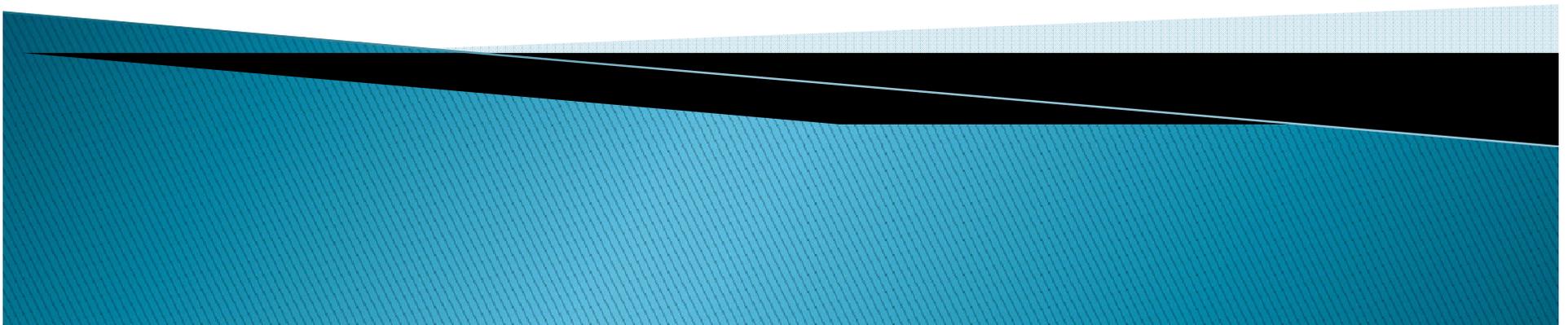


Testing for threshold in associations between child care quality and child outcomes

Q-DOT Team
SRCDD 2011 Montreal



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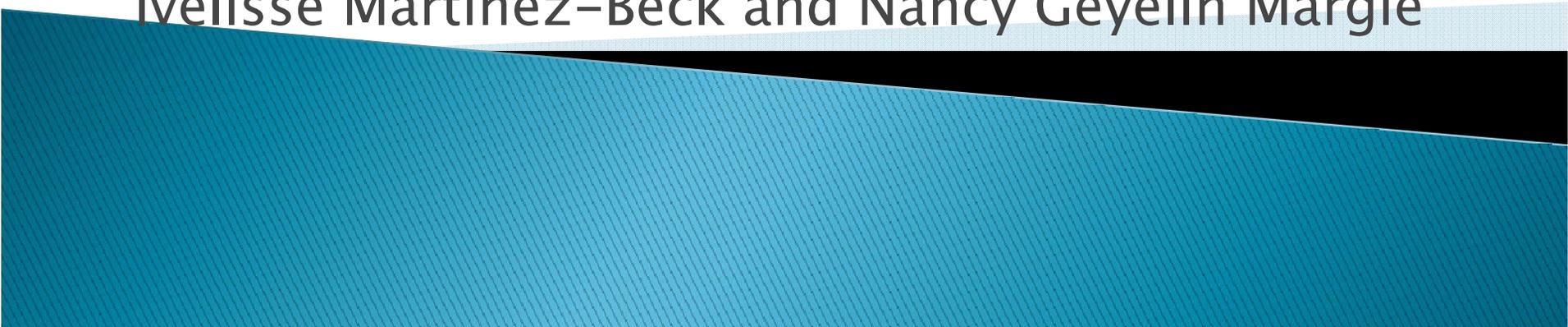
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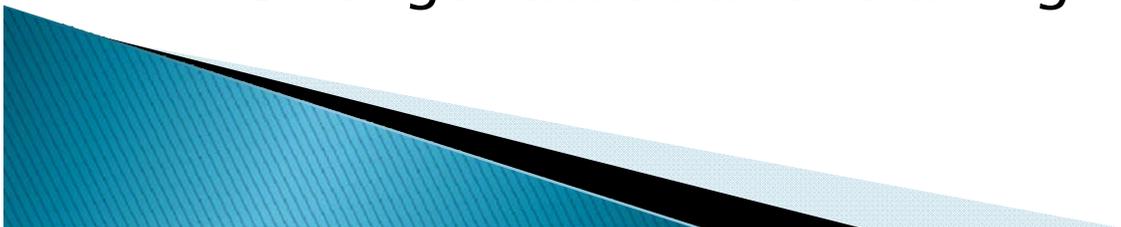
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Project funded by OPRE/ACF/DHHS
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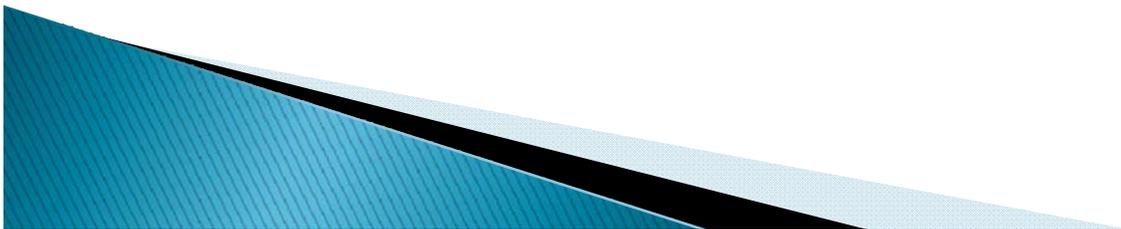
Background

- ▶ Heavy investment in publicly funded child care
 - Results: experimental and observational research
 - To date: mostly linear associations involving global quality measures
 - *Examine issues related to*
 - *Quality thresholds*
 - *Global and specific quality assessment*
- ▶ Two possible types of thresholds examined
 - Stronger association at lower levels of quality
 - Stronger associations at higher levels of quality:

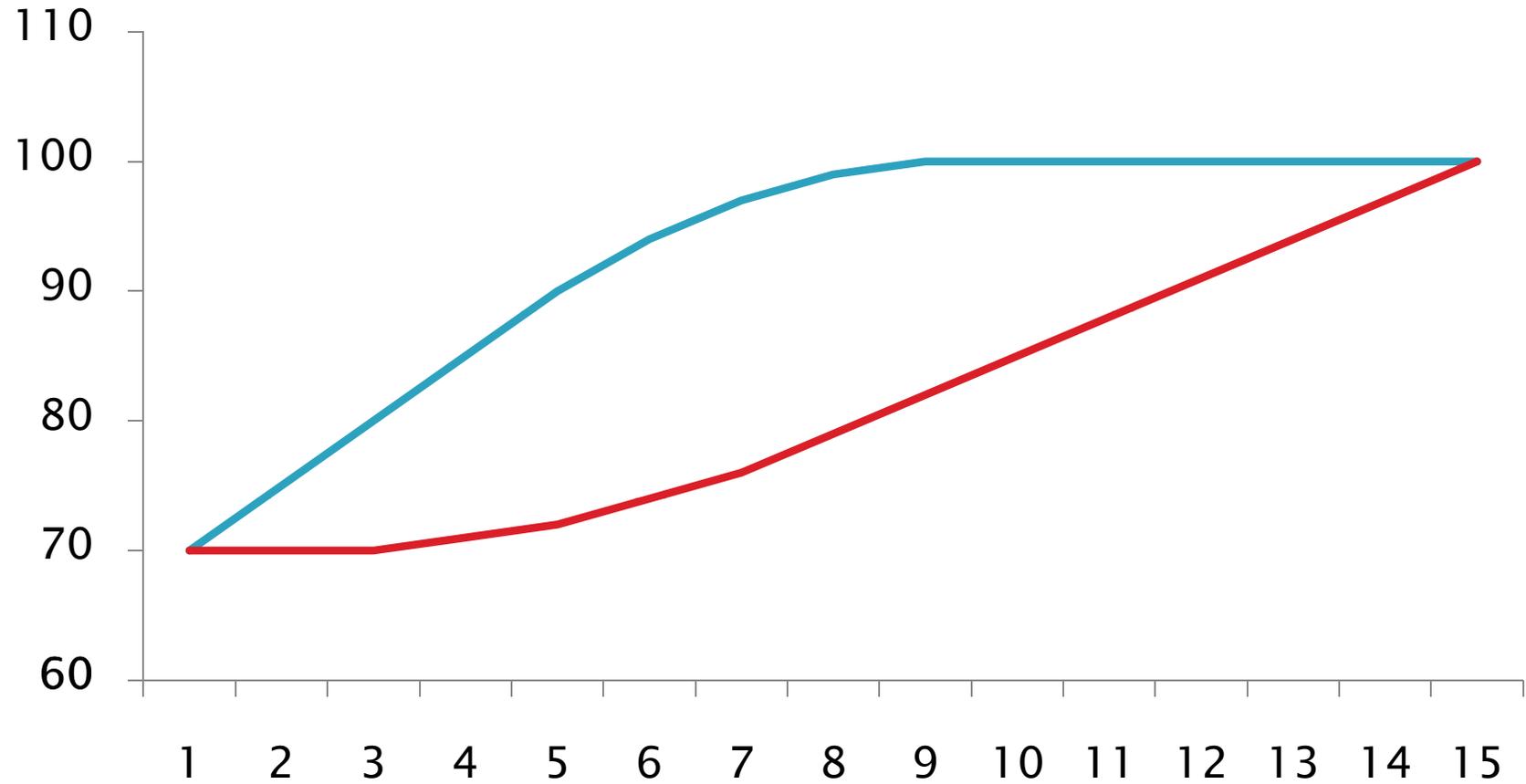


Quality, Dosage, Thresholds Study: Q-DOT: Research Questions

- ▶ Quality thresholds
 - Are there thresholds in the quality–outcomes association such that the relationship between quality and outcomes is stronger in higher quality classrooms?
- ▶ Global–specific quality measures
 - Are more specific quality measures better predictors of aligned child outcomes than more global quality measures?



Two examples of “Thresholds”

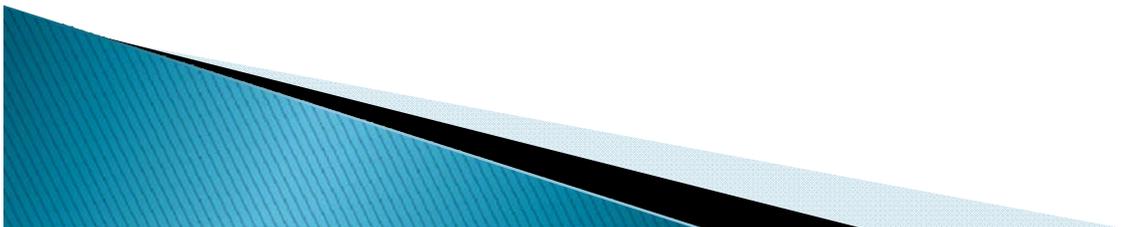


— Good enough — High Quality



Q-DOT: Design

- ▶ Secondary data analysis
 - Large child care studies
 - School readiness assessments
 - Preschoolers
 - Baseline and endpoint
 - Direct assessment of classroom quality
 - Global and specific
 - Global Quality
 - Teacher-Child Interaction Specific Quality
 - Domain Specific Quality



Q-DOT: Projects

- ▶ Head Start Family and Child Experiences Survey (FACES) – 2006
 - ~3000 children in ~ 335 classrooms
 - ▶ Early Head Start Follow-Up (EHS)
 - ~1500 children in ~ 1000 classrooms
 - ▶ More-at-Four (MAF): evaluation of NC Pre-K
 - ~1200 children in ~ 200 classrooms
 - ▶ NCEDL 11-state Pre-K study
 - ~2400 children in ~ 700 classrooms
- 

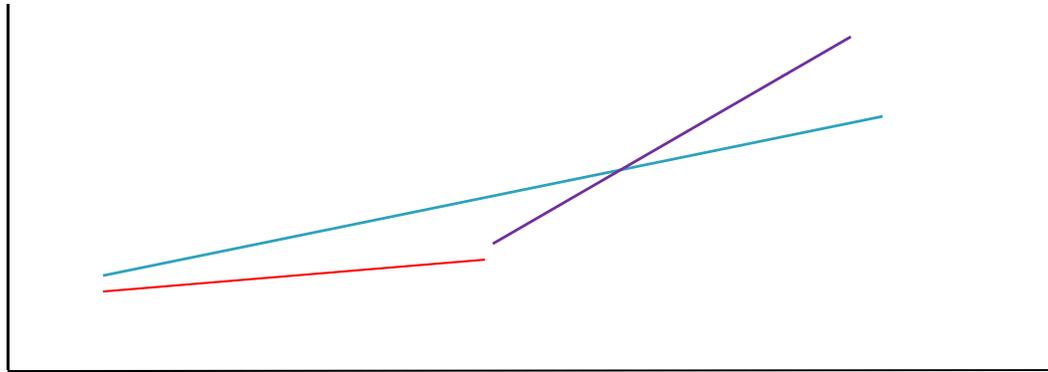
Q-DOT: Projects

- ▶ **Preschool Curriculum Evaluation Research (PCER) Study**
 - ▶ ~2700 children in ~ 1000 classrooms
- ▶ **My Teaching Partner (MTP): Professional Development project in VA Pre-K**
 - ▶ ~600 children in ~ 1000 classrooms
- ▶ **NICHD Study of Early Child Care (SECC)**
 - ▶ ~1000 children in ~ 1000 classrooms
- ▶ **Miami/Dade County Literacy Intervention Studies**
 - ▶ ~1500 children in ~ 750 classrooms



Q-DOT: Approach

- ▶ 2-level HLM analyses of project data
 - Quadratic quality (reduced to linear when quadratic term was nonsignificant)
 - “Spline”: allow separate linear slopes in lower and higher quality classrooms



