



# STUDENT GROWTH PILOT PROJECT

## *Professional Development Webinar #2*

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April 20, 2011

Missouri Department  
of Elementary and Secondary Education

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## Session Agenda: Student Growth Percentiles, Part 2

- 1) *GROWTH MODEL ROLL-OUT: LESSONS LEARNED (SO FAR) IN MASSACHUSETTS*
- 2) *QUESTIONS & COMMENTS VIA WRITTEN "CHAT"*
- 3) *REMINDER ABOUT NEXT TWO WEBINARS*



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## Goals for PD sessions focusing on Student Growth Percentiles (4/18 & 4/20)

- 1) Describe the benefits of MAP Student Growth Percentiles.
- 2) Interpret Student Growth Percentiles at the individual student level, the building level, and the district level.
- 3) Explain how to appropriately use Student Growth Percentiles to inform various types of decisions about individual students and groups of students.
- 4) Explain any caveats or considerations to keep in mind relative to the use of Student Growth Percentiles.



# Growth Model Roll-Out: Lessons Learned (so far) in Massachusetts

Robert Lee, MCAS Chief Analyst  
Massachusetts Department of Elementary &  
Secondary Education

April 20, 2011

# Types of Growth Models

- NCLB Growth Models
  - Criterion referenced; Tell whether students are on track to being proficient in a given number of years
  - Don't say much about students who are already *Proficient* or who are far from *Proficient*
- Value Added Models
  - Norm referenced; Control for student or school characteristics such as poverty, demographics and performance in other subjects in addition to past performance
- Student Growth Percentiles
  - Norm referenced; control only for past performance in the same content area

# Why Student Growth Percentiles?

- All students at all performance levels are measured in the same way and on the same scale
  - A student can achieve at a low level but still improve relative to his academic peers
  - Another could achieve well but not keep pace with other students who started the year where they were
- Gives feedback on higher achieving students and schools striving beyond proficiency
- Developed by educators and administrators
  - Fairness was a priority
  - Easy to interpret scale
  - Results are useful at the student, class, grade, school and district level

# Reactions from an Assistant Superintendent

- “For the first time it blew the stereotypes about who gets good scores and who gets bad scores out of the water. Teachers didn’t feel like they had much control over who was Proficient and who was not. For the first time, when we showed them their growth scores teachers realized they had so much power.”  
Southeastern Massachusetts data coordinator. “It’s made us look at mirrors rather than windows when we look at our MCAS scores.”
- “We’ve had conversations with every kid and every teacher (about their growth scores) and in every case they didn’t think it was a fluke.”

# Reactions from an urban assessment coordinator

- “It’s not what a lot of urban superintendents and school committees think it is. They wanted to believe it would show their kids growing more than all the high achieving schools, that was not realistic.”
- “It’s an ingenious workaround. The challenge is not just how to use it, but how *not* to use it.
- “The temptation is to line up all the teacher scores and sort them. Maybe that’s a good way to have a conversation about your fantasy baseball team, but not so much for school teachers.”
- “The rich discussions about teaching and learning are what we care about most.”

# Reactions from a Plymouth county middle school principal

- “Growth breathed life into my school. People teaching students with disabilities had been walking around wearing a scarlet letter “A” because we didn’t make AYP for that subgroup. Then the growth scores came out and we found out we were doing very well. In fact at one grade level we had the highest growth in the state for that subgroup.”
- “It has led to an enormous willingness to collaborate. The teachers with low growth all want to know what’s going on in the classes with high growth.
- “The number one factor (among teachers with high growth) is efficacy. You walk into their classrooms and everybody is busy and that’s hard to measure.”

# Stages of Familiarity

1. Unaware
2. Aware
3. Understands
4. Can Act
5. Can Teach Others

# Stages of Familiarity when you release your first growth scores

1. Unaware (Parents, Teachers, Some Principals)
2. Aware (Superintendents, State Staff, Media)
3. Understands (Growth leadership team, Data Specialists)
4. Can Act (Some Pilot districts)
5. Can teach others (Some state officials)

# How NOT to introduce a growth model (from the first slide of my first presentation)

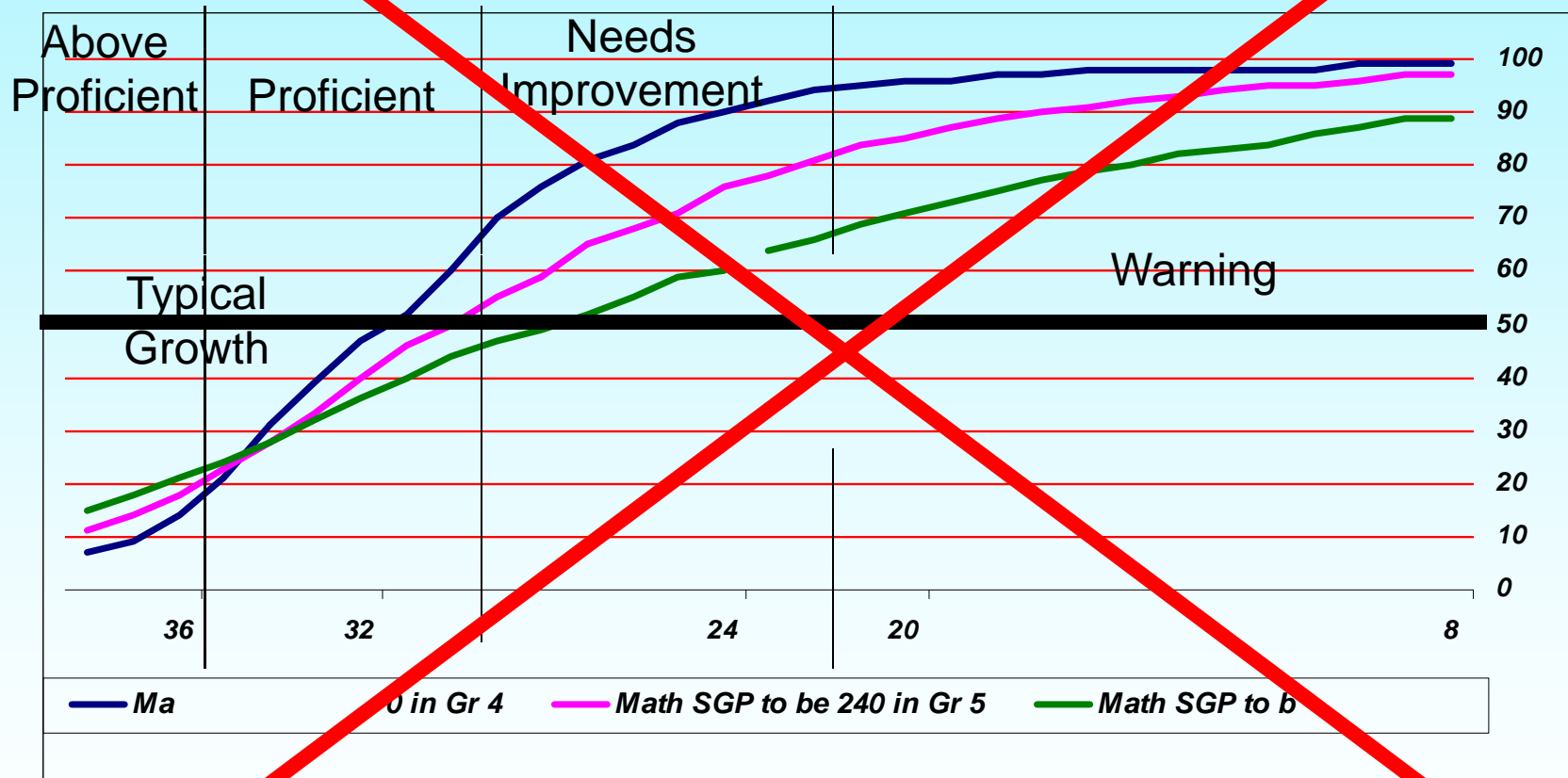
## Growth Measure Purpose

- To supplement the various current metrics used to report MCAS results (scaled scores, performance level results, composite performance index), which indicate performance at a point in time, with a metric that indicates the extent to which performance has changed over time.

