIBELS: DORF

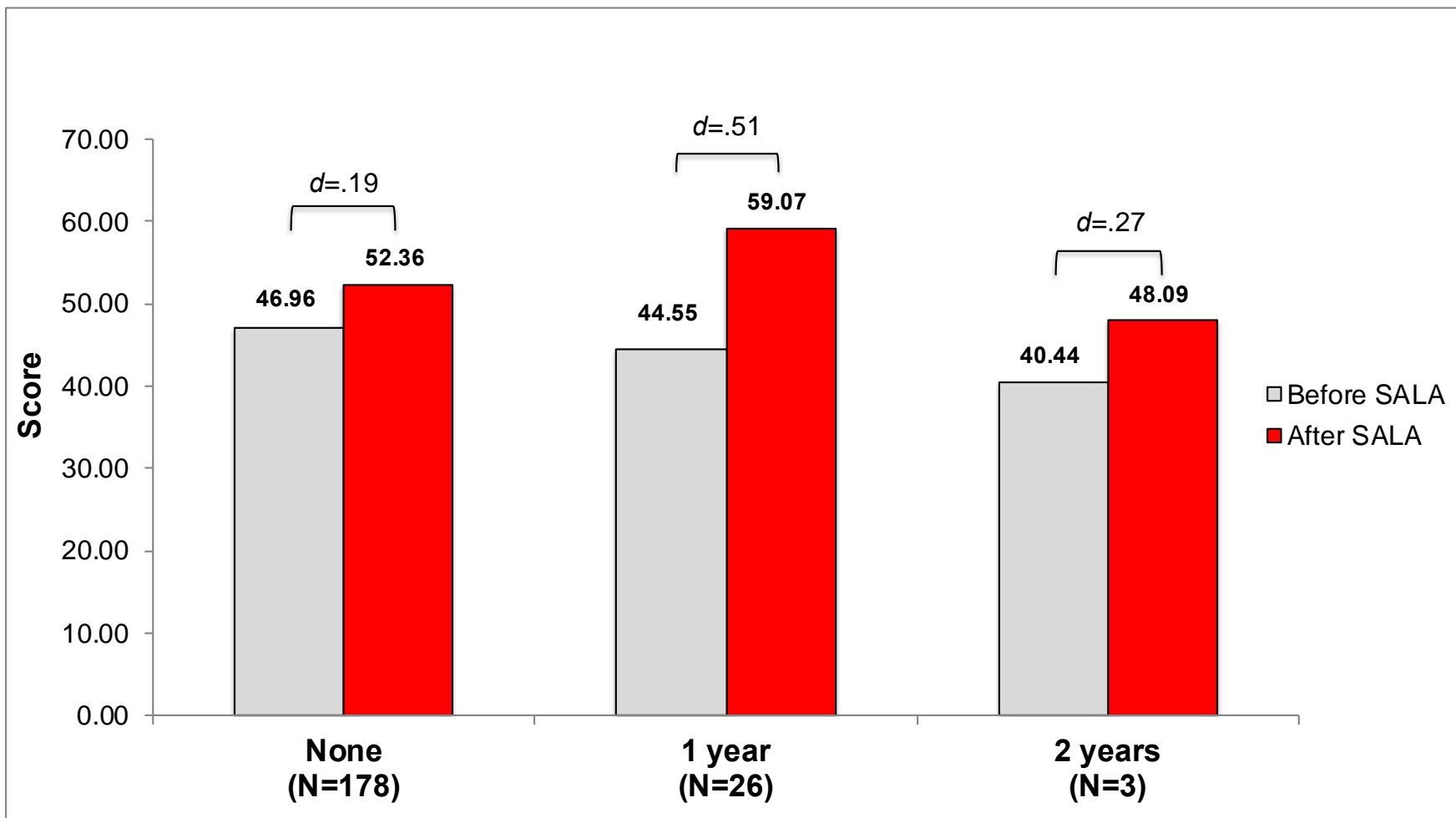


Was There an Effect of SALA on DIBELS Scores?

