



**15TH NATIONAL
CONVENTION
ON STATISTICS**

03-05 OCTOBER 2022

*Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority*



Understanding the predictors of achievement and growth from Kindergarten to Grade 4 in the Philippines

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Australian Council for Educational Research

Child and Youth Development Indicators Session

Crowne Plaza Manila Galleria

4 October 2022, 3.30-5.00pm

UNICEF Philippines Early Childhood Education Kindergarten to Grade 4 Longitudinal Study

Research Questions

- How do cognitive, social, and emotional skills of young children develop in **different contexts**?
- How does **participation in pre-school/day-care** relate to children's later cognitive, social and emotional development, learning experiences and performance in school?
- How do factors related to a child's **home, community, school and classroom**, in different contexts, affect cognitive, social and emotional development in children?
- How do children **transition from ECCD settings in different contexts**, and what part do schools play in supporting this transition?



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Research Design

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LUZON – 37%

20 schools

VISAYAS – 30%

21 schools

MINDANAO – 33%

20 schools

VARIABLES

Access to preschool/day care

Urban 45%

Rural 55%

Disaster-prone 70%

Conflict affected 10%

Urban Poor 41%

High SES 28%

Mid SES 27 %

Low SES 26 %

Main Island Group
Languages

• Tagalog 33%

• Cebuano 50%

• Maguindanaon 17%



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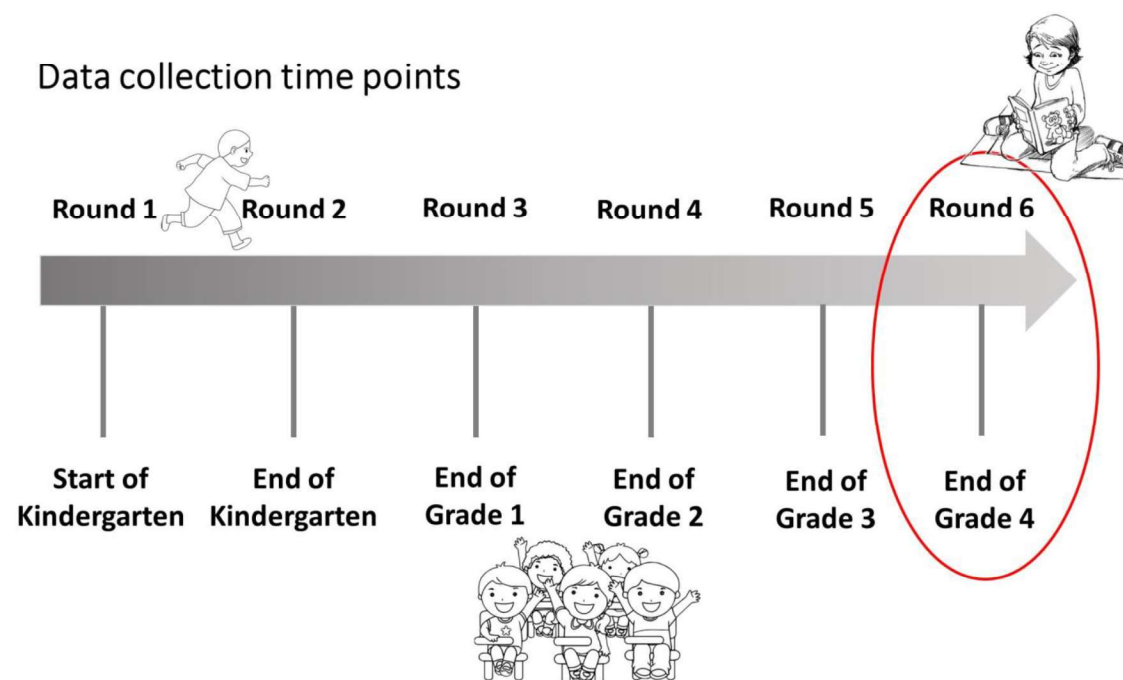
Research Design, cont'd

