

Growth in easyCBM

- PRF WITHIN all grades
- PRF ACROSS all grades
- PRF within GRADE 4
- LSF Kindergarten Growth

Growth in easyCBM

Joe Nese

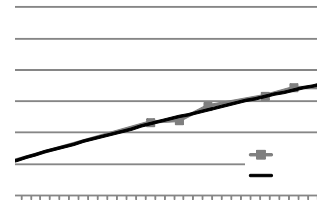
PRF WITHIN all Grades

- In Search Of Average Growth: Describing Within-year Oral Reading Fluency Growth For Grades 1-8
 - Nese, Biancarosa, Cummings, Kennedy, Alonzo, Tindal
 - Journal of School Psychology, 2013

PRF WITHIN all Grades

- Rates of growth in research and aim lines in practice are used to characterize student growth; in either case, growth is generally defined as linear, increasing at a constant rate over time.
- Linearity assumption may be inaccurate.
- We examined ORF growth within-year for students in Grades 1-8.
 - Other research limited by using only 3 testing occasions.
 - Our sample included Grade 1 to 8 students, drawn from the full range of abilities within each grade level and assessed up to 8 times per year.

- Comparing the trajectories across grades, we found that a decelerating growth curve best described ORF data.
- Grade 8...different.
- On average, across grades, students, actuality experience a natural decrease in growth across the year.
- Why?
 - Many potential reasons:
 - summer effect,
 - state testing at the year end,
 - BUT, we cannot answer that question here.

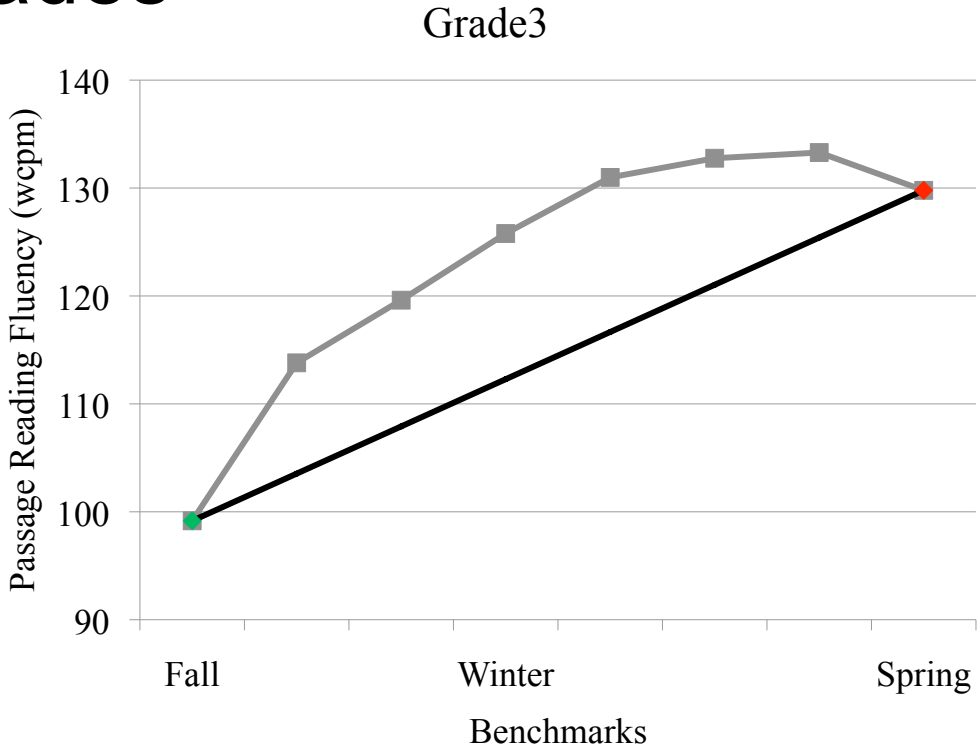


Oral Reading Fluency (WCPM)

Time (grades 1-7 average weeks, grade 8 months)

PRF WITHIN all Grades

- Appropriate instructional planning to reach target.



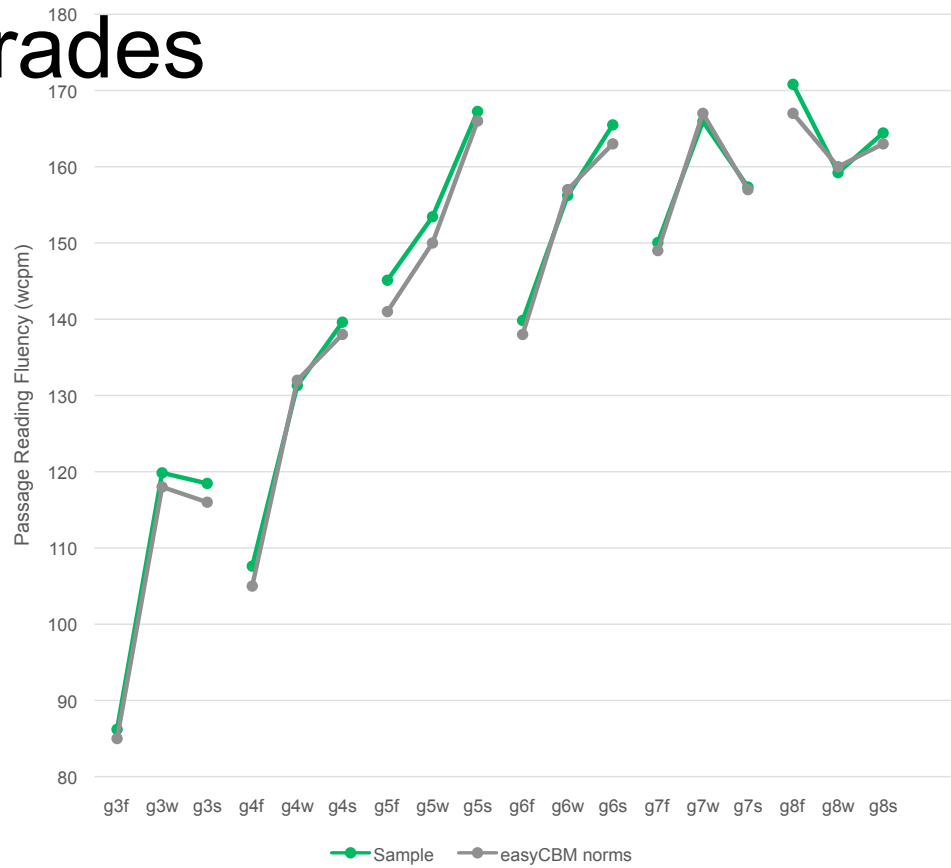
PRF WITHIN all Grades

- Planned study with a partner district
- All students assessed 8 times/year (including benchmarks)