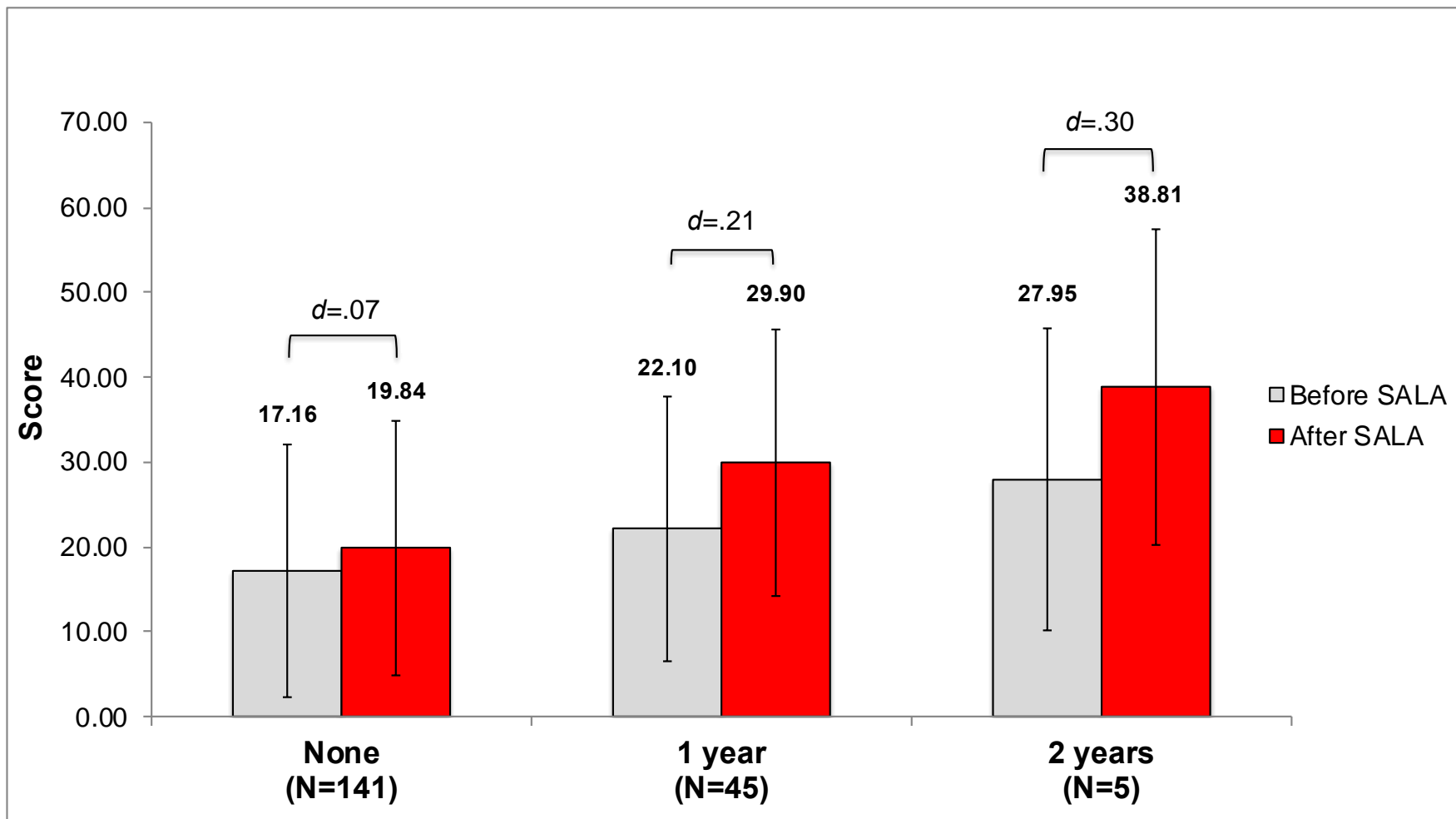
- Yes. However,
 - While all effects were statistically significant ($p < .05$)...
 - Not all effects were practically important ($d > .25$).
- Effects were practically important for:
 - Phoneme segmentation.
 - They were nearly practically important for Nonsense CLS.
- Effects were not practically important for:
 - Nonsense WWR and the DORF subscales.