- Longitudinal
- Low attrition – retained variable group sizes

Instruments

- Literacy
- Mathematics
- Social-emotional development
- Teacher questionnaire
- School head questionnaire
- Parent questionnaire
- Case studies

Data collection time points





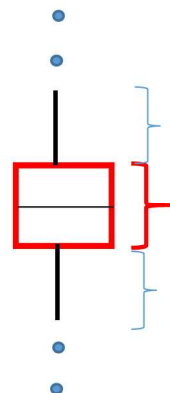
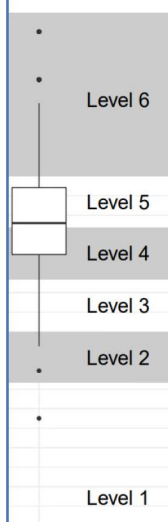
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Box Plots



Dots are top 5% of students*

Line is top 20% of students*

Box is middle 50% of students (horizontal line is the mean)

Line is bottom 20% of students

Dots are bottom 5% of students

* distributions for the upper 25% of students are misleading (see sub-heading below: 'Misleading distribution in Level 6')



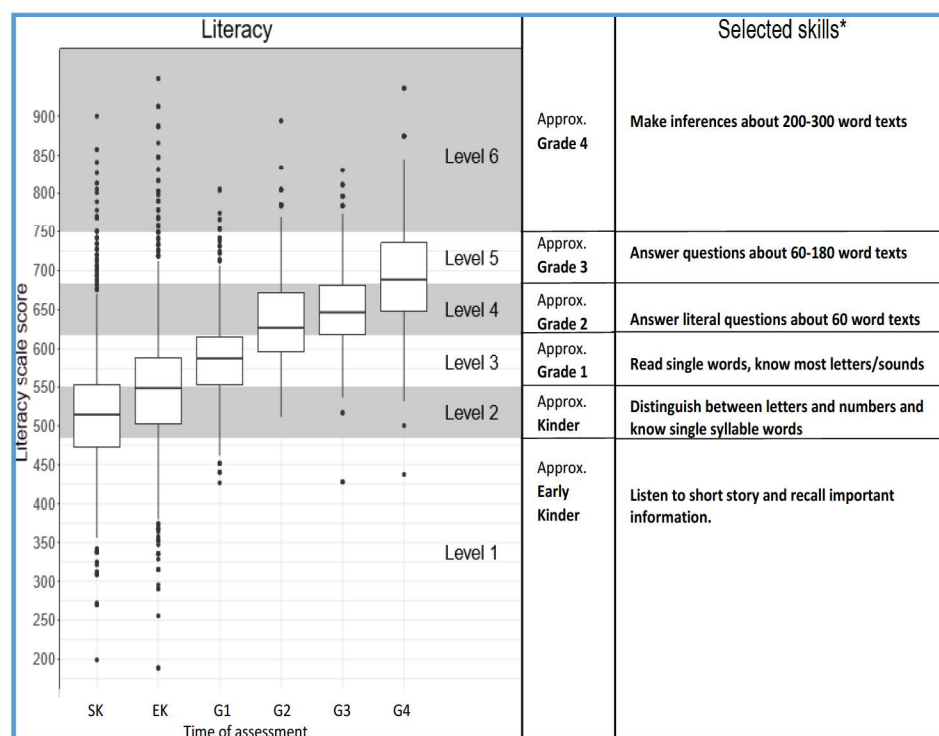
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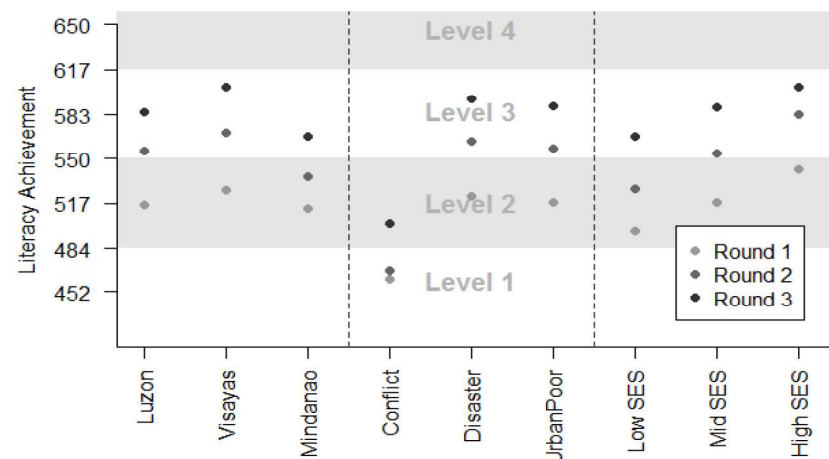
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Key findings – literacy