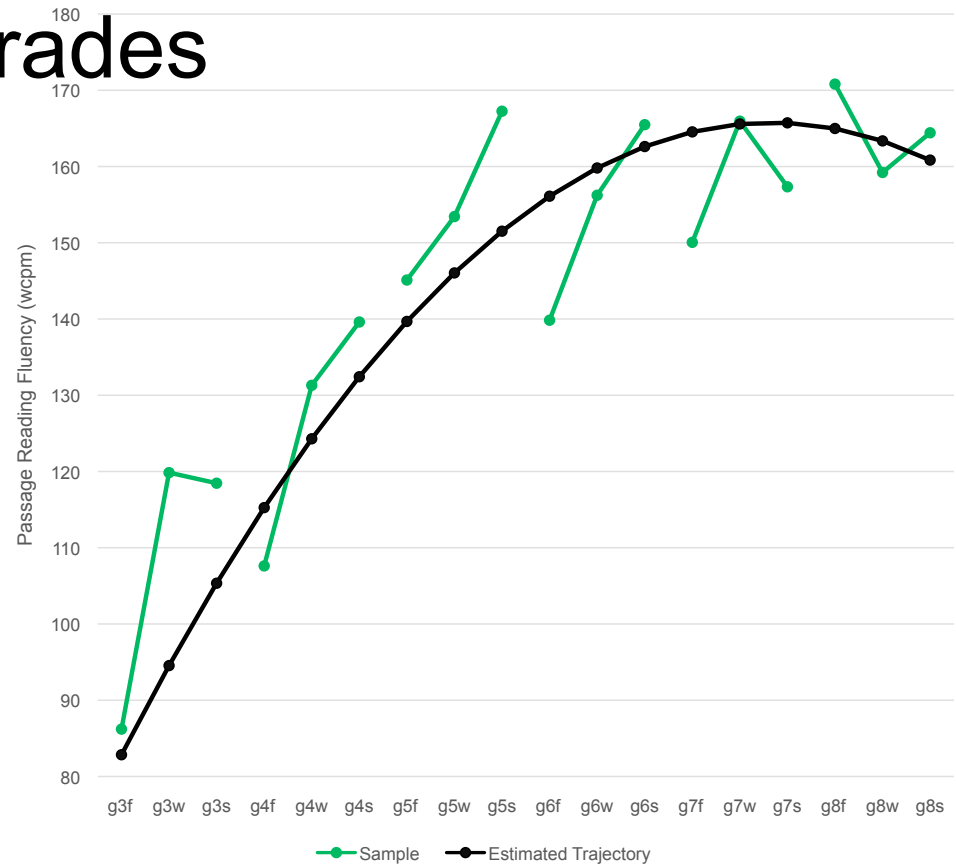
PRF ACROSS all Grades

- Ascending The ORF Slope: Three Methods To Identify Meaningful ORF Plateaus
 - Nese, Alonzo, Sàez, Tindal
- The purpose of this study is to estimate PRF “plateau” that represents the transition from acquisition to mastery for average student.
- Efficient with resources.
- *Note:* One approach of many to answer this question.