DIBELS:
**Does SALA Effect Vary by Grade, ESY, Current
or Prior Attendance, Benchmark Status, or
Teacher Experience?**

DIBELS: Nonsense CLS by Prior Attendance



DIBELS: DORF Fluency by Prior Attendance

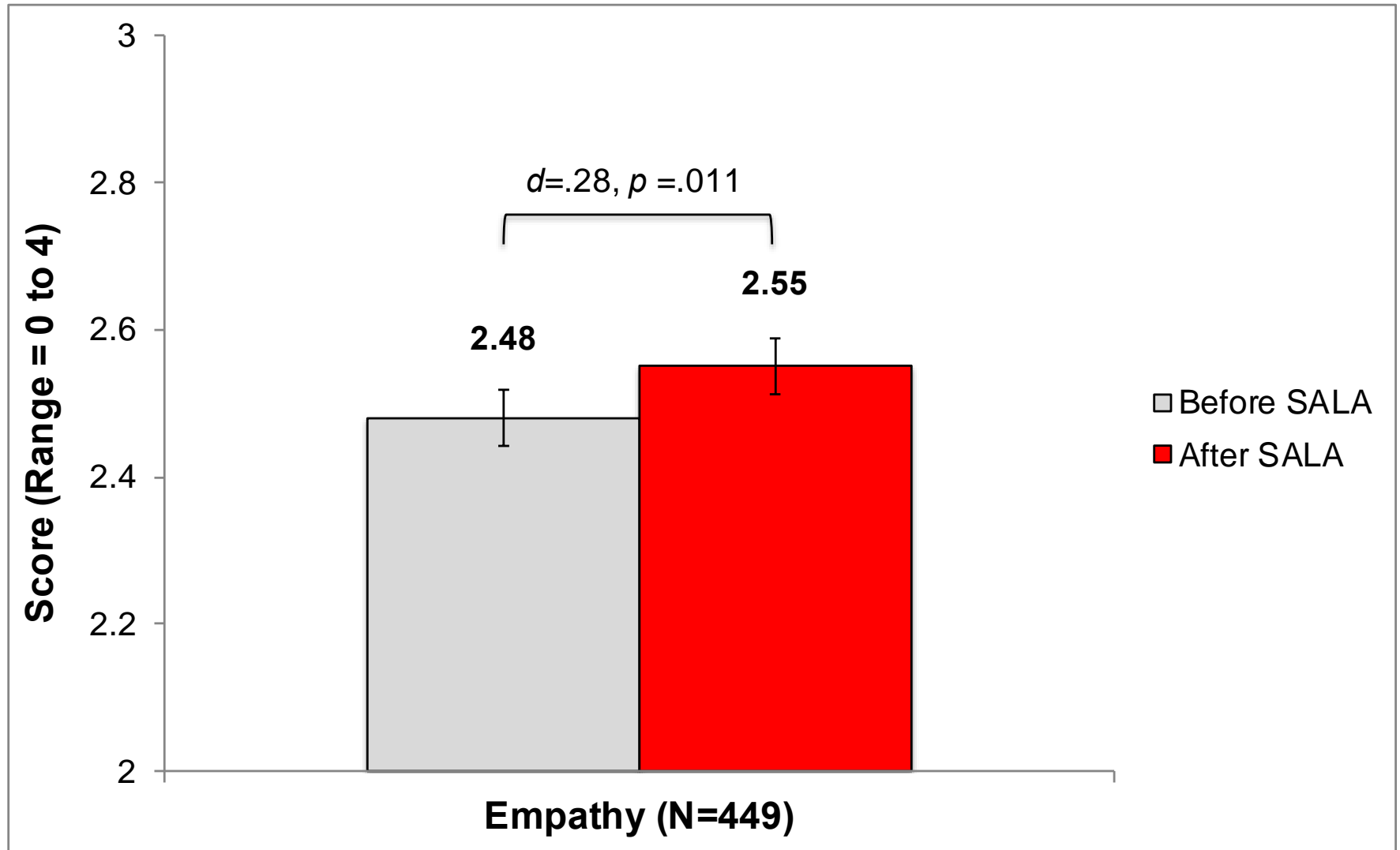


Does SALA Effect Vary By...