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# Student Growth Percentile Targets for 3 Graders Mathematics



Annual Growth Percentile needed to be proficient

# Impediments to Understanding

- Technical and defensive descriptions do not motivate instructional leaders
- Accessing reports can be difficult and time consuming
- Race to the Top politics

# How educators first become aware of a growth model matters

## Growth Model Purpose: Ideals

- This is easy to use
- This is the only fair way to compare test results longitudinally
- To empower educators to understand test results so they can improve curriculum and instruction

## Growth Model Purpose: Fears

- This is impossible to understand
- Growth scores are sometimes lower for students with disabilities or unmotivated students
- The president wants to use this to “evaluate” me based on test scores of kids who aren’t trying in my class
- They are going to use this to eliminate tenure

Stakeholders are more likely to take a leap of faith if they trust the decision making process

*“The U.S. Department of Education has made it clear that they expect student performance to be part of a teacher’s evaluation. Teachers recognize that we play an important role in student academic achievement. At the same time, teachers are very clear that it would be grossly unfair to hold us solely responsible for our students’ growth scores on MCAS tests since there are dozens of other factors that contribute to scores, including family income, parental support and the students’ own motivation and effort.”*

MTA President Anne Wass, May 24, 2010 in a letter of support for Massachusetts’ RTTT Application

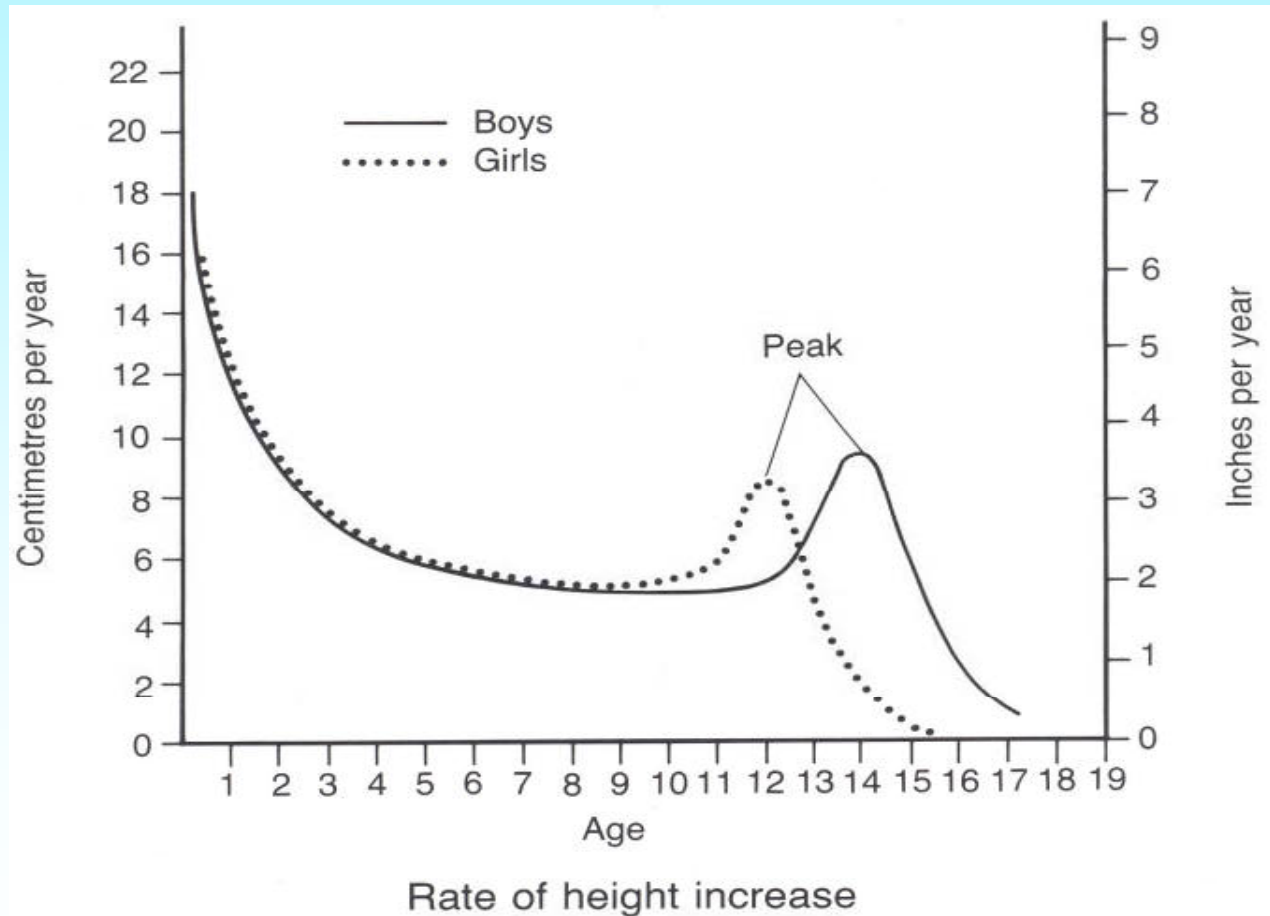
## Proposed Framework (subject to board review)

- Growth and MCAS scores, among other measures and artifacts, will be used, when available, to help identify strengths and weaknesses in the formative assessment and evaluation of teachers
- Goals will be set between the evaluator and evaluatee to address those weaknesses
- Measures of student performance may be used in the final evaluation

# Tips for introducing growth to emphasize teaching and instruction

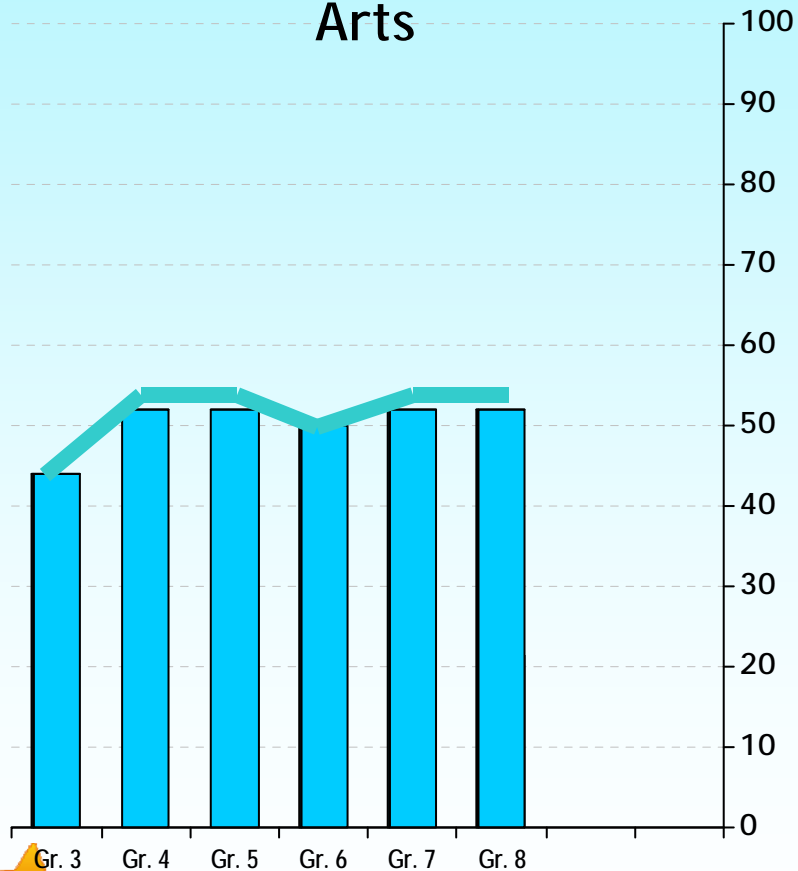
- Pilot the new measure with selected volunteer districts
- Emphasize the potential constructive uses for those who understand and can act on this data
- Find organic metaphors:
  - Pediatric growth
  - Academic Peers
- Don't use technical language, graphs in introductory meetings
- *Try* not to use growth for accountability before educators understand it
- *Try* to make reports that are modern, colorful and easy to use - think cereal box, rather than dissertation
- Talk about kids, not politics

Much like changes in height vary by age and gender, academic growth varies by grade