PRF ACROSS all Grades



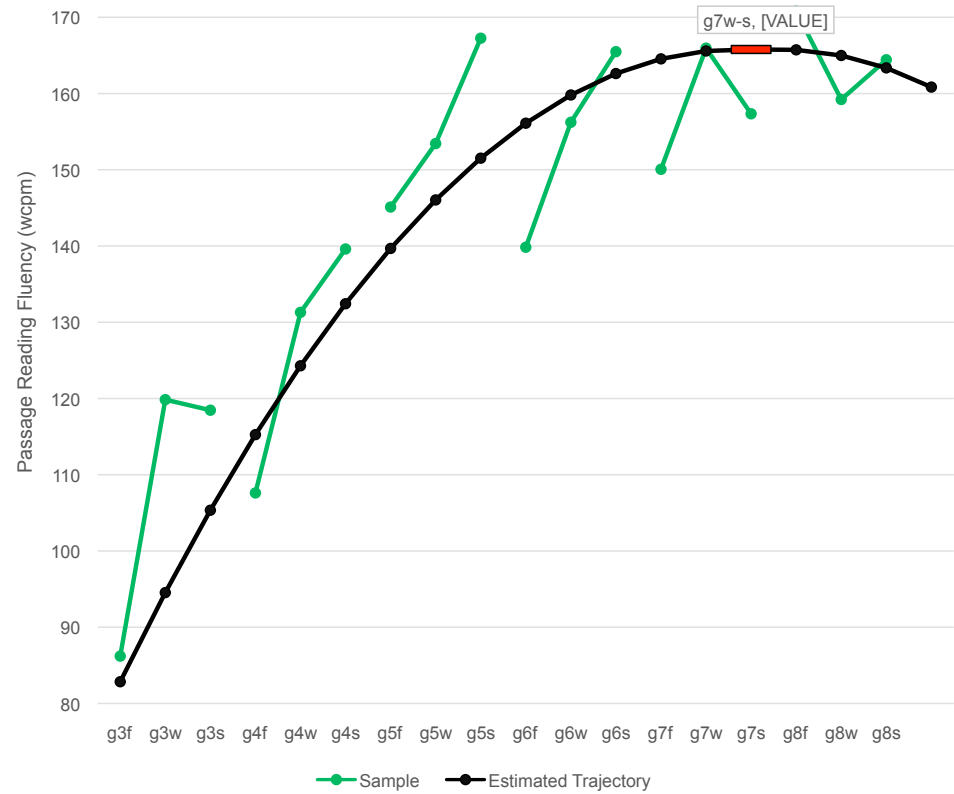
PRF ACROSS all Grades



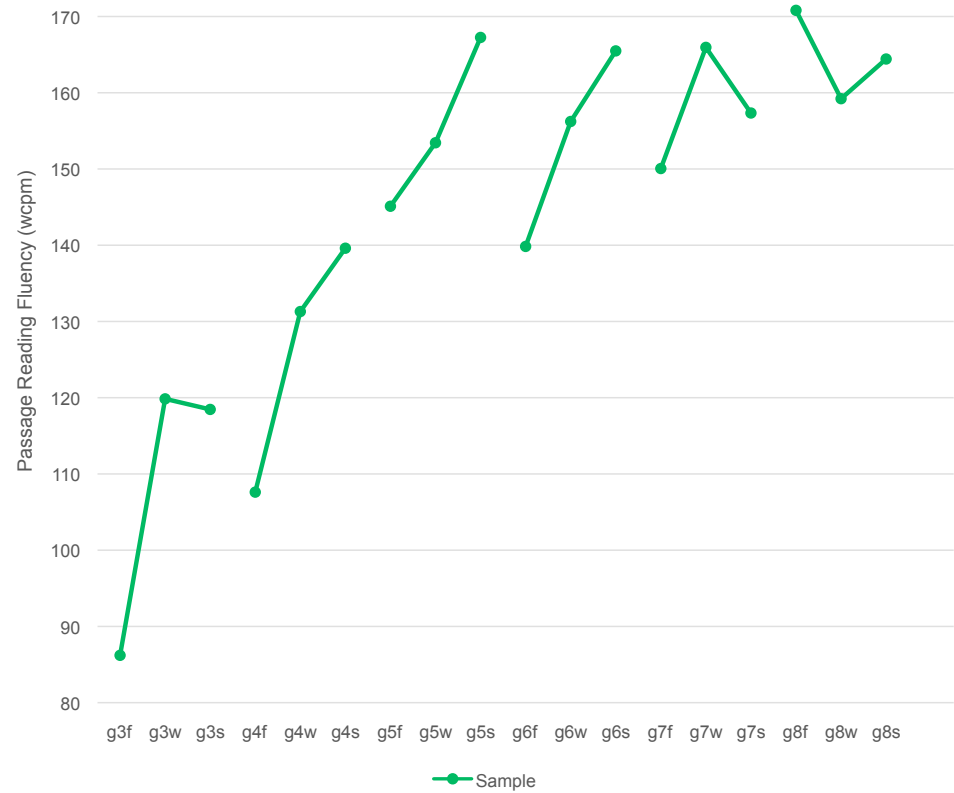
PRF ACROSS all Grades



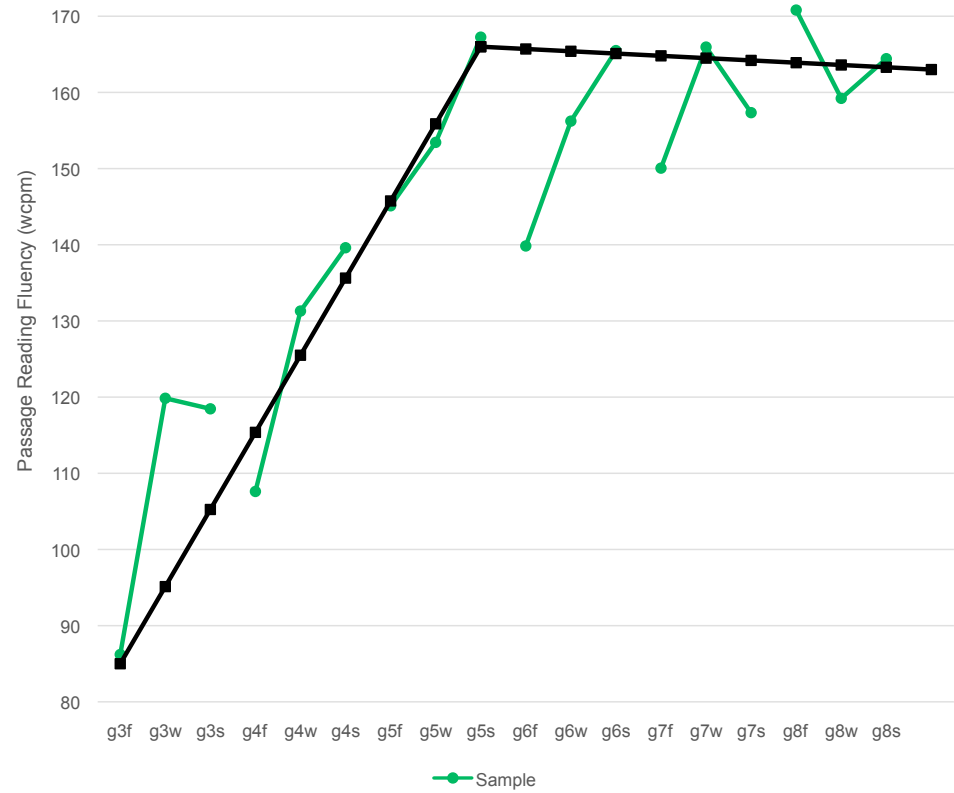
PRF ACROSS all Grades



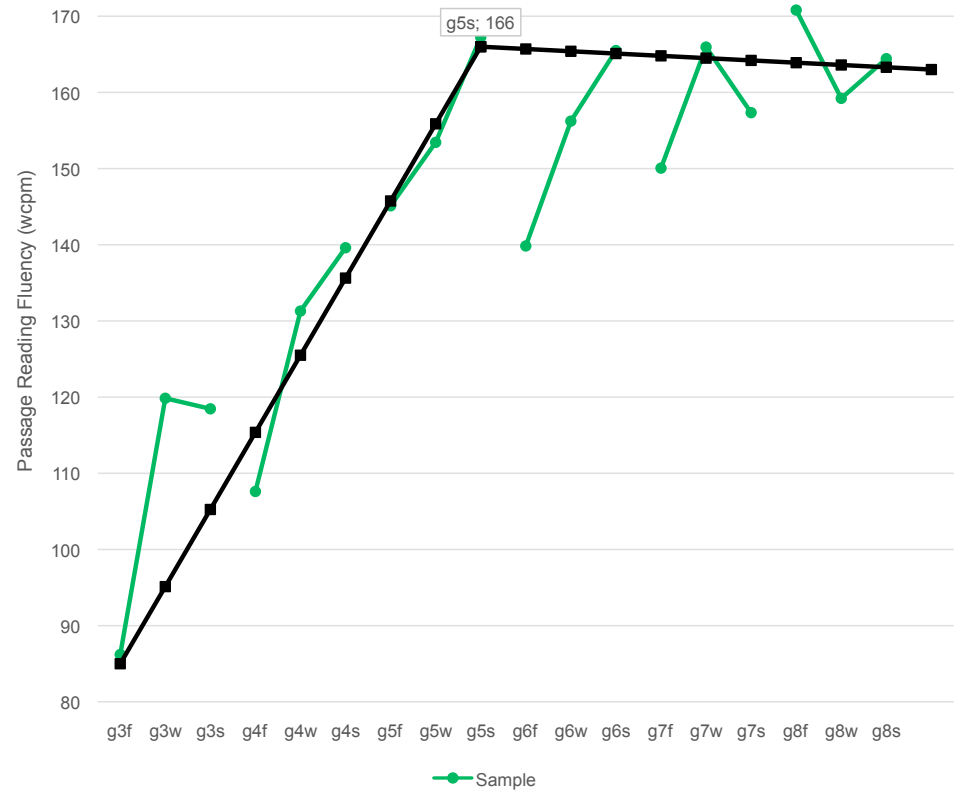
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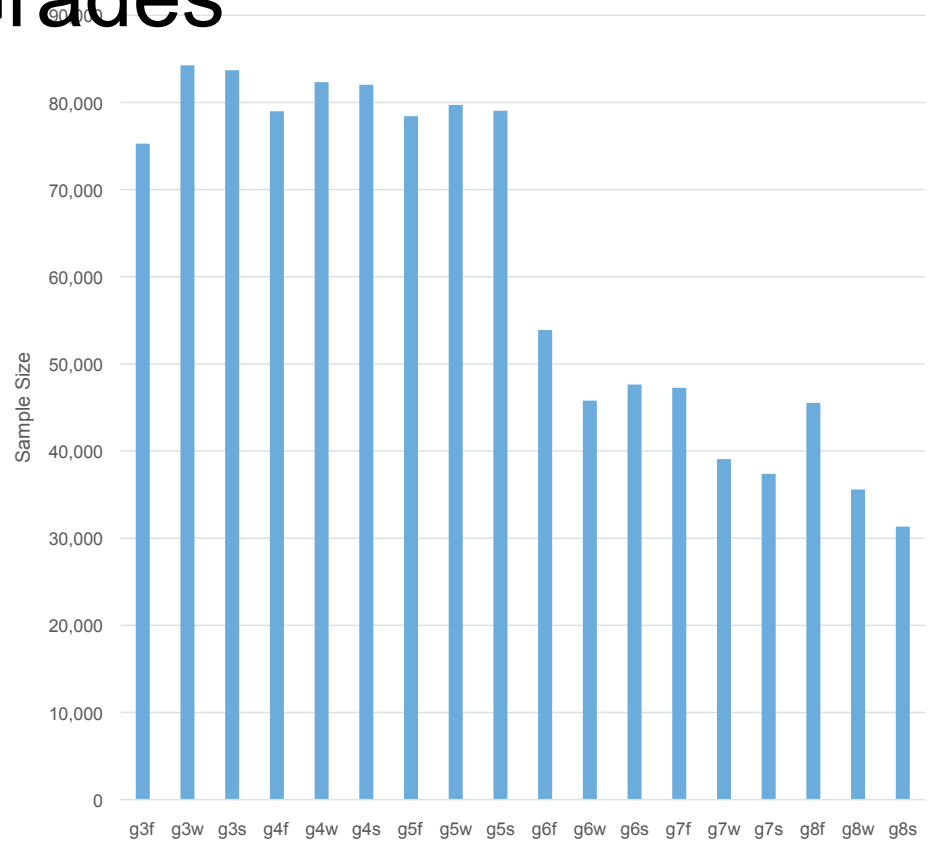
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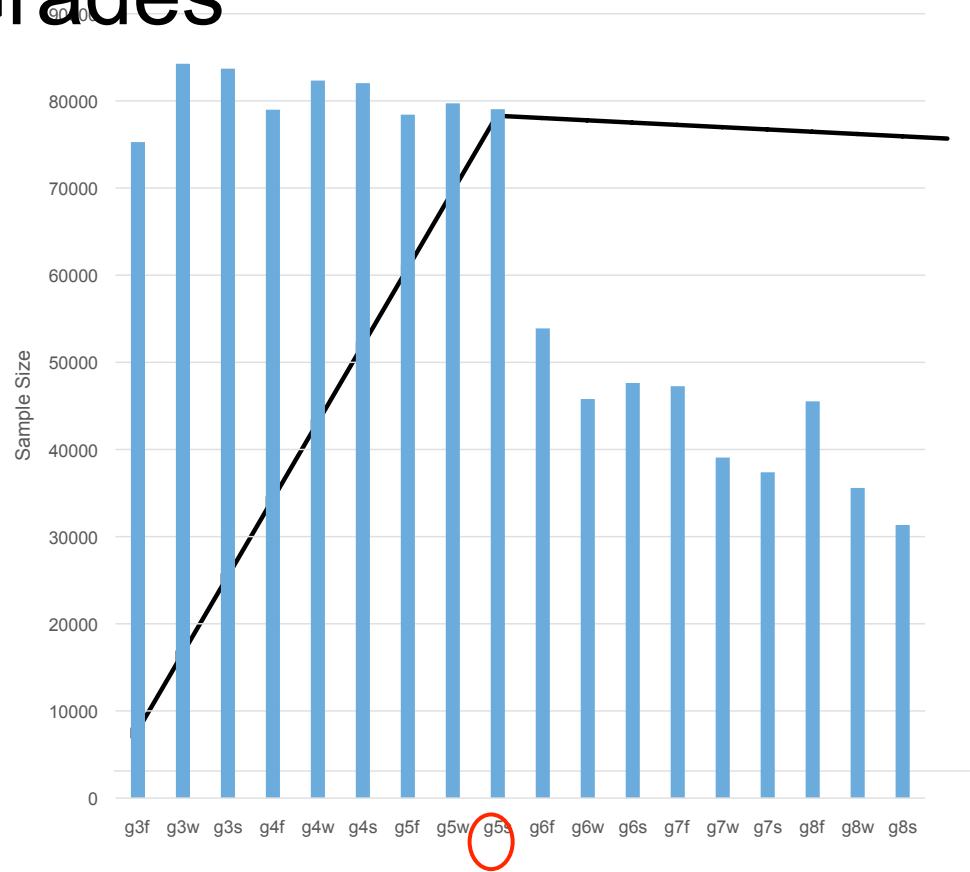
PRF ACROSS all Grades