Q-DOT: Approach

- ▶ Separate analyses
 - For each quality score and outcome in each project
- ▶ Effect sizes:
 - $d = B \text{ sd}(\text{quality}) / \text{sd}(\text{outcome})$
- ▶ Meta-analysis combined results across projects
- ▶ Outcomes: Spring Pre-K assessments of
 - Language (PPVT, TOPEL)
 - Reading (WJ LW, TOPEL)
 - Math (WJ AP)
 - Social Skills (SSRS, TCRS, BPI)
 - Behavior Problems (SSRS, CBCL, TCRS, BPI)



Q-DOT: Approach

▶ Quality Measures

- Global:
 - ECERS-R
- Teacher-child interaction specific:
 - CLASS, ORCE
- Domain specific:
 - TBRS, ELLCO, OMLIT

▶ Covariates:

- Child: child's baseline score, gender, race, elapsed time between fall and spring assessment
- Family: English spoken at home, mother's education or family poverty



Q-DOT: Approach

▶ Spline cut-points

- Same cut-points used with all projects
- Chosen theoretically – “high quality” and adapted if insufficient sample size

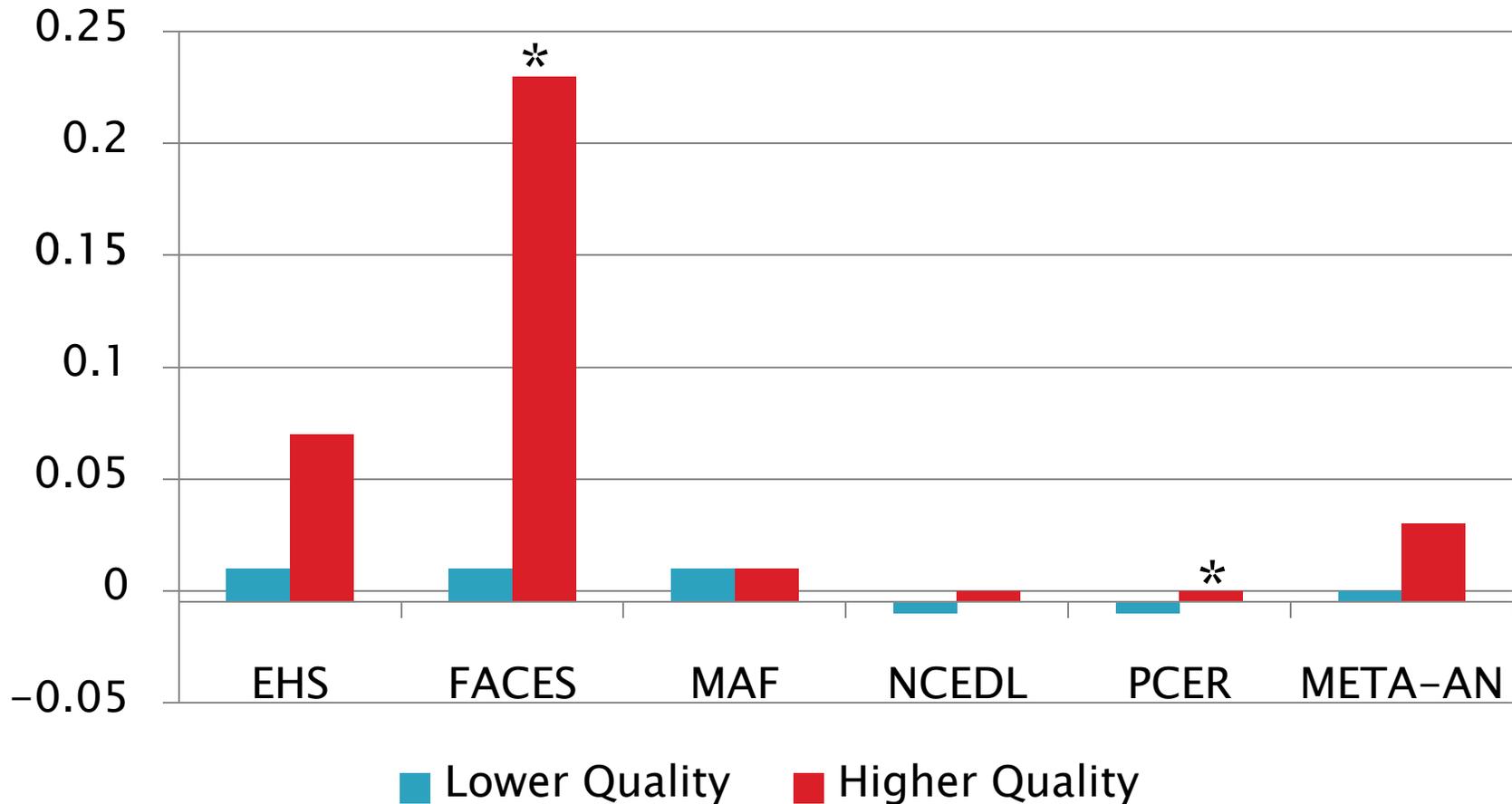
▶ Cut-points

- ECERS-R: 4.5:
 - ECERS total, ECERS Interactions, ECERS Materials (range 1–7)
- CLASS 5.0:
 - CLASS Emotional Support Classroom Management (range 1–7)
- CLASS 2.75:
 - CLASS Instructional Support and CLASS Language Modeling (range 1–7)
- TBRS 2:Literacy and Numeracy scales (range 1–3)
- ELLCO Literacy Scale 4: (range 1–7)
- ORCE Positive Caregiving 3: (range 1–4)