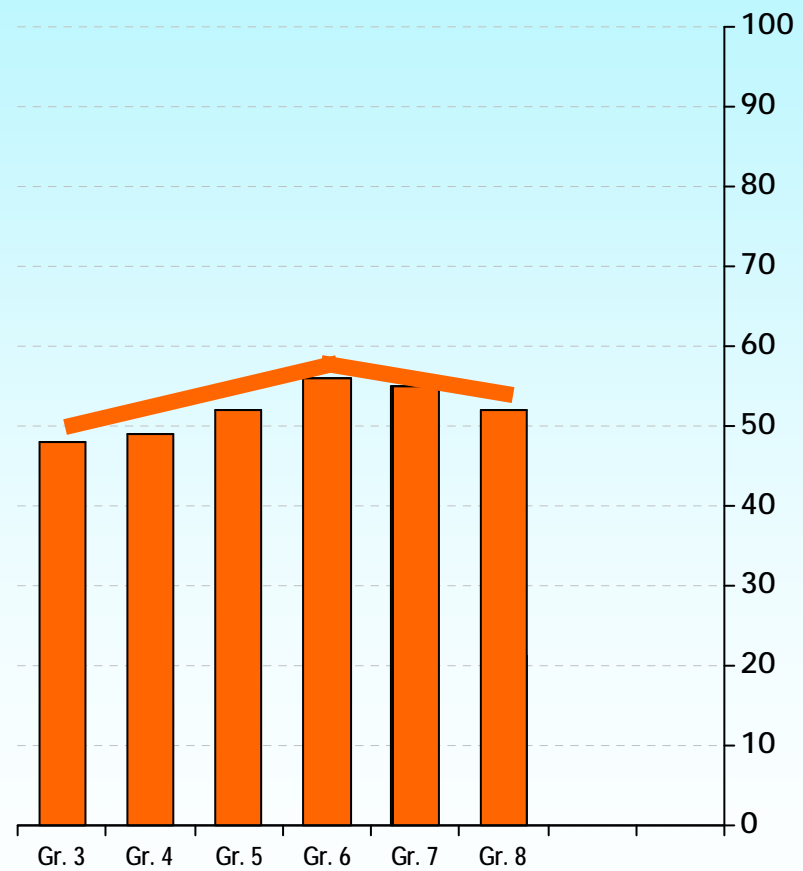


# 2010 Missouri Percent *Proficient* by Grade

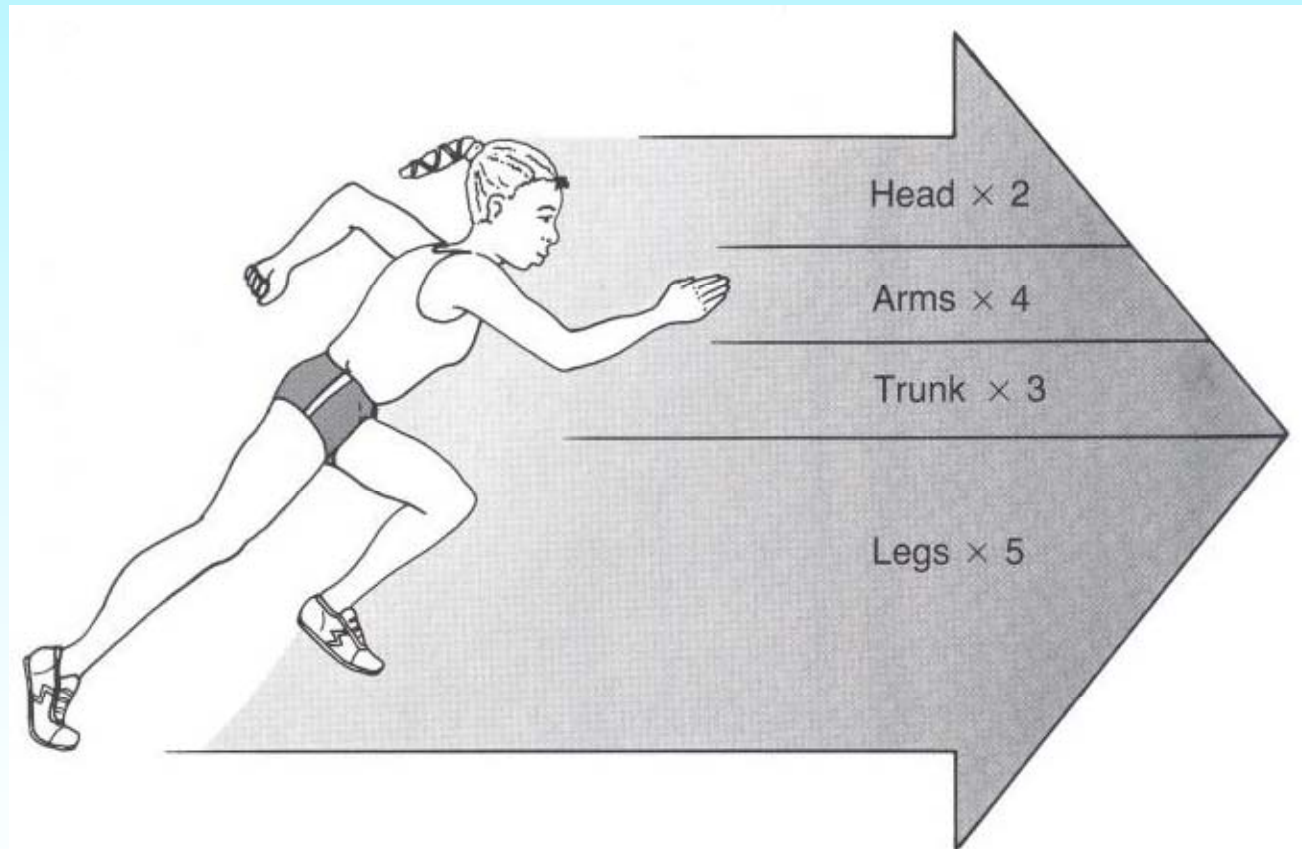
## Communication Arts



## Mathematics



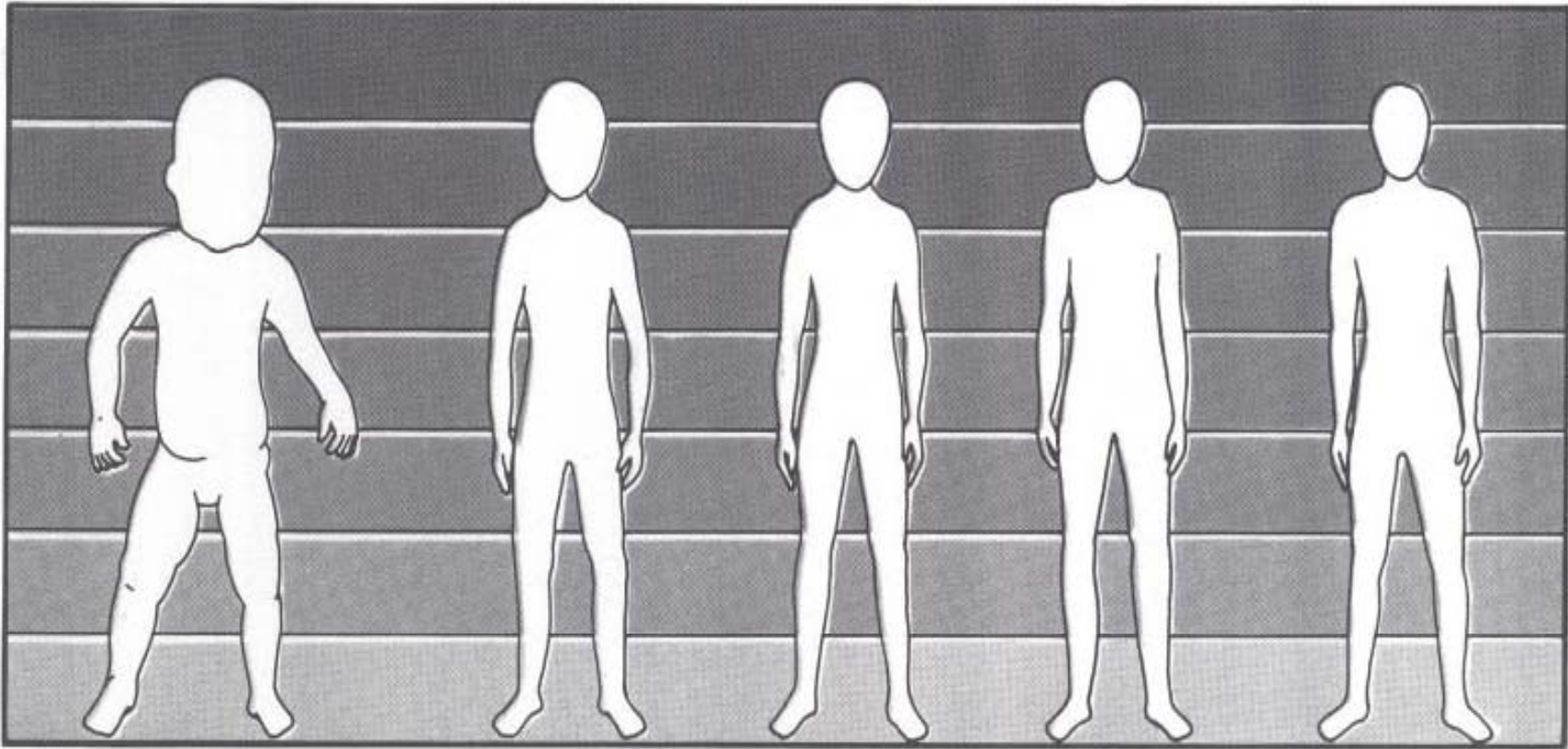
# Different parts of children grow at different rates at different times of life