PRF ACROSS all Grades



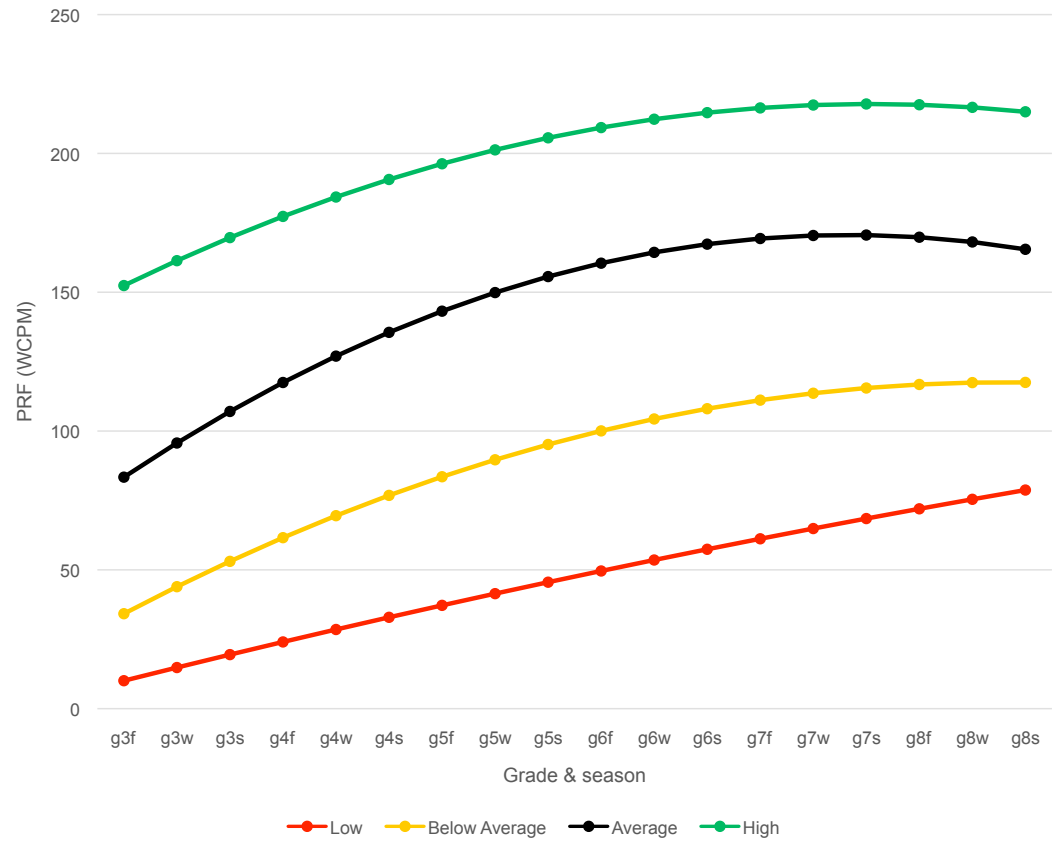
PRF ACROSS all Grades



PRF ACROSS all Grades

- Based on archived data.
- Limited findings.

PRF ACROSS all Grades



PRF Within GRADE 4

- Modeling Nonlinear Growth With Three Data Points : Illustration With Benchmarking Data
 - Kamata, Nese, Patarapichayatham, Lai
 - *Assessment for Effective Intervention; **Article of the Year, 2013***
- The purpose of this article was to demonstrate ways to model nonlinear growth using three testing occasions: fall, winter, and spring passage reading fluency benchmark assessments.
- 2,100 Grade 4 students.
- Unobserved classes of students.