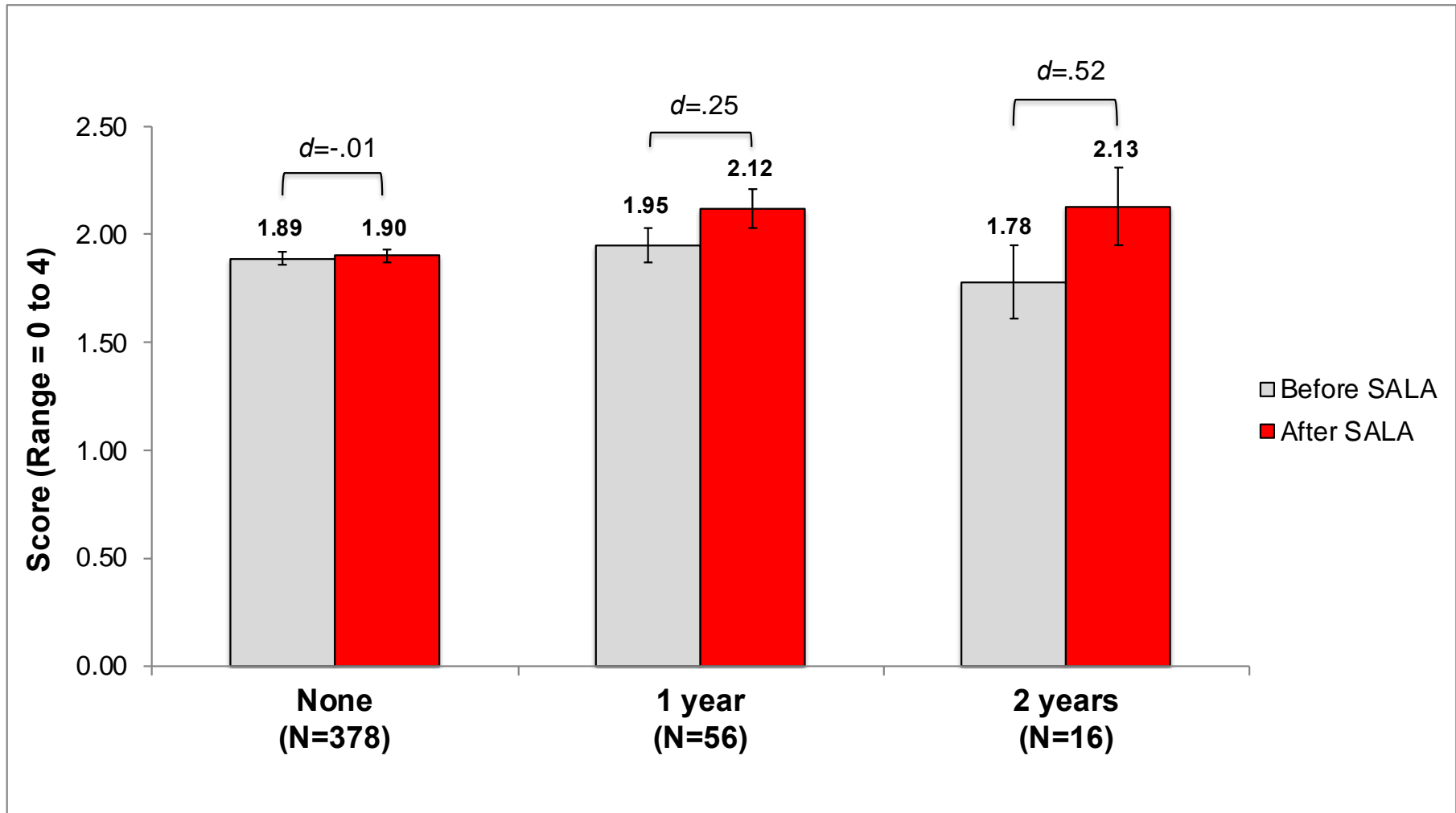
- Grade? No.
- ESY Status? No.
- Current or Prior Attendance?
 - Yes, for Nonsense CLS and DORF Fluency.
 - For both measures, effects were practically important (or nearly so) for students who had attended SALA in the past.
- Benchmark Status? No.
- Teacher experience? No.

Cooperation, Empathy, or Self-Control: Was There an Effect of SALA on Scores?