Amount of growth from birth to adult

Source: [www.coach.org](http://www.coach.org)

Otherwise Adults would look like the figure on the far left



The changes in proportions from birth to adult

# People are used to using percentiles to measure kids

Birth: 19"  
(37<sup>th</sup> percentile)



6 months: 27"  
(50<sup>th</sup> percentile)



## Traditional percentiles (percentiles of stature)

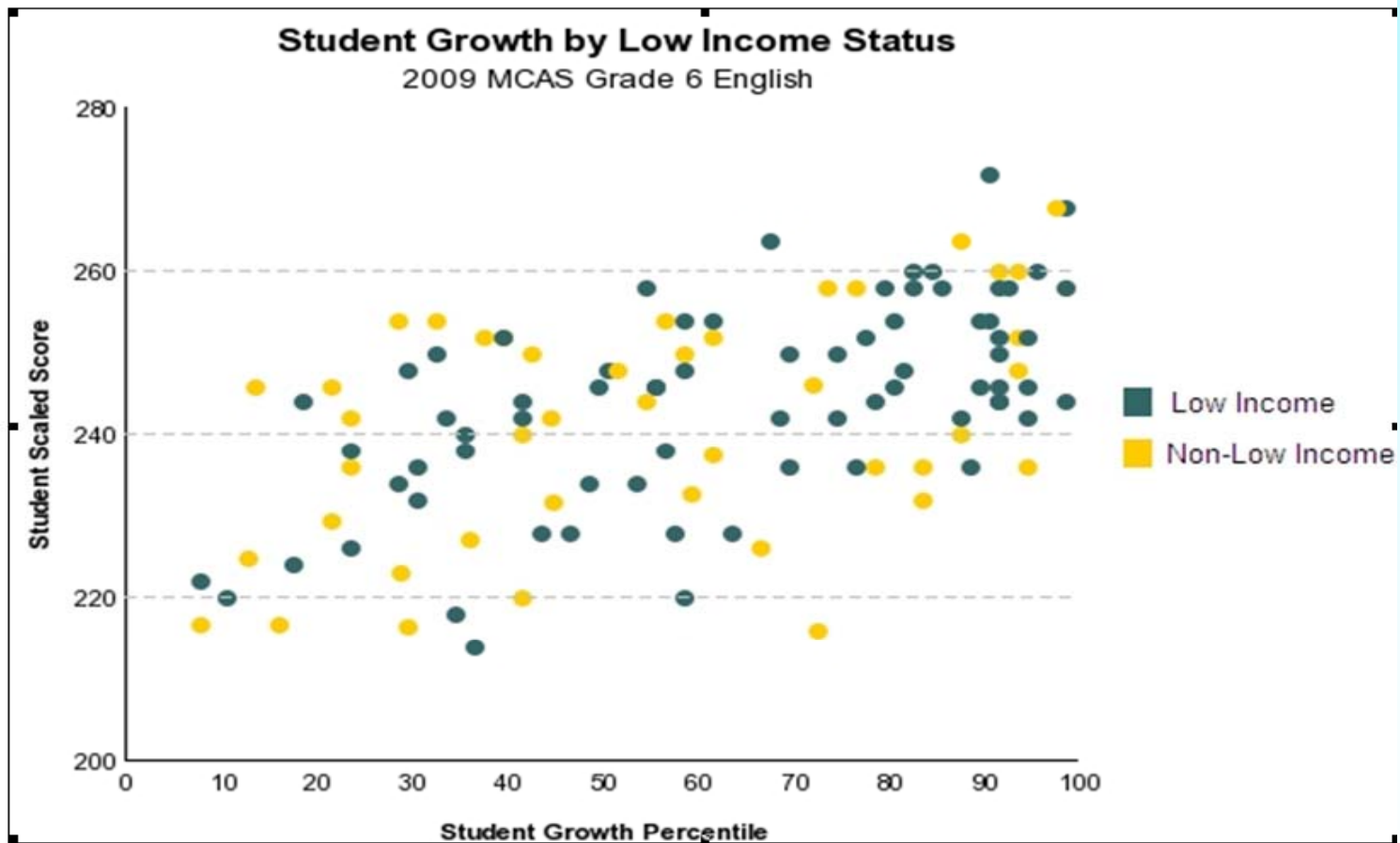
0 months: 19" (37<sup>th</sup> percentile)

6 months: 27" (50<sup>th</sup> percentile)

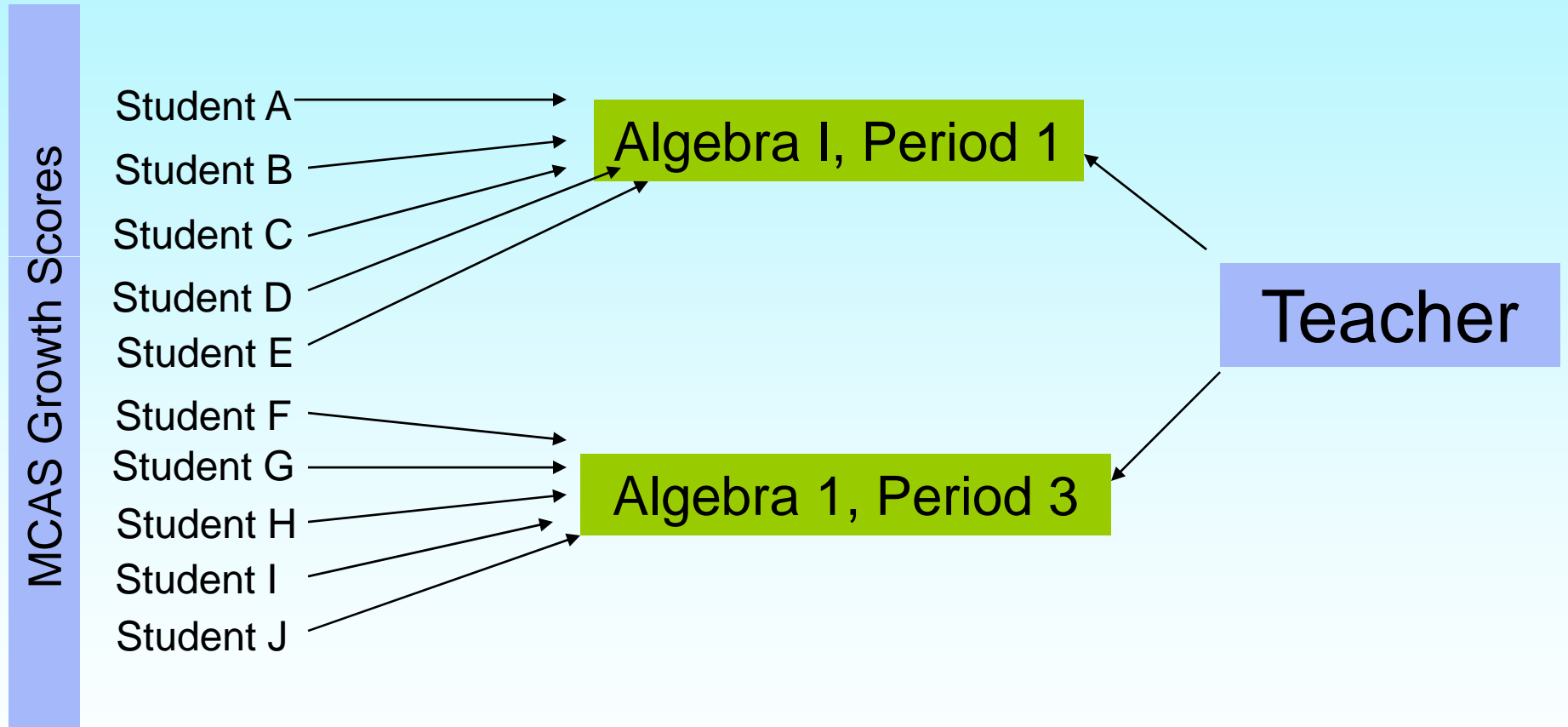
## Growth percentiles (percentiles of change)