PRF Within GRADE 4

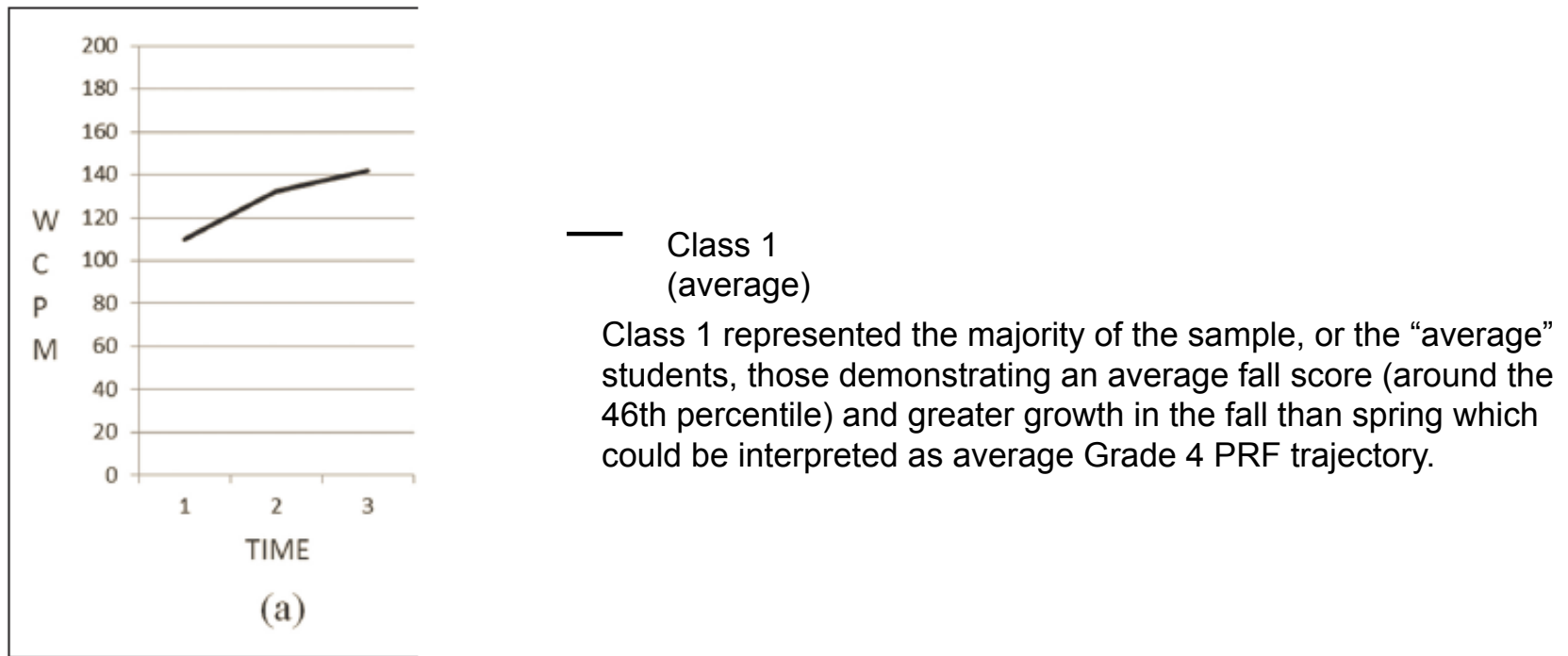
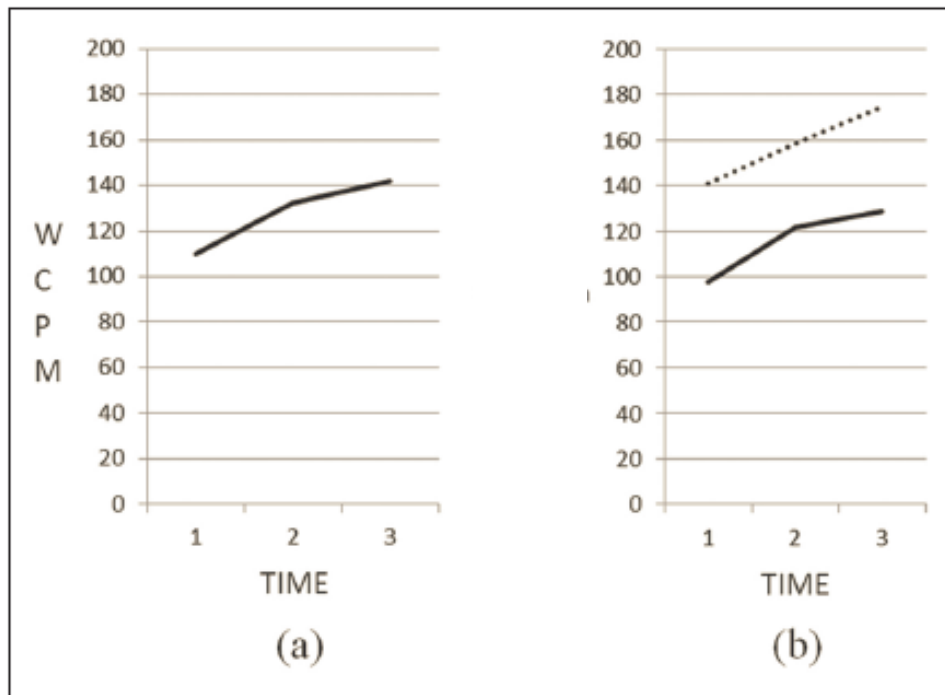


Figure 3. Estimated growth patterns for 1-class PGM and 2-class and 3-class piecewise growth mixture models (PGMM).

PRF Within GRADE 4



Class 2 represented high achieving students, demonstrating high initial PRF status (around the 86th percentile) and nearly linear growth.

- Class 2 (high)
- Class 1 (average)

Figure 3. Estimated growth patterns for 1-class PGM and 2-class and 3-class piecewise growth mixture models (PGMM).

PRF Within GRADE 4

Class 3 represented students at risk of poor learning outcomes, demonstrating a very low mean initial PRF status (around the 7th percentile), and a lower growth trajectory than the other classes.