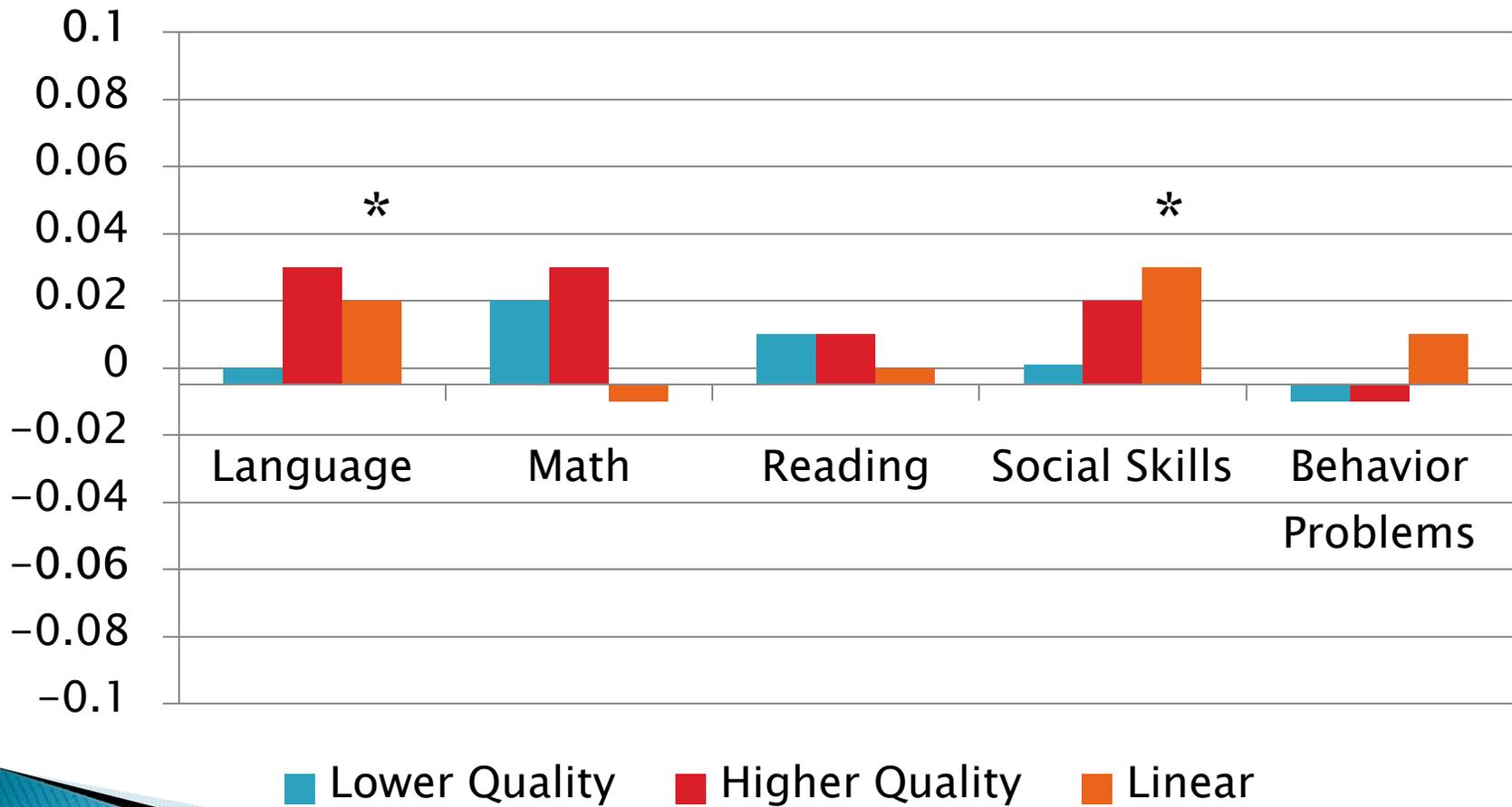
Findings: Thresholds?

ECERS Total and Language Skills

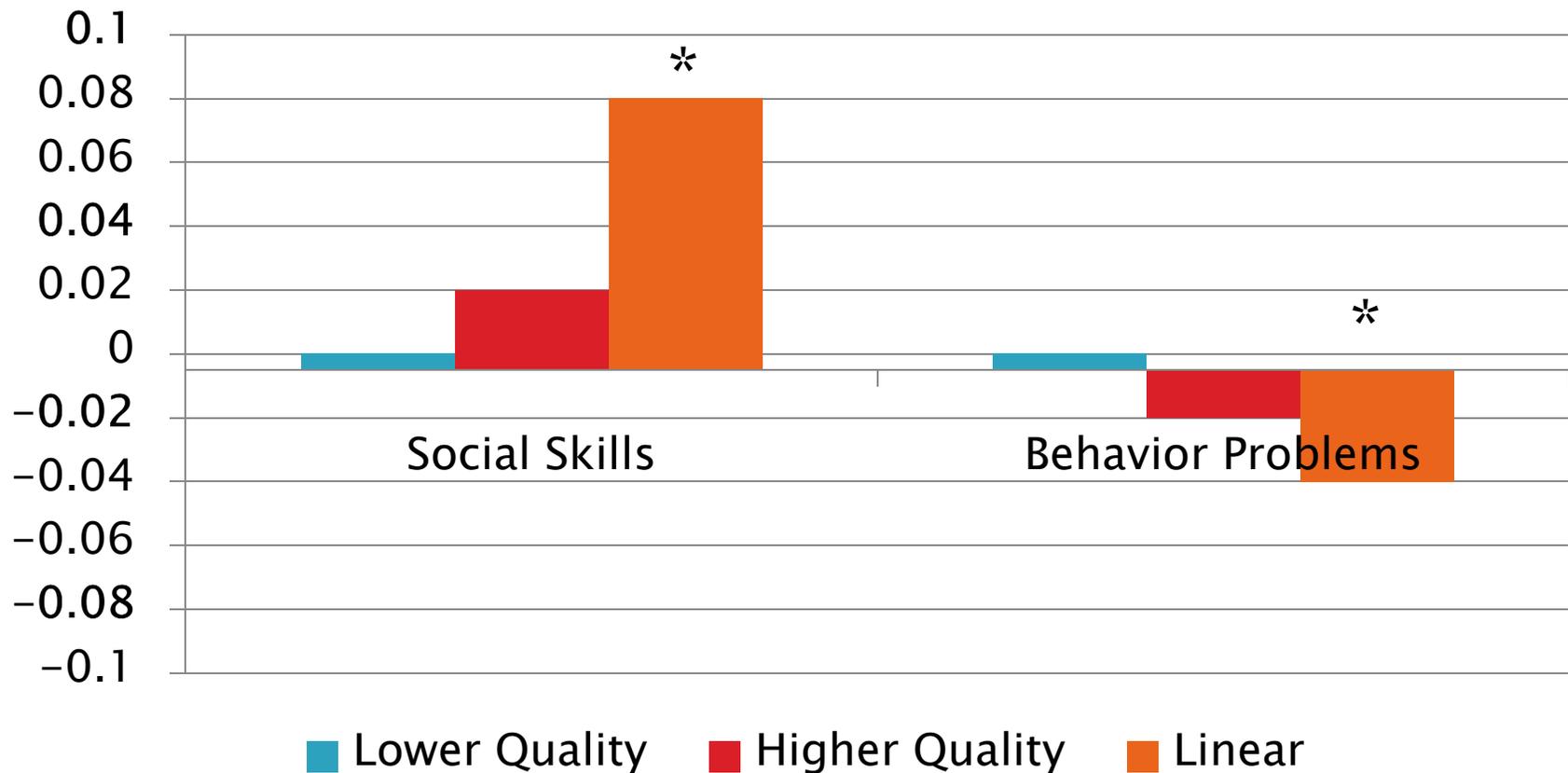


Findings: Thresholds?