8 inches over first 6 months: 63<sup>rd</sup> percentile

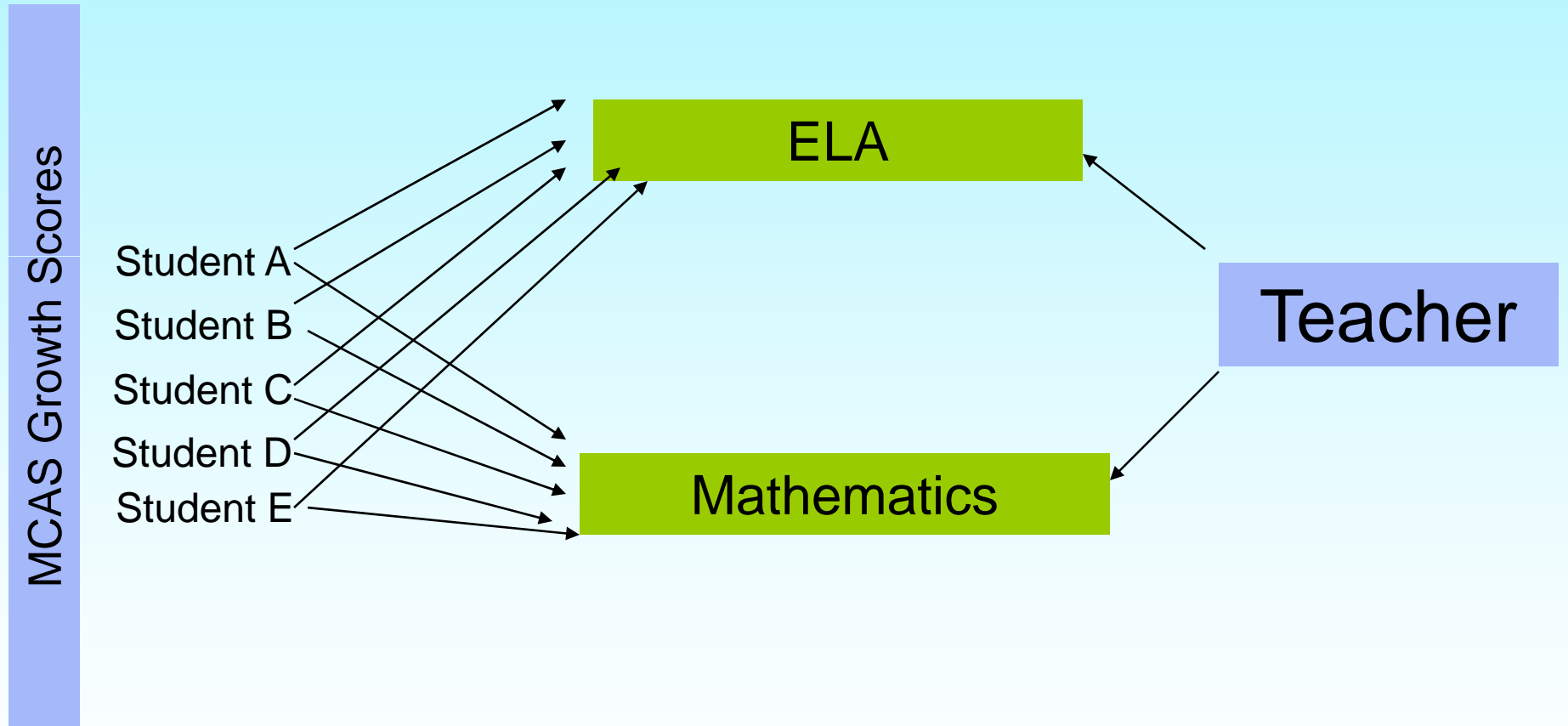
# Sample Grade Level Report



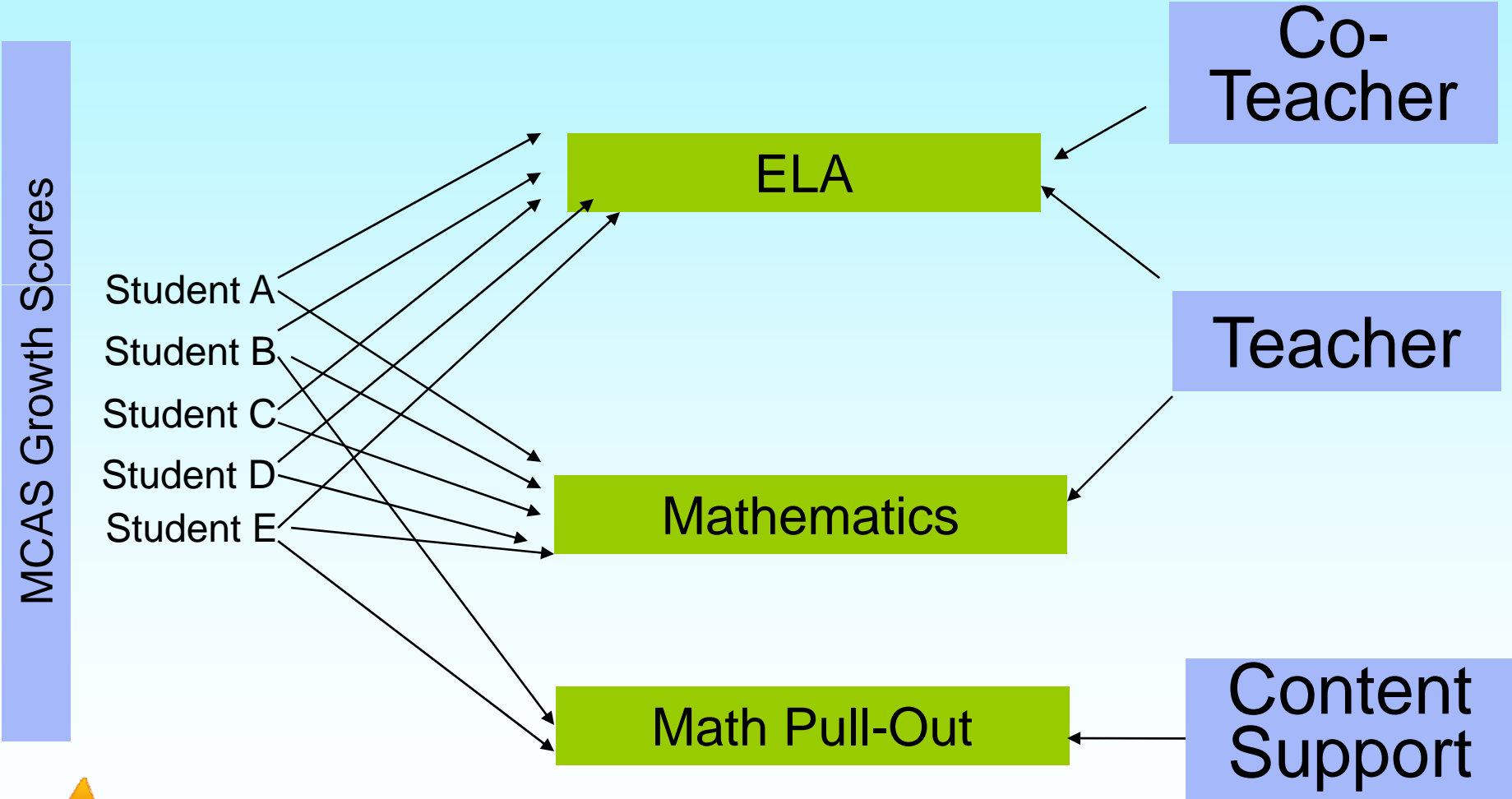
# Ideal connection for attribution secondary school