Start of Kindergarten to end of Grade 1





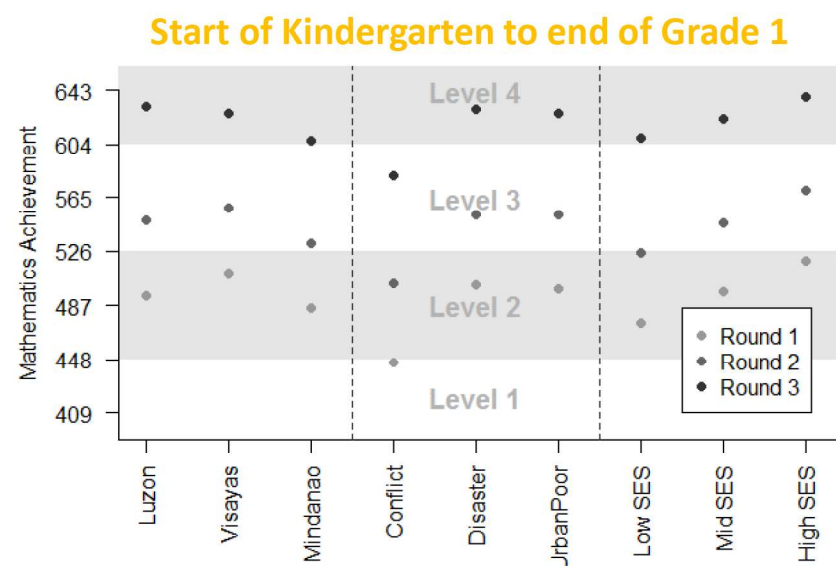
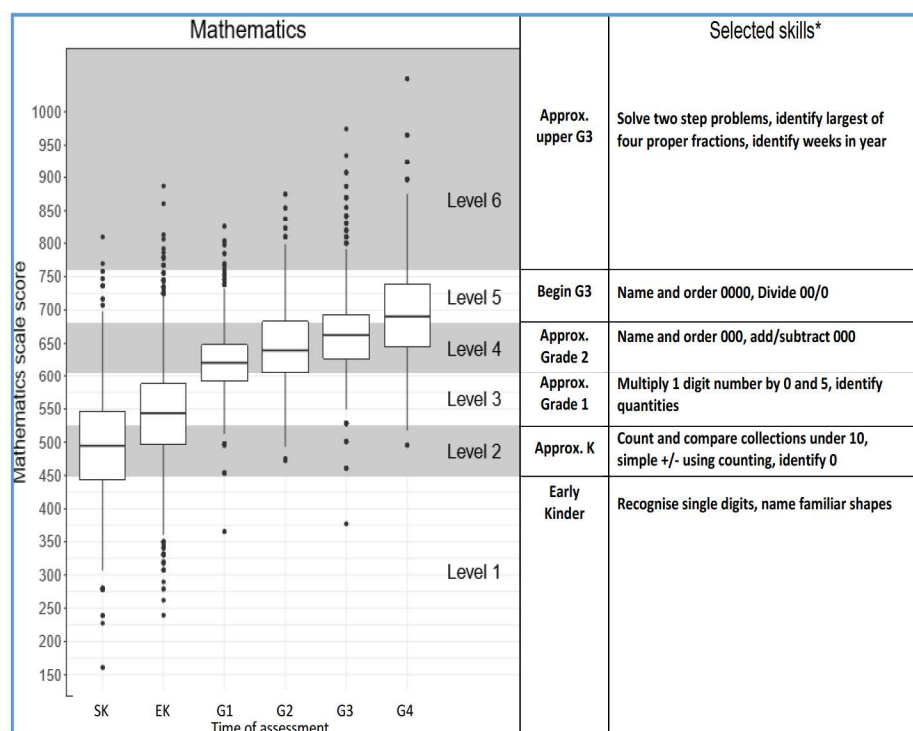
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Key findings - mathematics