Parent-Reported Empathy



Parent-Reported Self Control: Differences in Effect Sizes by Prior Attendance



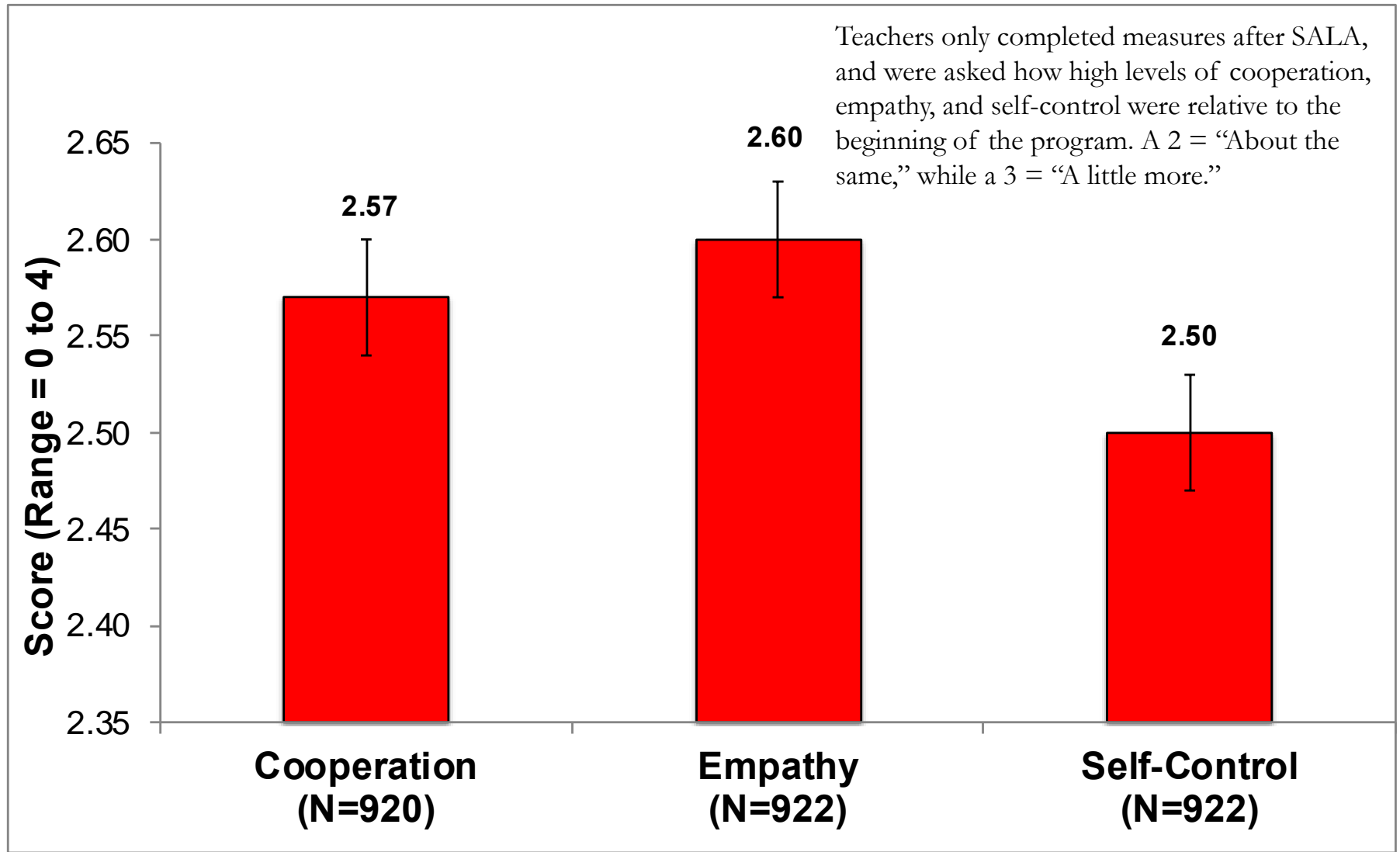
Was There an Effect of SALA on SEL Scores?

- Yes. An effect was observed for parent-reported empathy.
- However, effects were not observed for:
 - Parent-reported cooperation or self-control.
 - Student-reported SEL scores of any kind.
 - In fact, students exhibited significant *decreases* in scores.

Did SALA Effects Vary by...