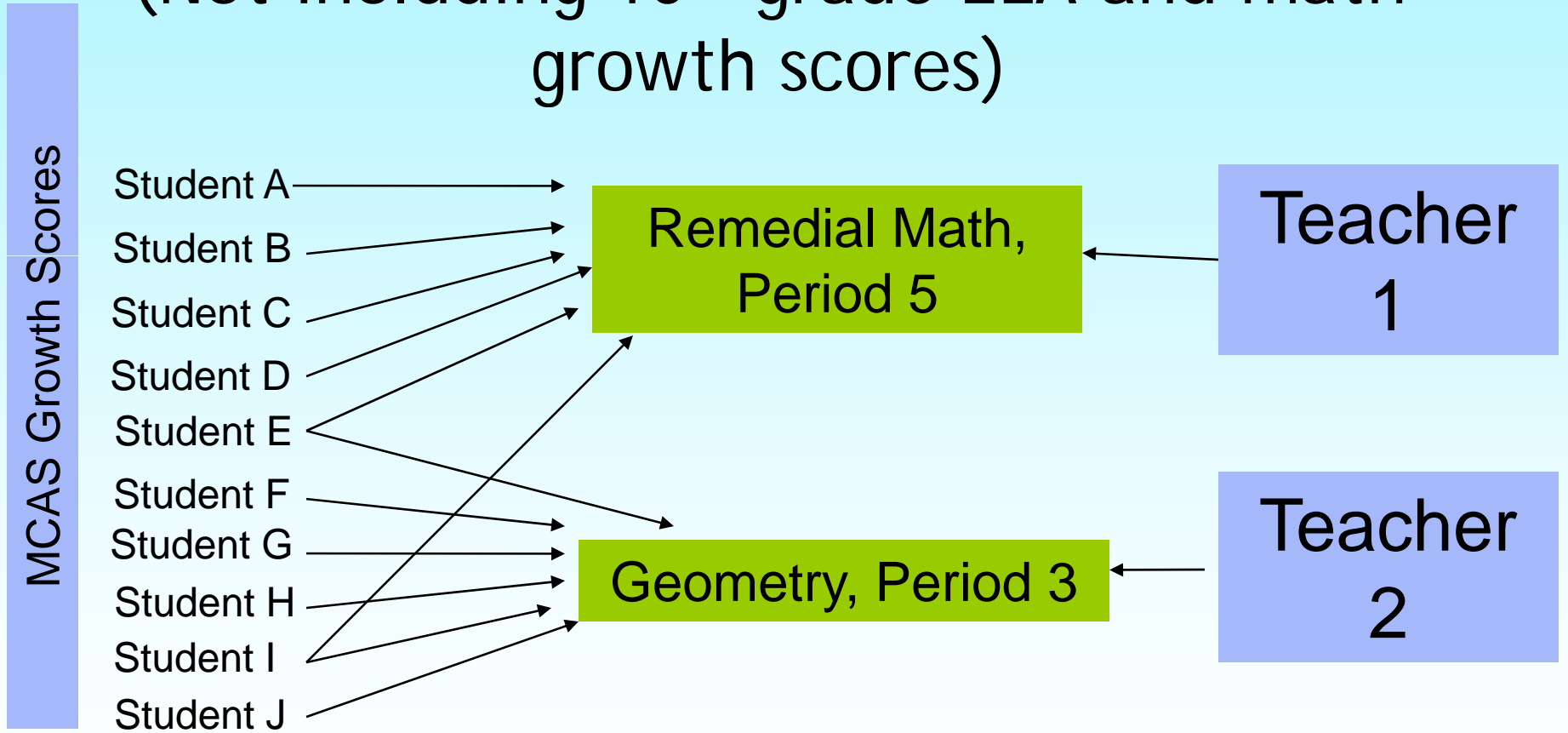
# Ideal Relationship for attribution: Elementary self contained classrooms



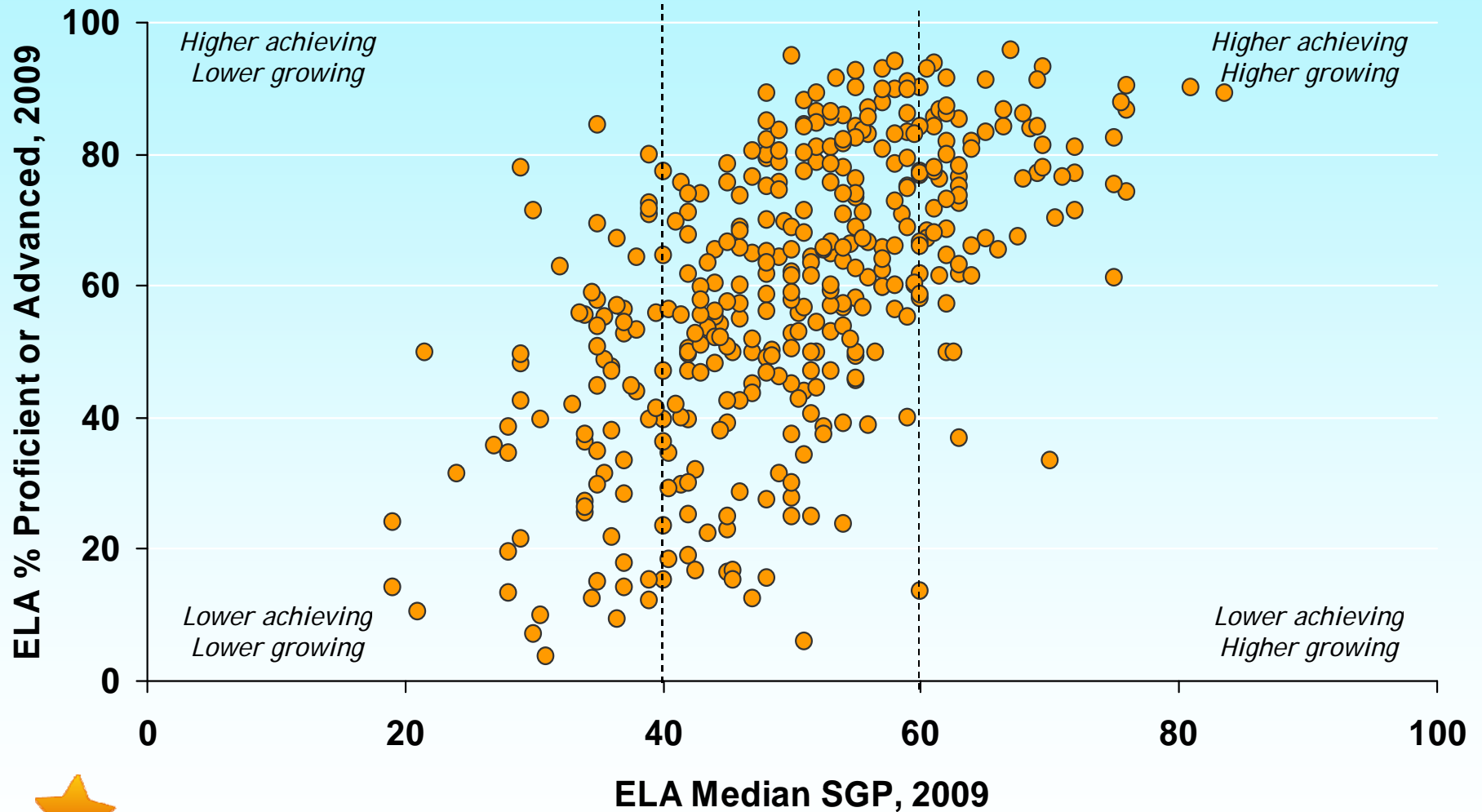
# Problematic Relationships for attribution ~10% of teachers