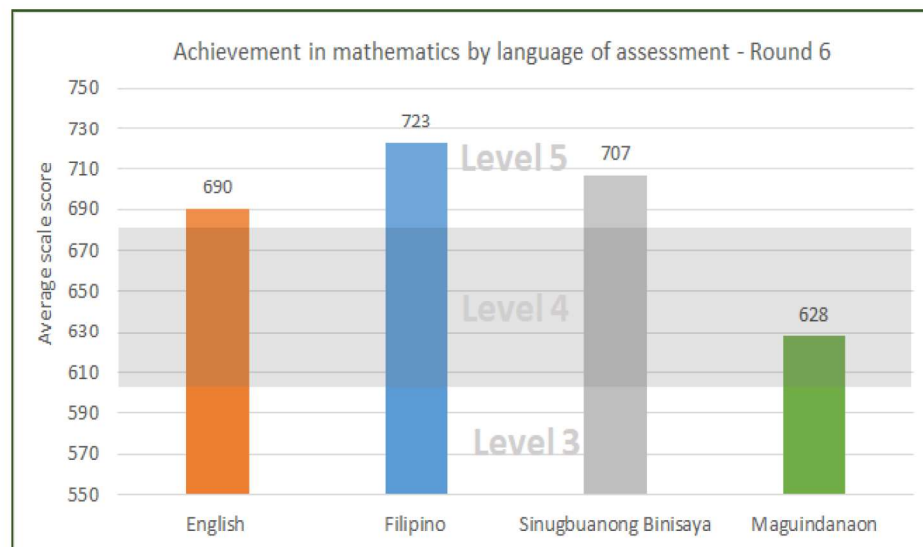
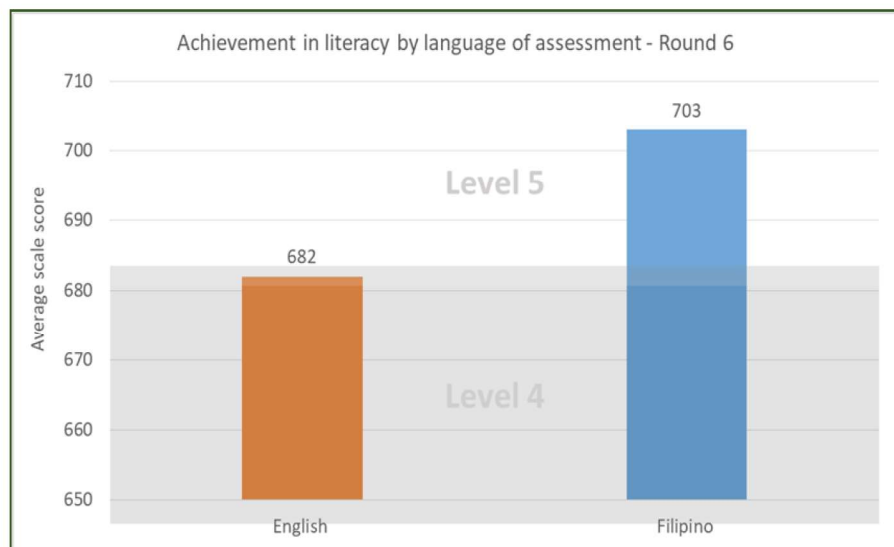
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Impact of language