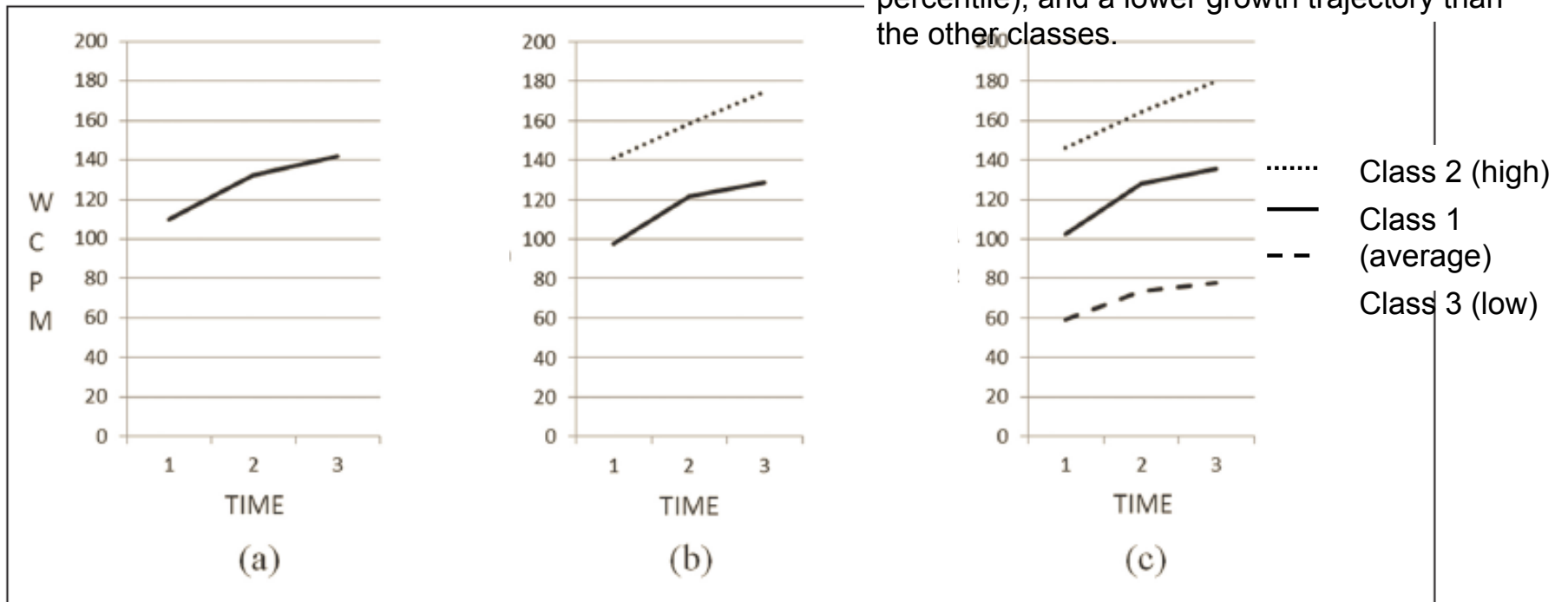


Figure 3. Estimated growth patterns for 1-class PGM and 2-class and 3-class piecewise growth mixture models (PGMM).

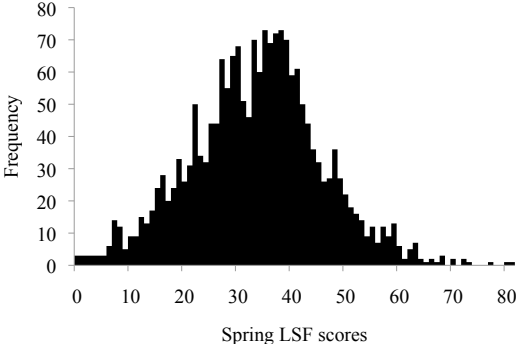
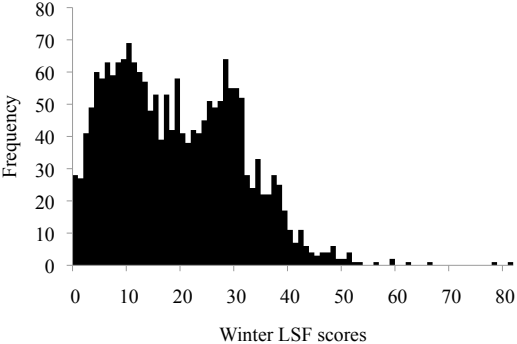
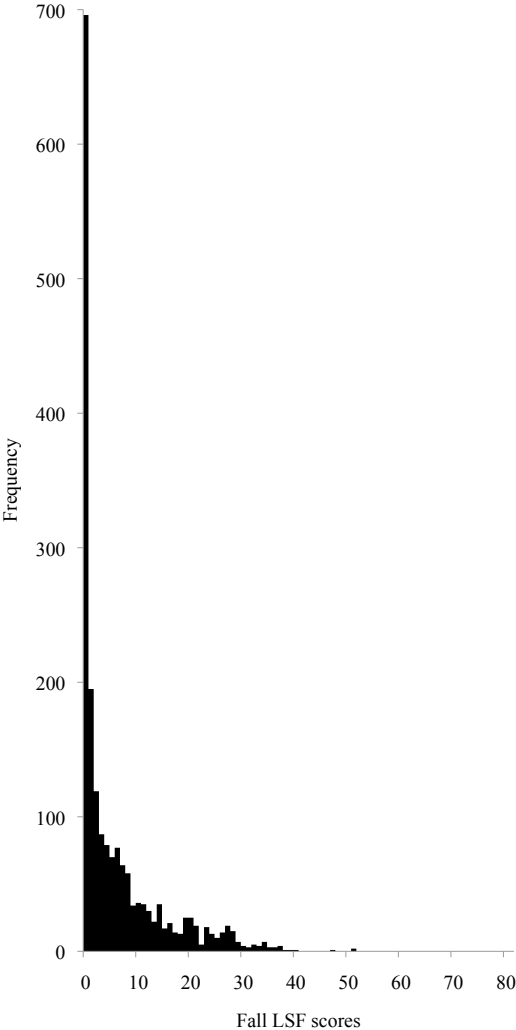
PRF Within GRADE 4

- These findings may have implications for local response to intervention (RTI) policies, including the generation of adequate expectations for growth using progress monitoring tools.

LSF Kindergarten Growth

- A Two-Step Growth Mixture Modeling Approach for Emergent and Developing Skills with Distributional Changes Over Time
 - Nese, Kamata
- Currently an increased interest by policy-makers, educators, and researchers in assessing kindergarten entry skills to understand:
 - proficiency upon entry,
 - risk,
 - disparities among student groups, and
 - growth over time.
- Extension of the unobserved classes approach to a specific issue in practice and data.