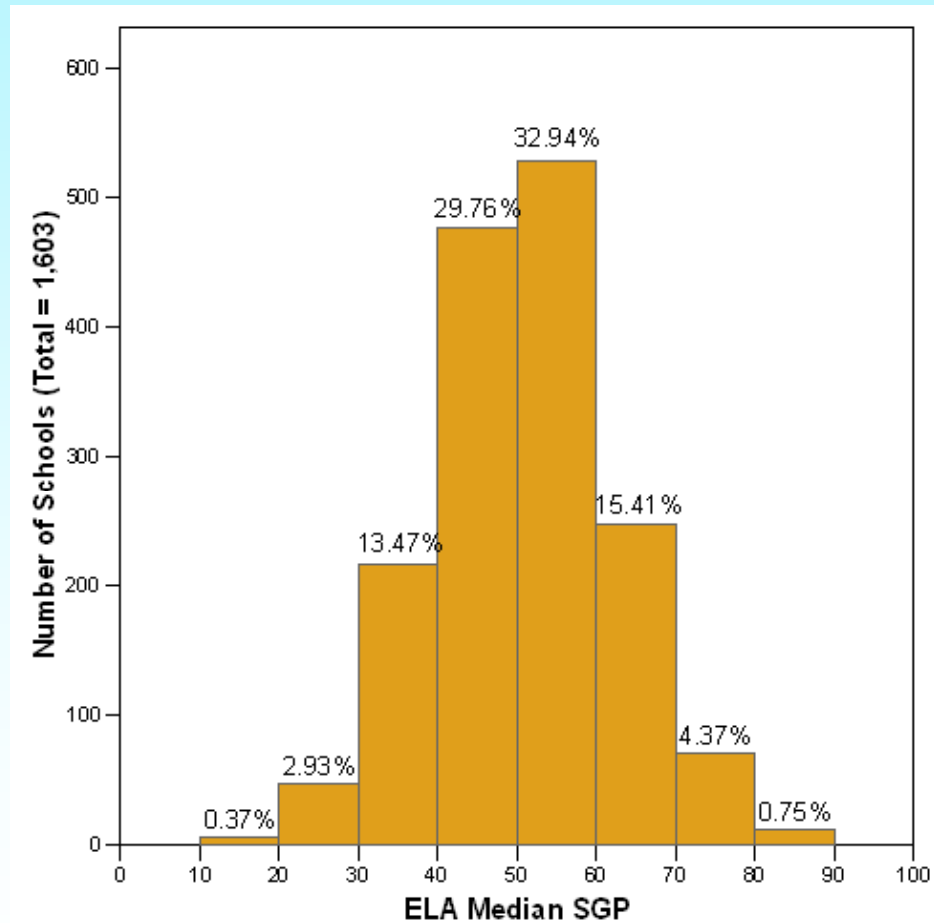
# Problematic Relationship: 2.5% of students have more than one ELA or Math teacher (Not including 10<sup>th</sup> grade ELA and math growth scores)



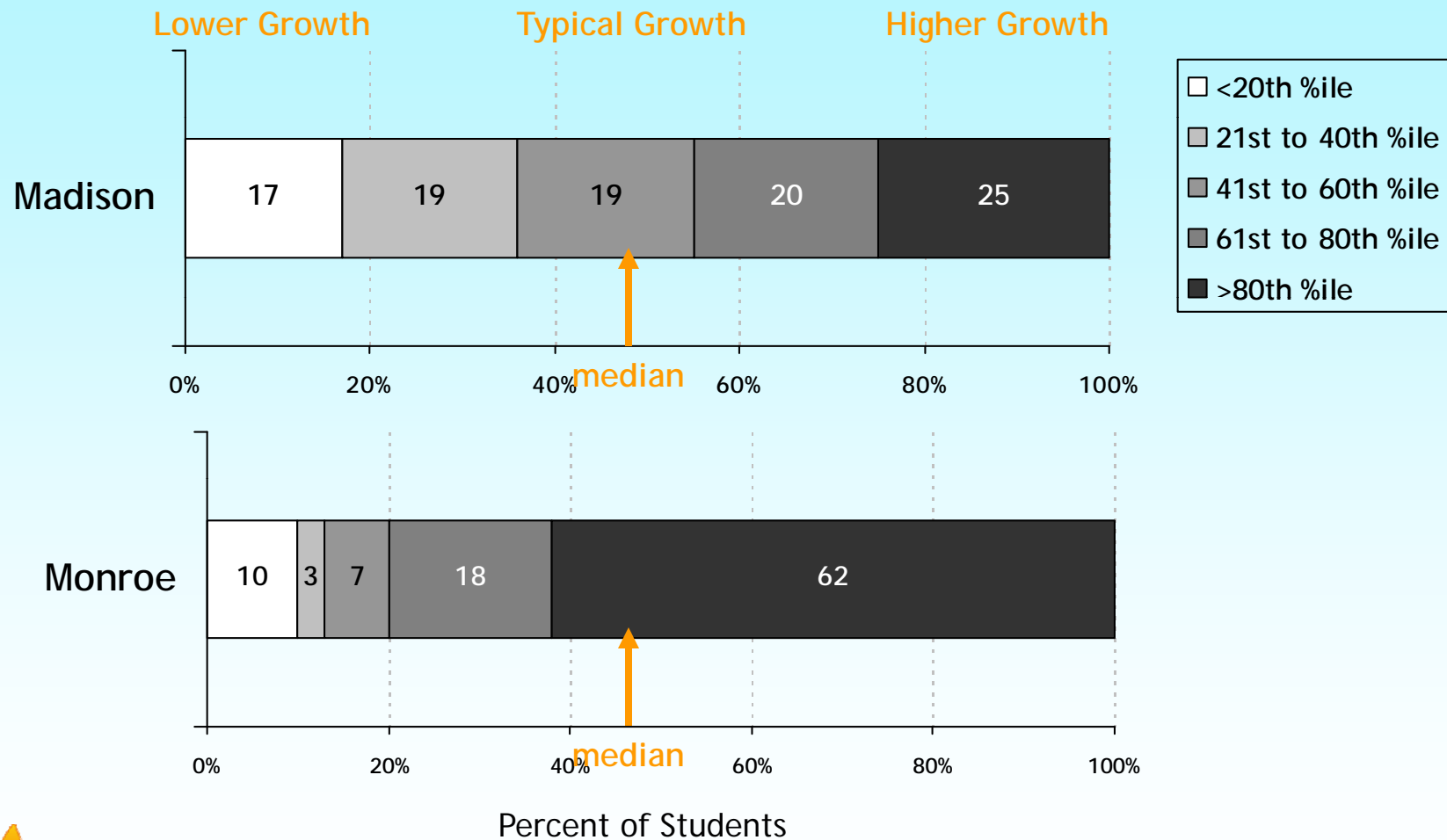
# Using Median Student Growth Percentiles: Growth by Achievement for Schools