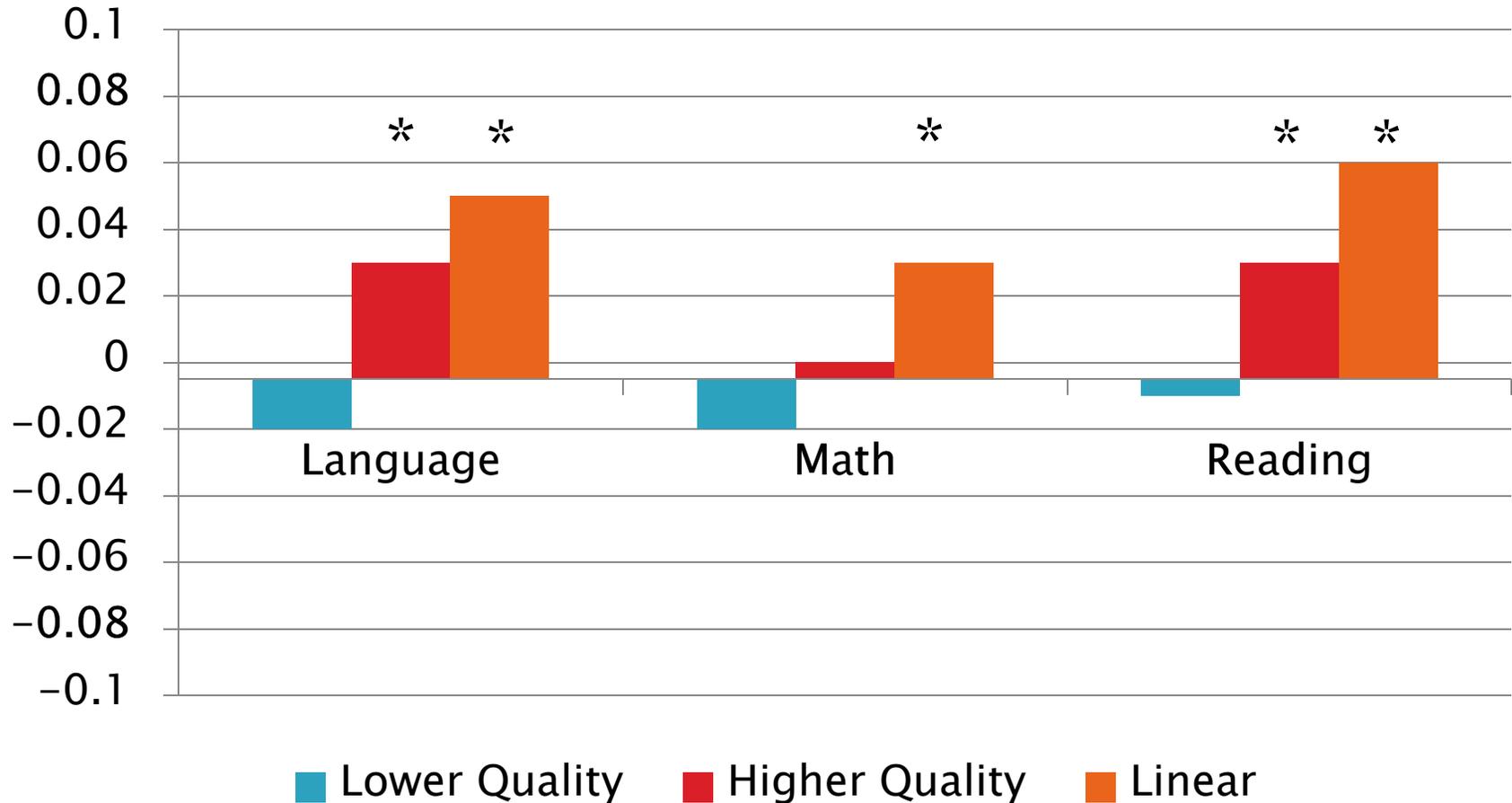
Global Quality: Meta Analysis for ECERS Total



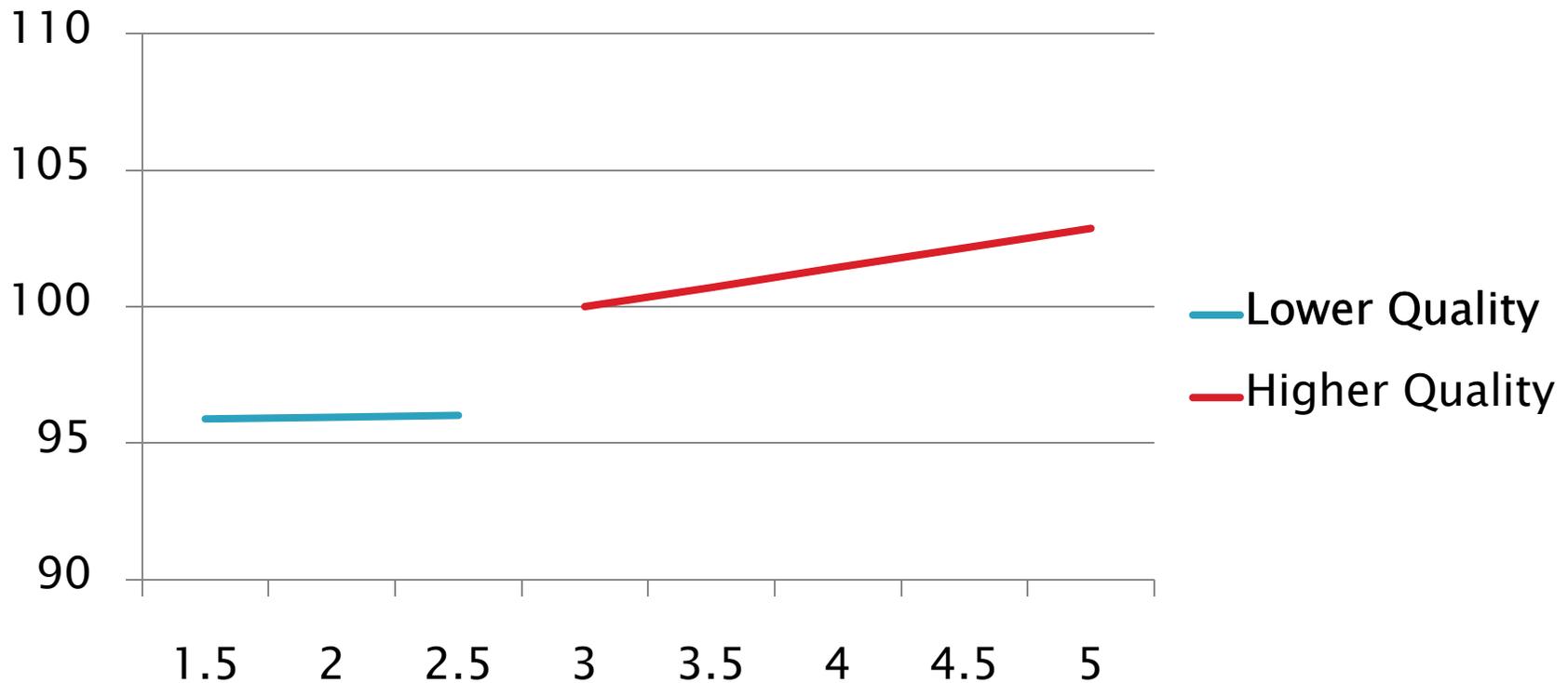
T-C Interaction Specific Quality: CLASS Emotional Support