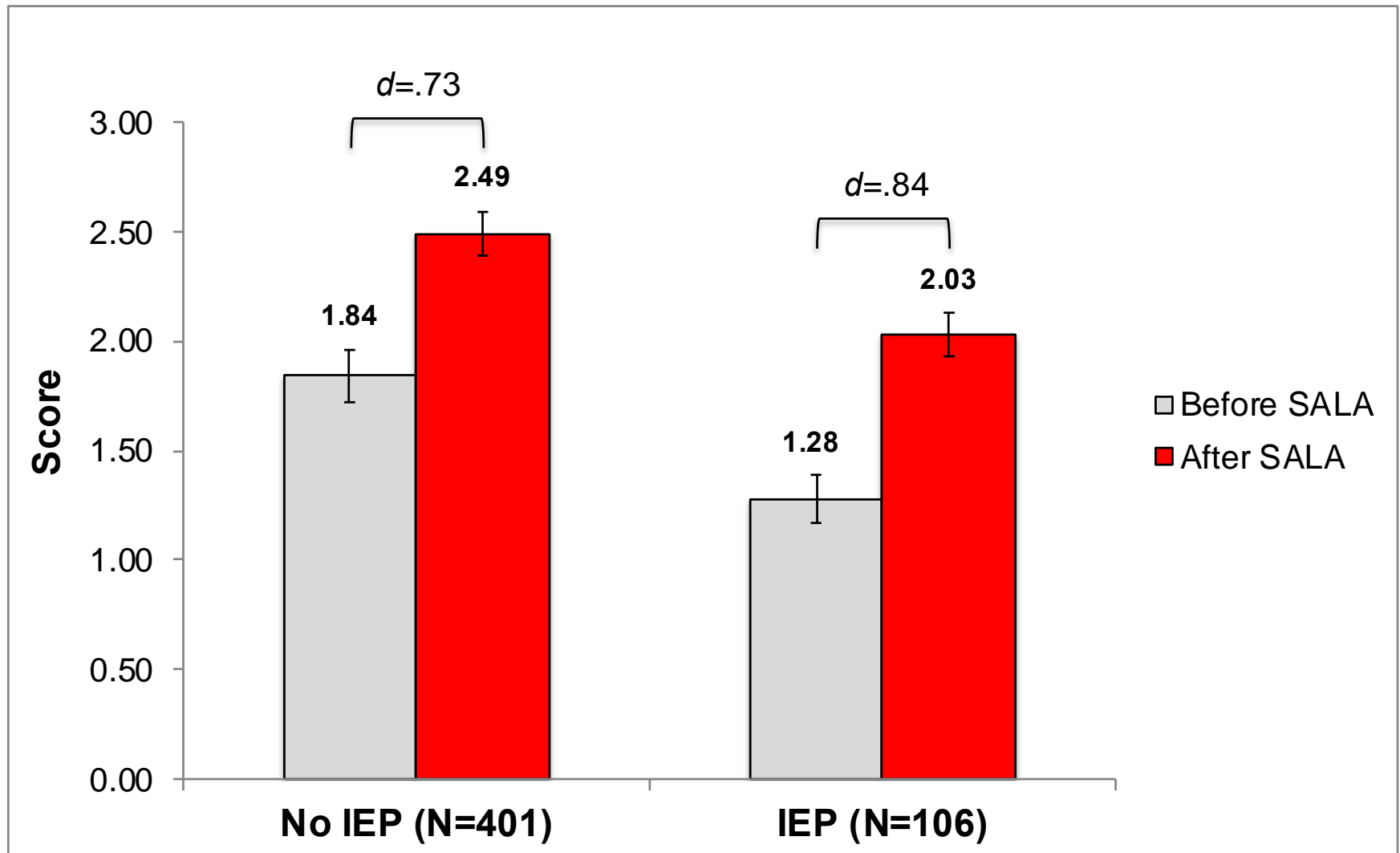
- Grade? No. ESY? No.
- Current or Prior Attendance?
 - Yes. Students who attended in prior years had higher parent-reported self-control.