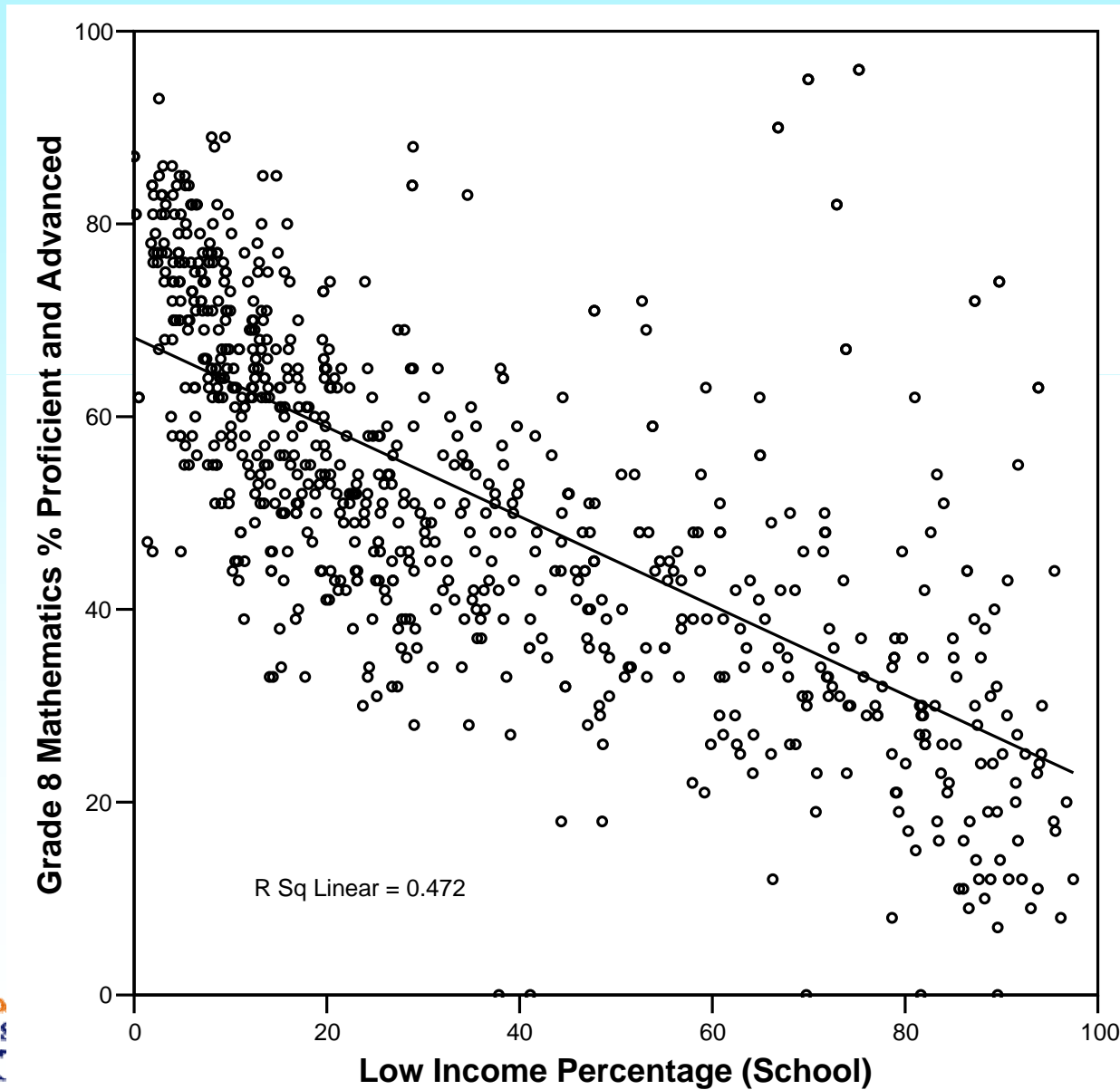
# School-level distribution of medians



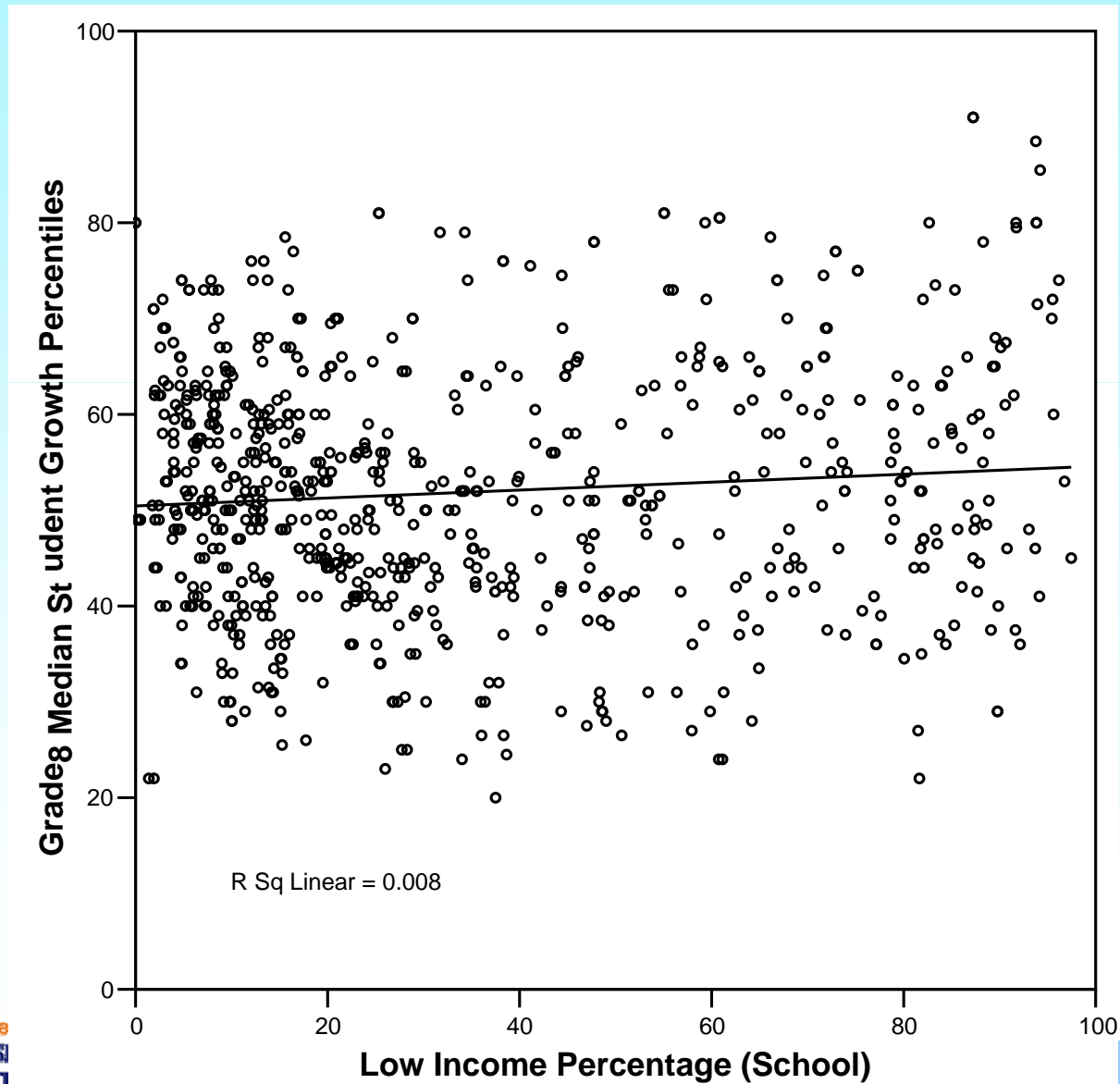
# Growth Distribution Charts



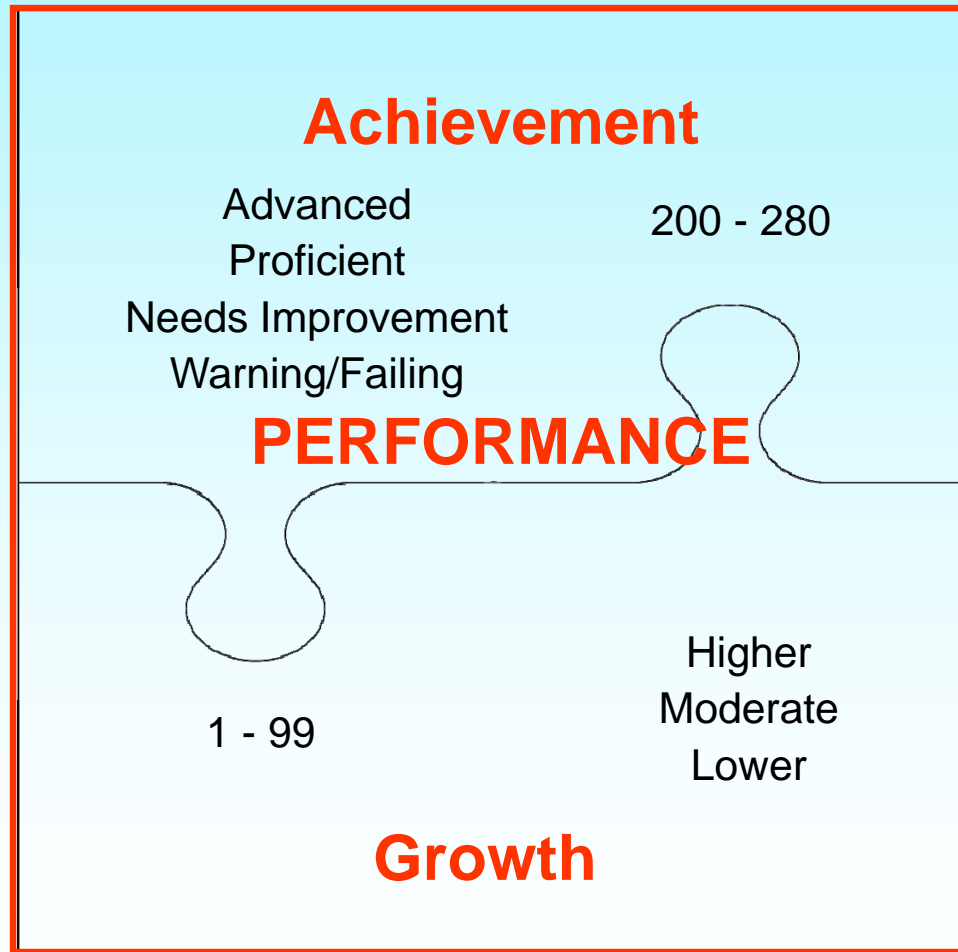
# Patterns: Achievement vs. Poverty



# Patterns: Growth vs. Poverty



# Growth offers a more complete picture of student performance



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For more information:

[www.dese.mo.gov/MOSIS/MCDS\\_pilot-student-growth.html](http://www.dese.mo.gov/MOSIS/MCDS_pilot-student-growth.html)



If you have questions you want me to forward to Bob Lee...

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