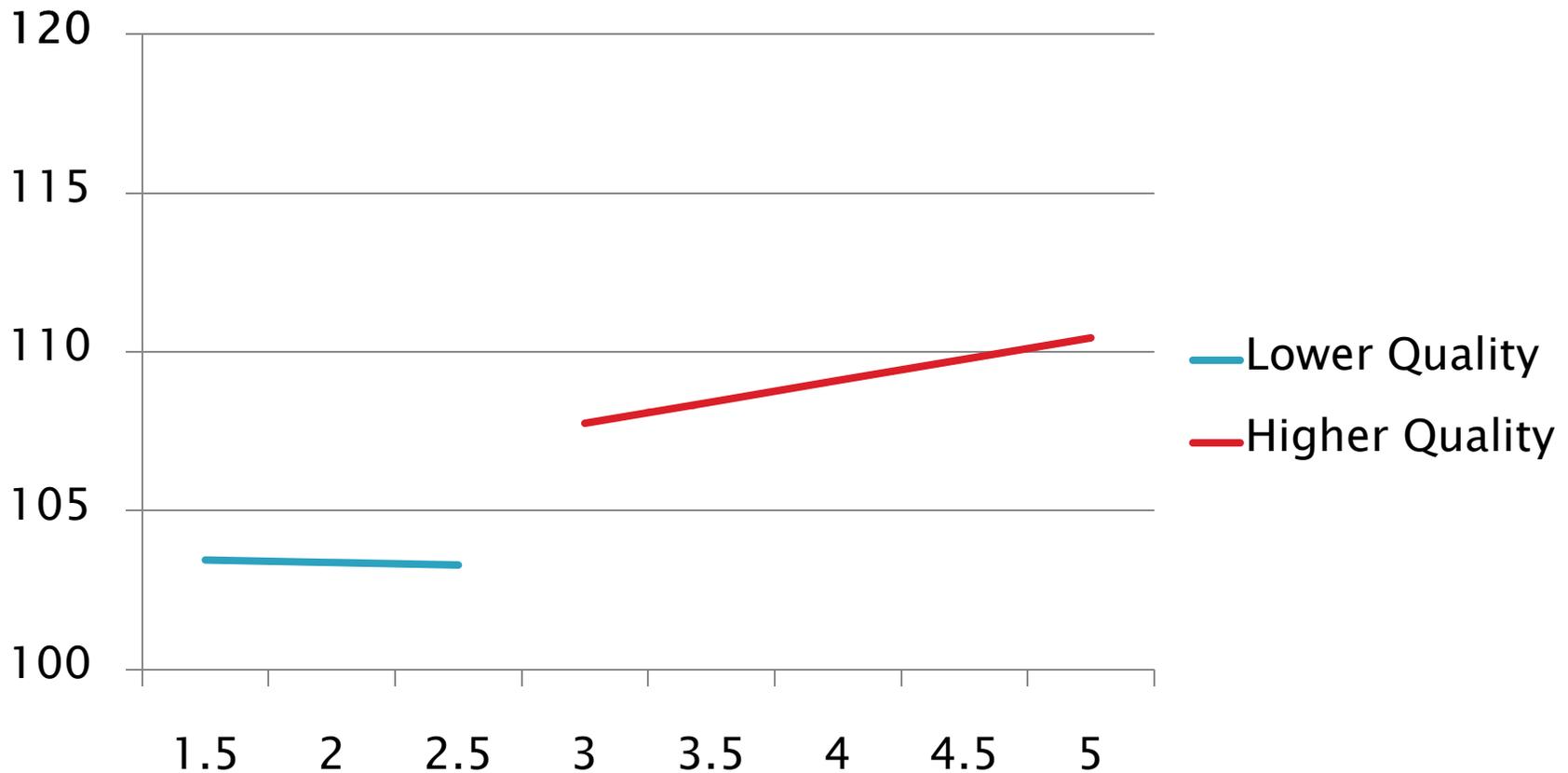
T-C Interaction Specific Quality: CLASS Instructional Support