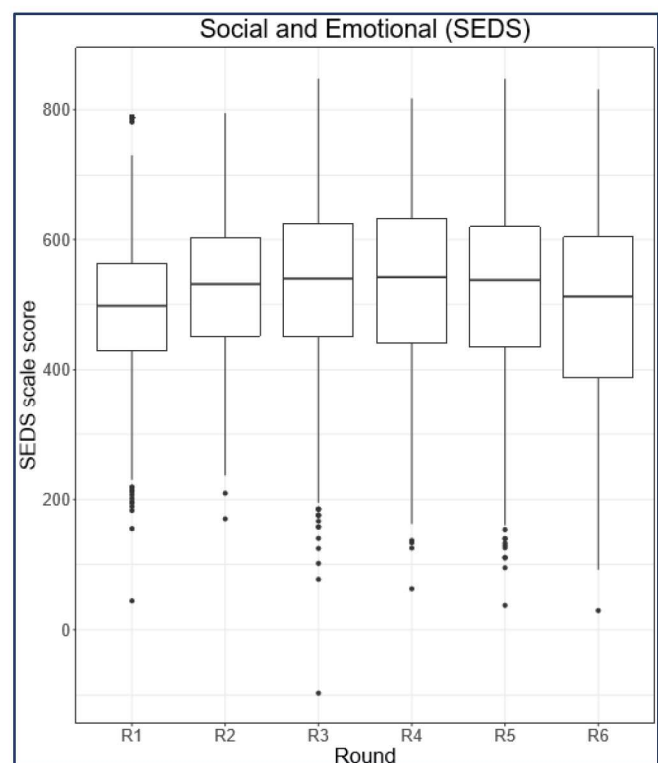
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Key findings – social-emotional skills



FINDINGS

1. **Mid-high scores**
 - Most of the time/some of the time
2. **Low growth**
3. **Low achievers not improving, high achievers remain the same**

IMPLICATIONS

- Minimal school effect
- Minimal opportunities
- Teacher expectations
- Teacher skills and experience in rating or fostering SE skills



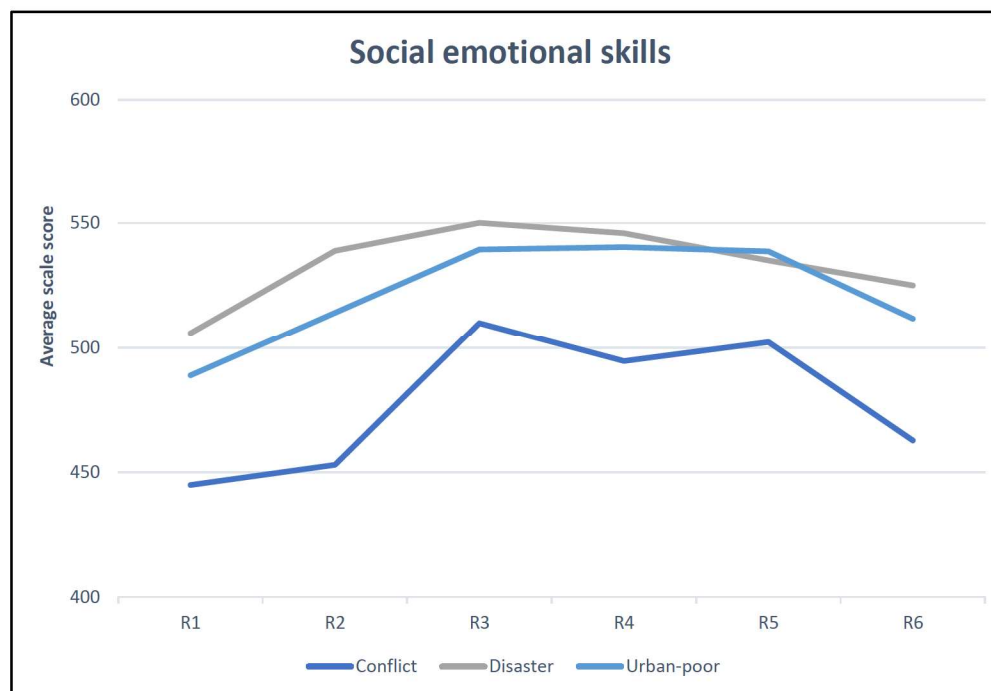
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Social-emotional skills achievement and growth