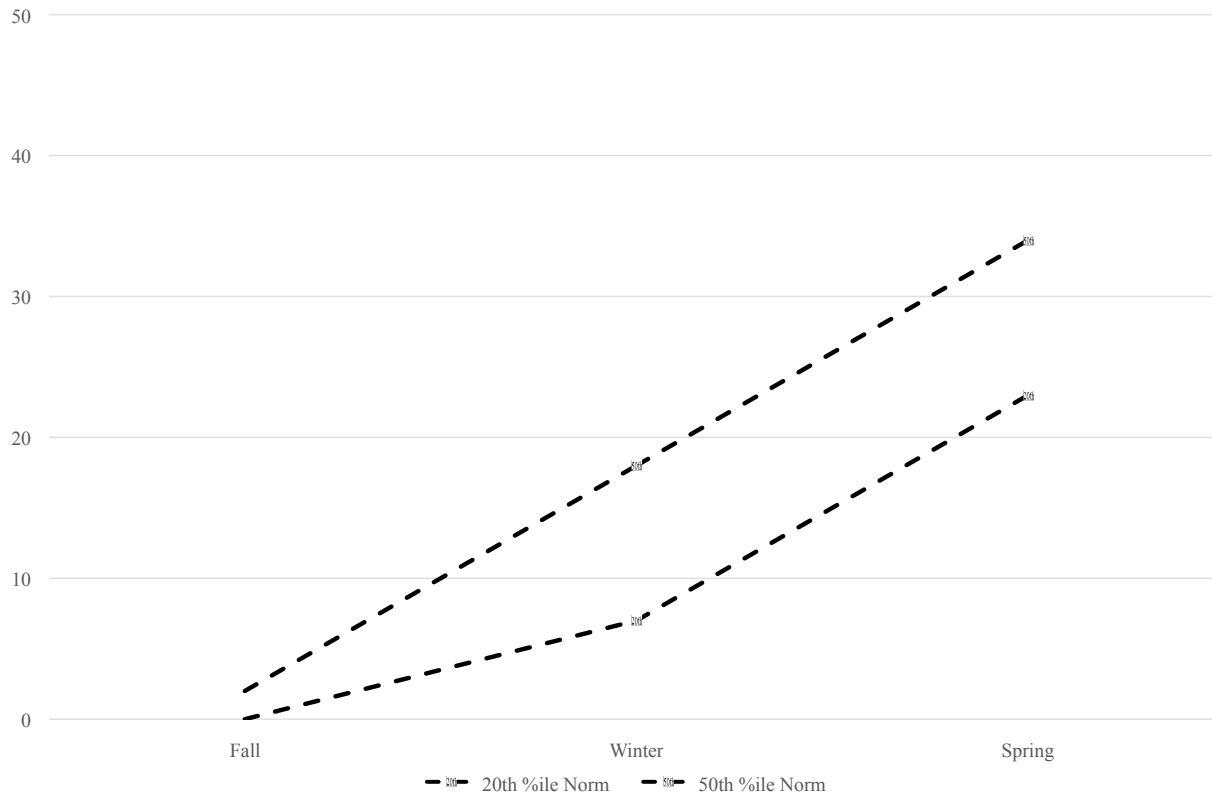
LSF Kindergarten Growth



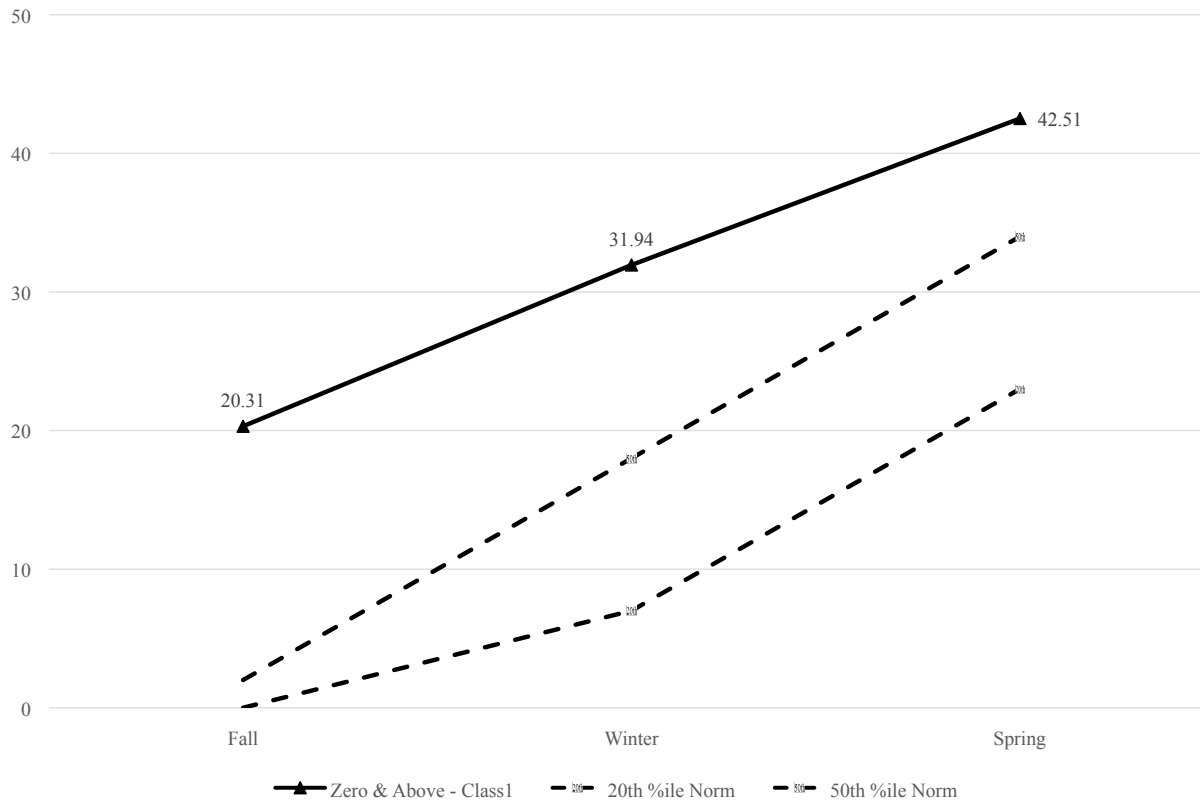
LSF Kindergarten Growth

- This trend is not interesting in itself.
- Rather, the great potential lies in the method of distinguishing between students whom begin at zero and make meaningful gains and students whom begin at zero and do not.
- The value lies in demarcating these groups before the skill disparity between them becomes readily evident.
- 6 classes discussed.