Teacher-Reported Cooperation, Empathy, & Self-Control

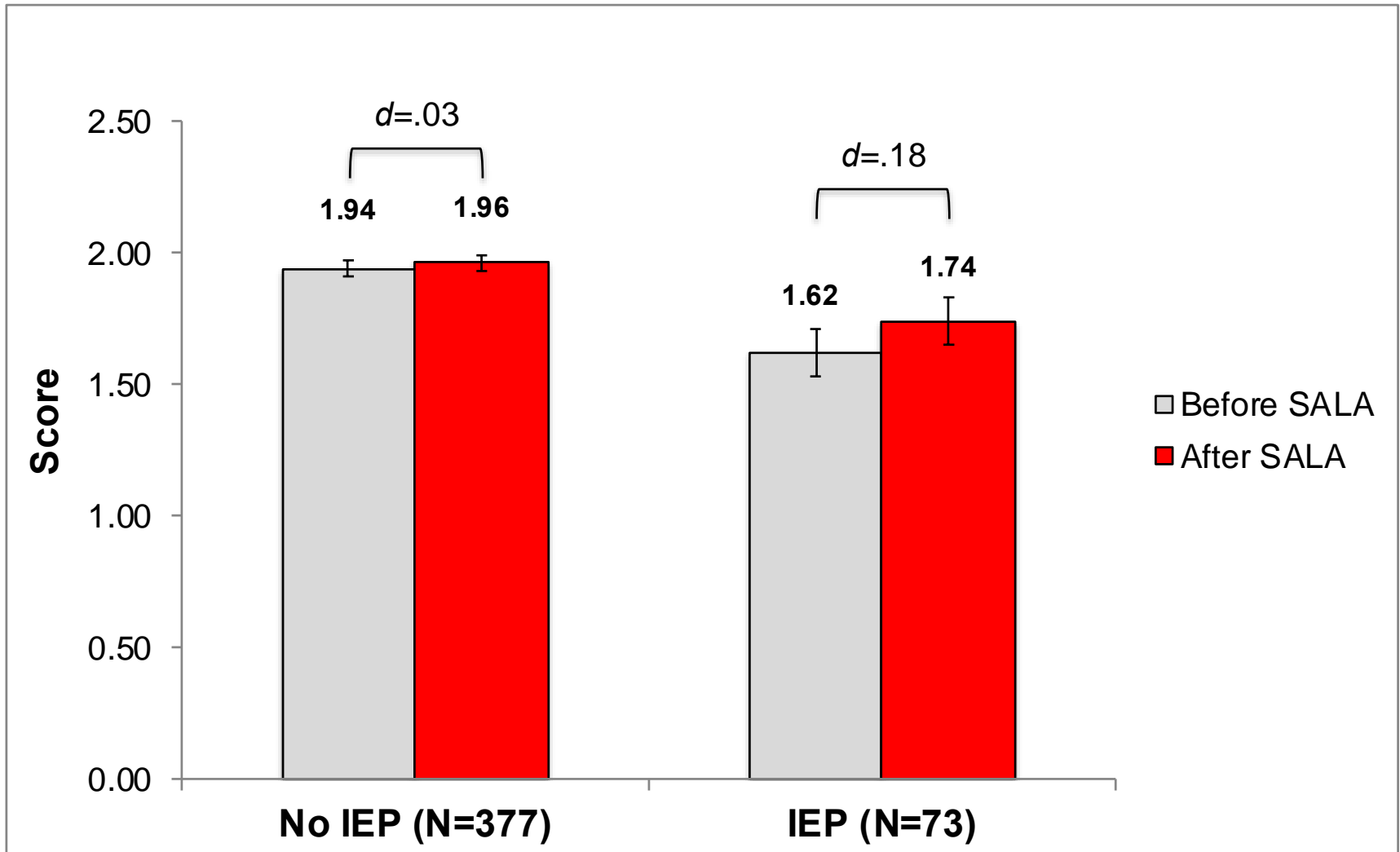


Unexpected Findings: Differences in SALA Effects by IEP Status

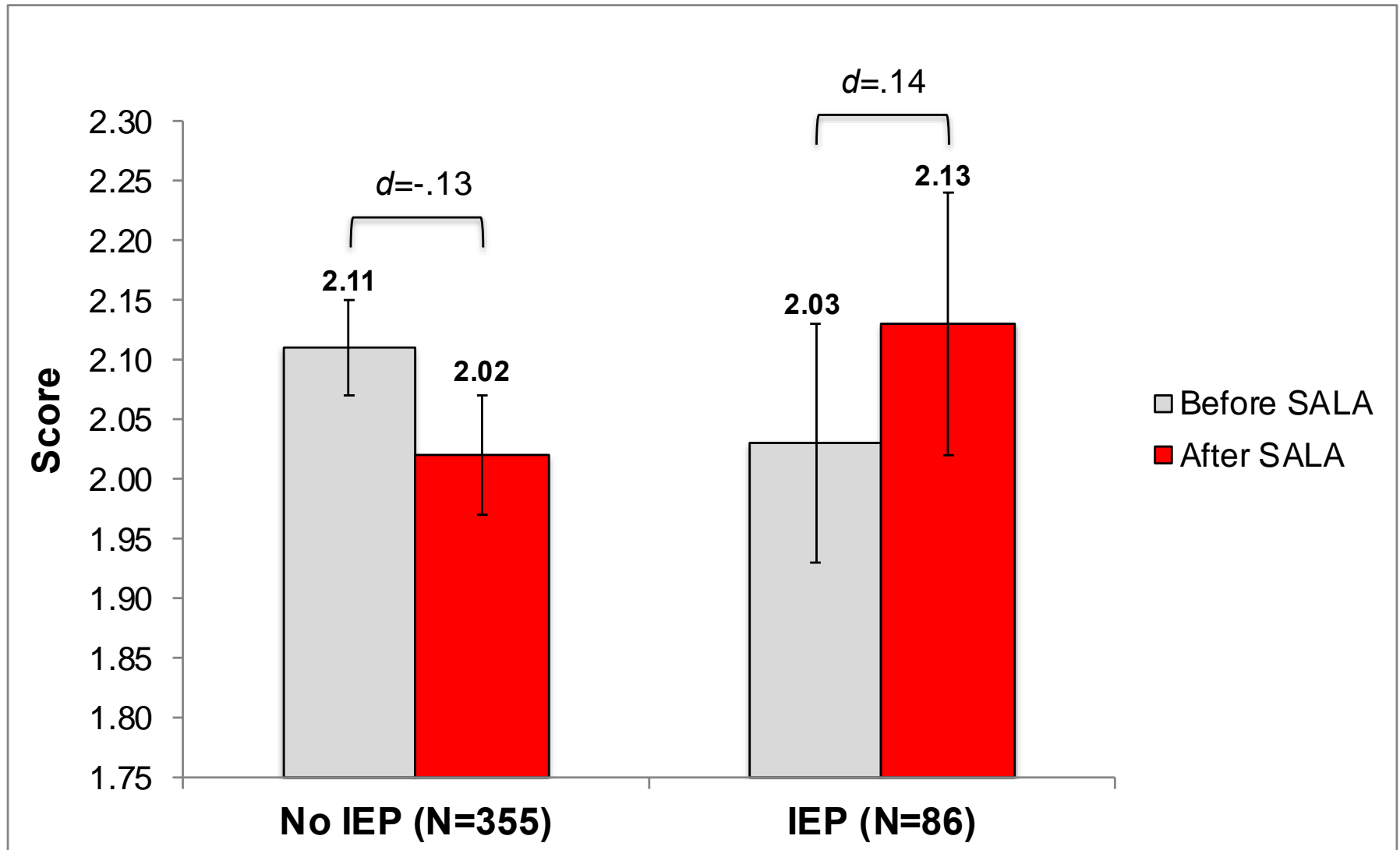
Writing Content Scores: Differences in Effect Sizes by IEP Status



Parent-Reported Self Control: Differences in Effect Sizes by IEP Status



Student-Reported Empathy: Differences in Effect Sizes by IEP



Unexpected Findings

- The increase in writing content scores were higher among students with an IEP classification than their peers.
- Increases in parent-reported SEL:
 - Approached the threshold for practical importance for cooperation for students with an IEP classification.
 - Exceeded the threshold for practical importance for self-control for students with an IEP classification.
- Students with an IEP classification reported increases in self-reported empathy.

Next Steps

- Add missing data
- Add classifications for:
 - New teachers
 - New sites
 - Reading Partners classification
- Re-run analyses and update
- Discuss procedures for 2019 evaluation:
 - Data collection: Retaining student and parent SEL measures?
 - Data management: Building a database for SALA?