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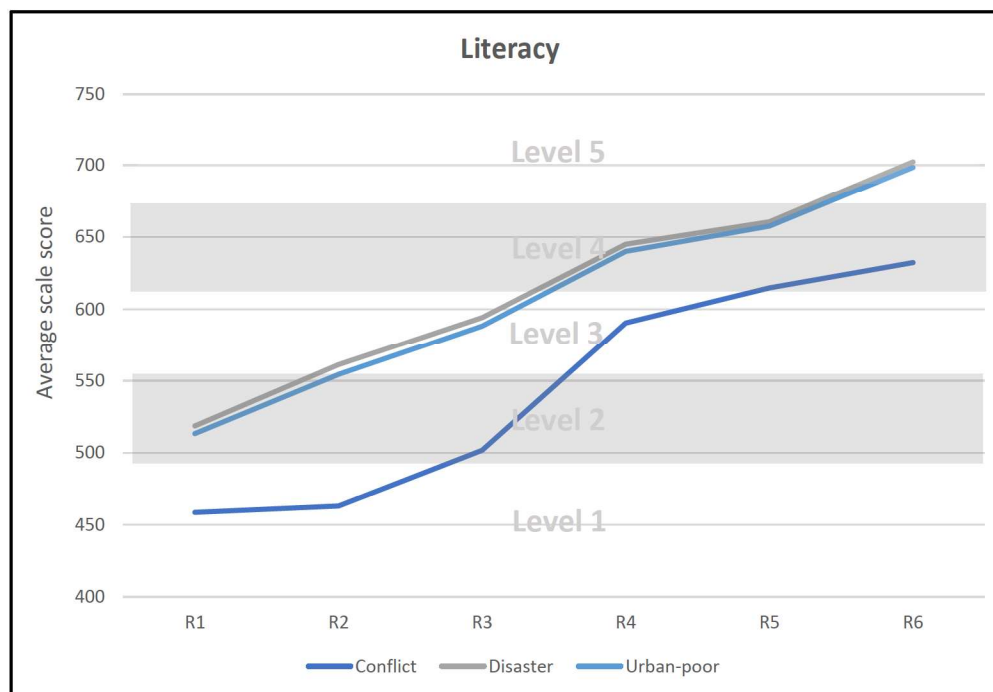
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Literacy achievement and growth



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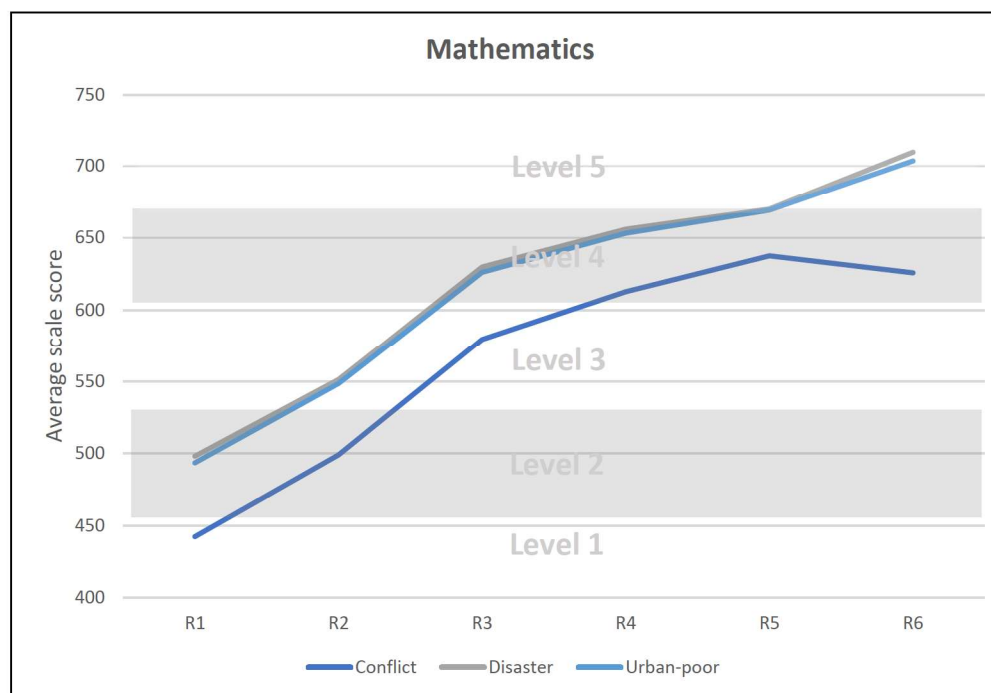
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Mathematics achievement and growth