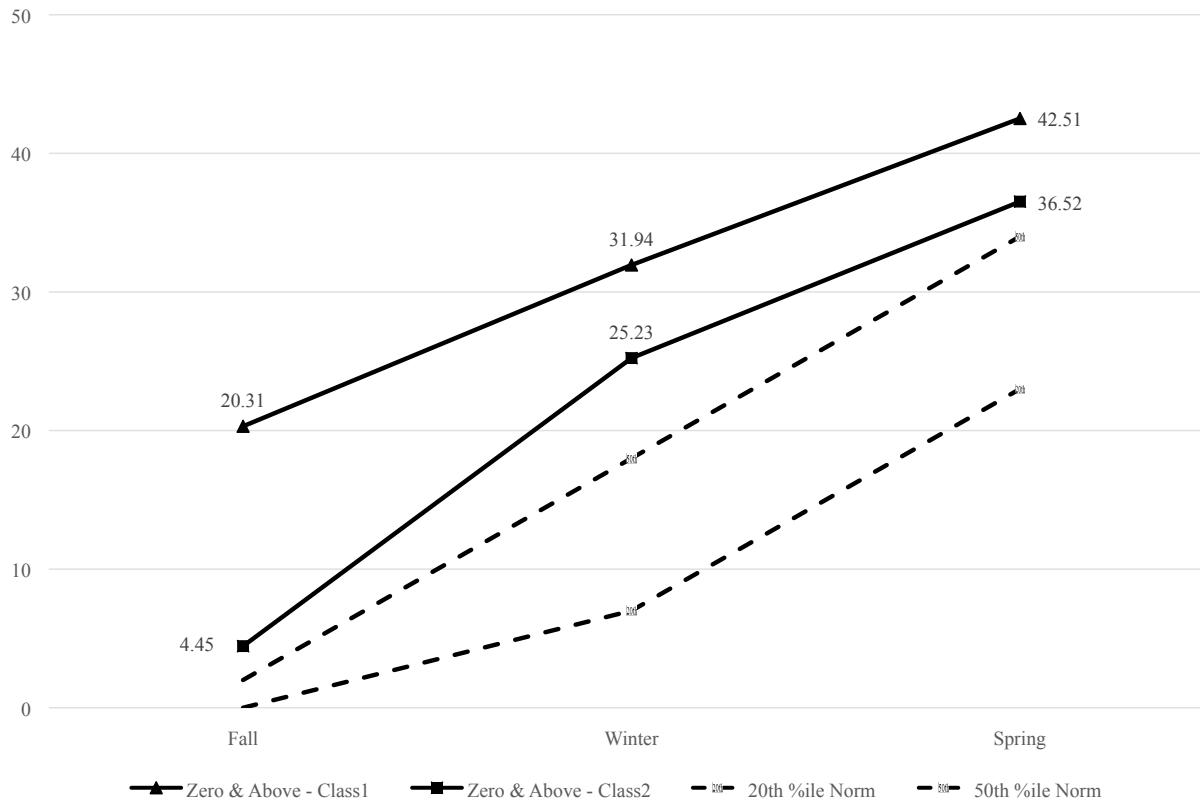
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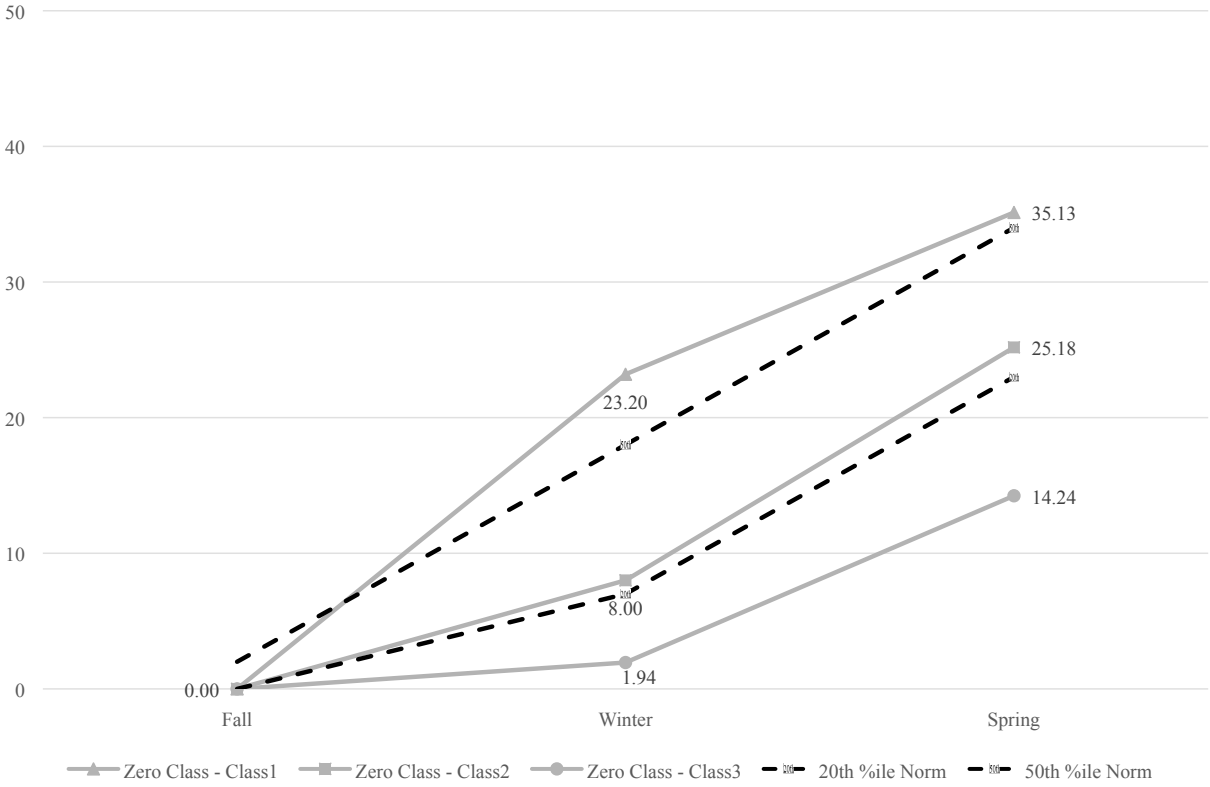
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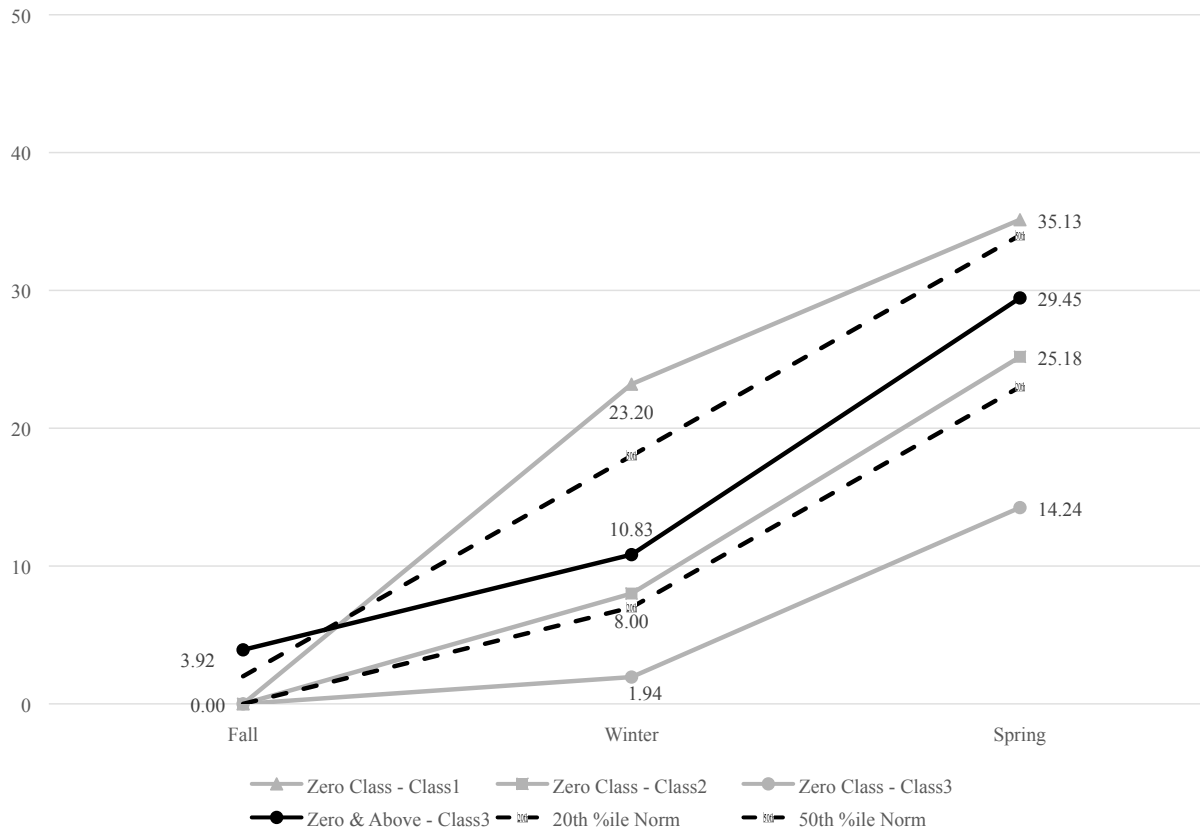
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LSF Kindergarten Growth

- Statistical and practical problems we address.
- Identification of these students for intervention.