Thresholds? Predicted NCEDL language means by level of CLASS Instruction Support

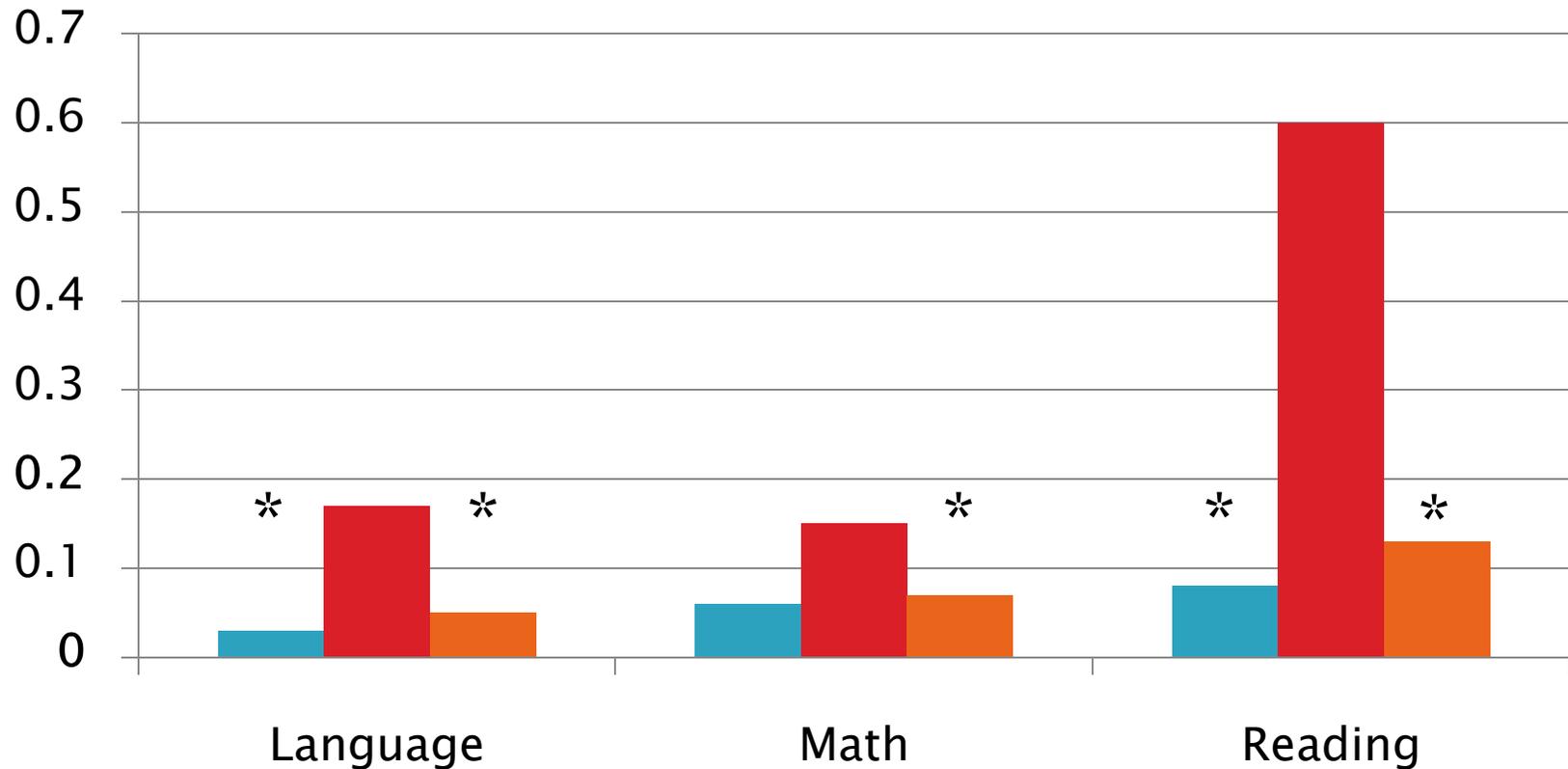


Thresholds? Predicted NCEDL reading means by level of CLASS Instruction Support



Domain Specific Quality

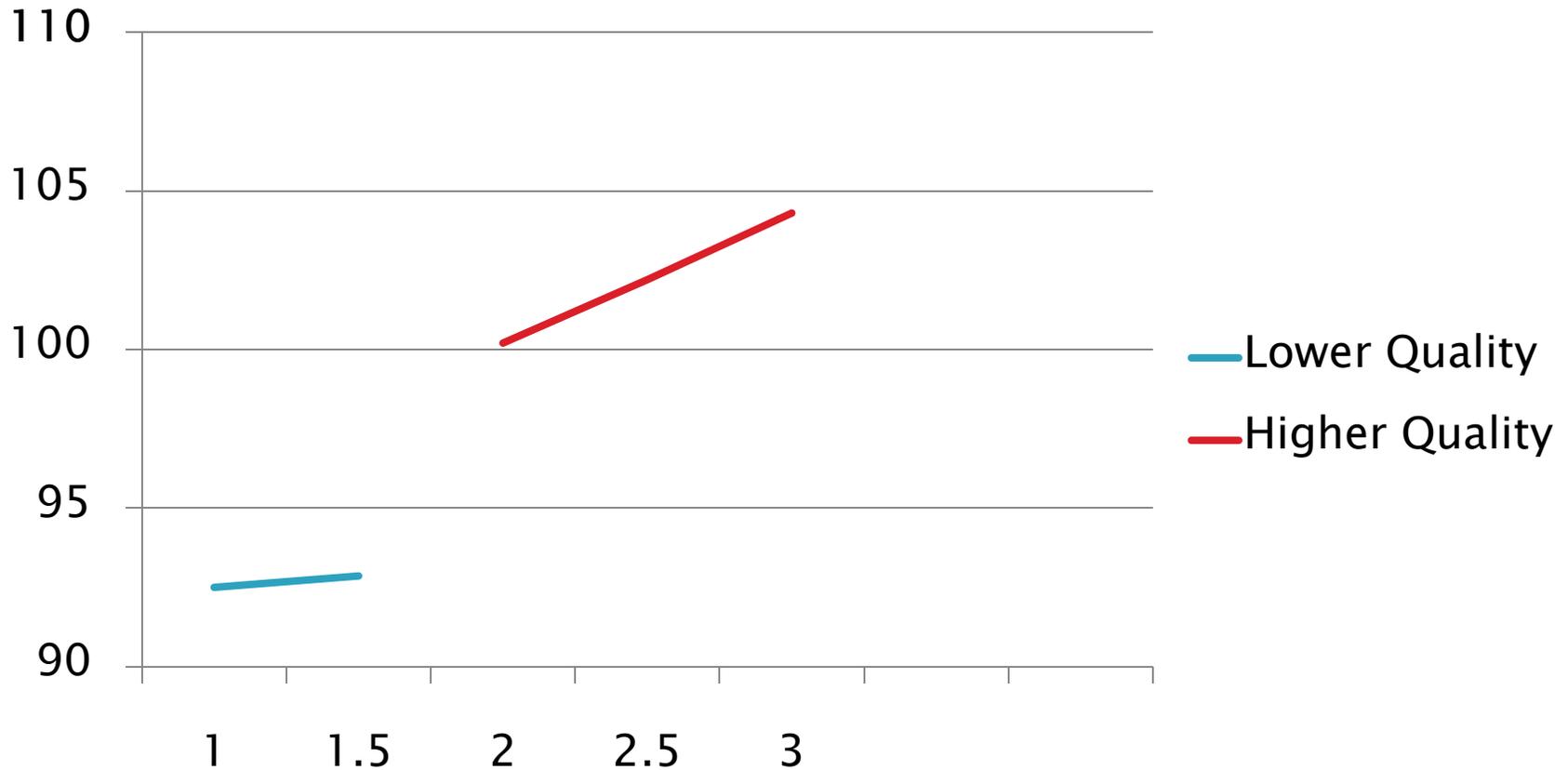
TBRS: PCER only



■ Lower Quality ■ Higher Quality ■ Linear

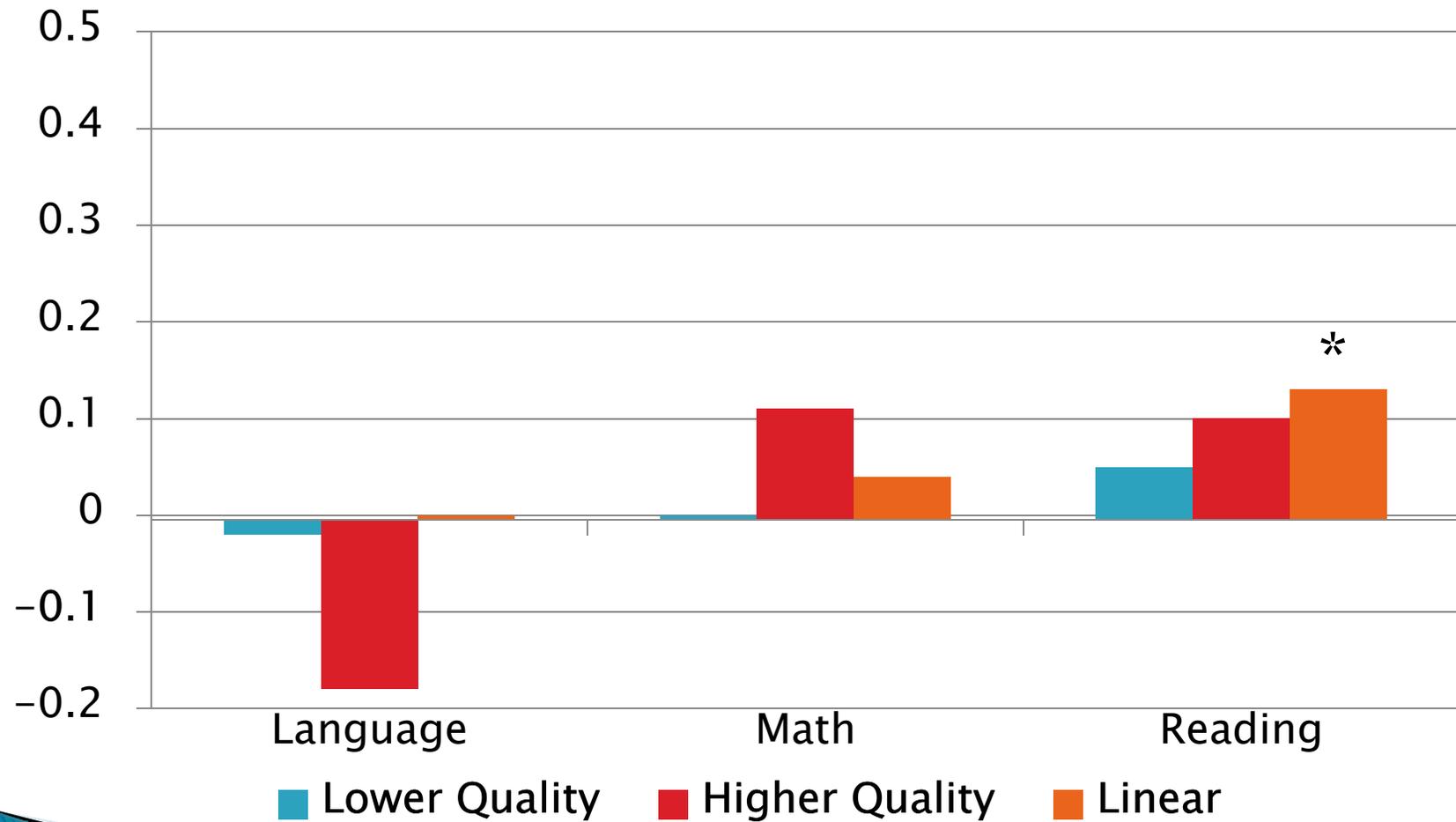


Thresholds? Predicted PCER language means by level of TBRS Literacy Quality



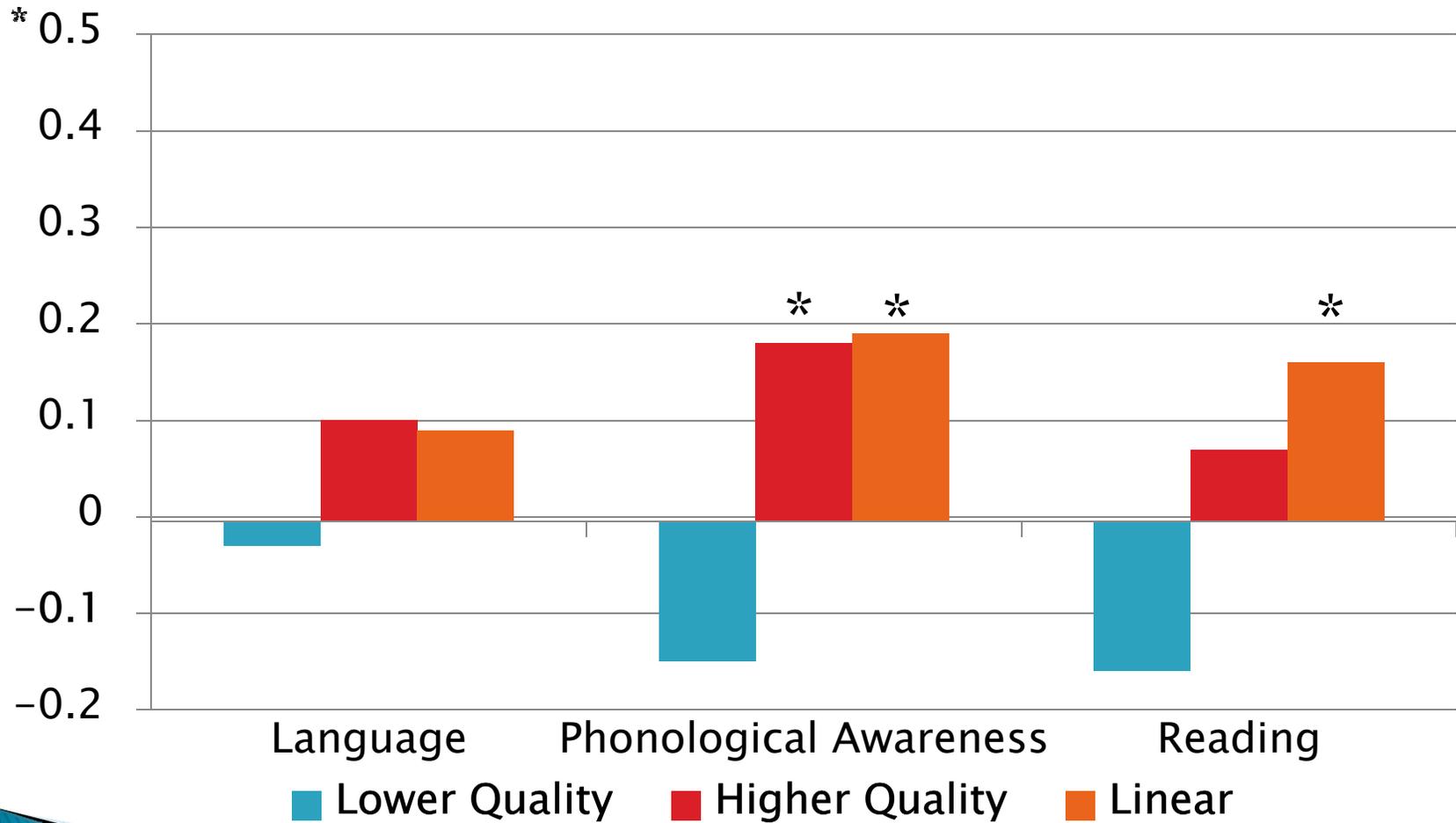
Domain Specific Quality

ELLCO: MAF only



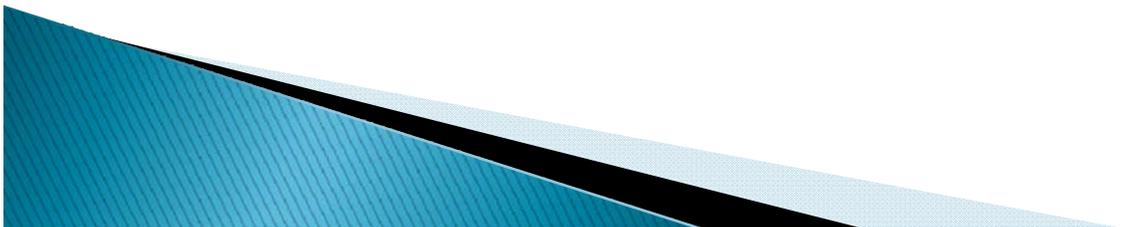
Domain Specific Quality

OMLIT: Miami/Dade Co. only



Summary

- ▶ Some, albeit somewhat mixed, evidence for
 - Thresholds, especially in instructional quality measures
 - Better prediction to child outcomes from more specific than global quality measures
- ▶ Cautions
 - Evidence is not overwhelming
 - We did not empirically identify cut-points



Summary

- ▶ We are not seeing confirmation of a "good enough" level of quality;
 - Instead, we see that you may need to focus on two approaches:
 - 1) focus bumping lower-quality programs up into an "active range" where there is a relationship to child outcomes and
 - 2) encourage continuous improvement within the higher-quality range
- ▶ Thus, crossing a cut-point is not sufficient – it is just the first step.