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Growth models

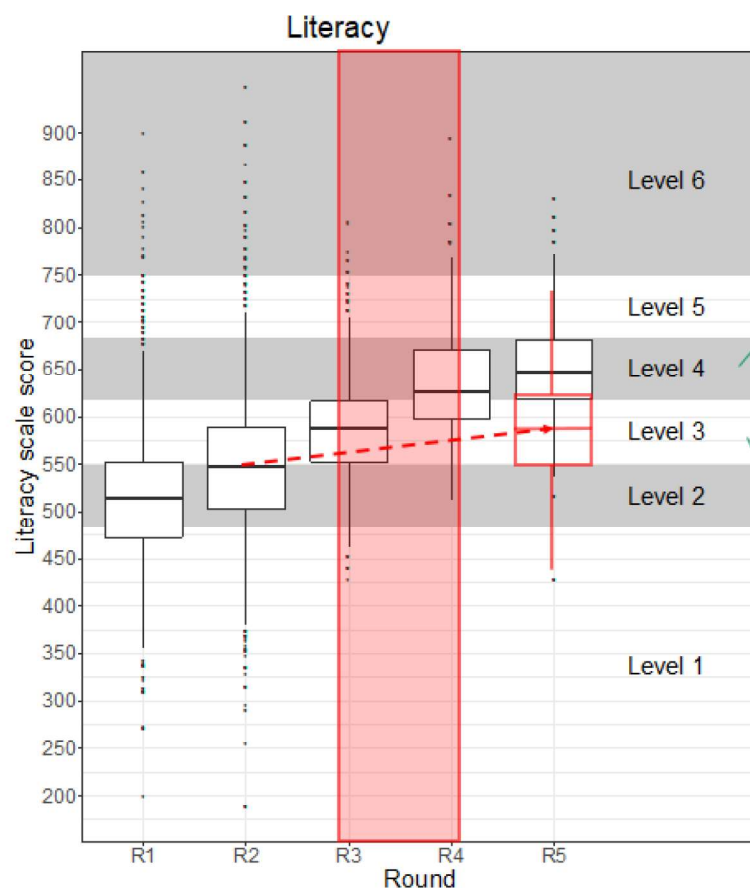
- Context is a significant predictor of students' achievement and progress in all three domains.
- Students who didn't attend preschool had slower rates of growth across all three domains.
- Students from low SES families have a slower rate of growth and are unlikely to catch up to their peers by the end of PS.
- **Students who had a lower achievement score to start with had a relatively slower rate of growth over the six years compared to their peers.**



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- Match a short, written description to an illustration.
- Read short descriptive texts and simple maps and locate directly stated information when there is little competing information.
- Sequence three events.
- Identify the correct written spelling for some common words with 6–8 letters.
- Apply knowledge of grammar and syntax to orally complete simple sentences.

- Infer meaning through change in skill description - describe the learning loss and:
 - What does this mean in terms of curriculum and grade expectations?
 - What materials and pedagogy should shift to accommodate likely impact?
 - What formative assessment is sensitive to this?
 - Can we build specific materials, plans, and PD to support this learning gap?

- Know the names and sounds of most letters.
- Listen to a short narrative, poem, or information text and orally recall prominent information where there is some competing information, make simple oral interpretations and make oral inferences about characters and the author's purpose.
- Understand that words are read from left to right with a return sweep.

Next steps...



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Thank you!



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