

South Dakota's Growth Model

From Student Growth Percentiles
to School Accountability Scores

How did South Dakota arrive at an Academic Growth model?

Growth Model Work Group

- Spring 2013 – convened key education professionals
- That group defined the purpose and non-negotiables for any model:
 - Fair to large and small schools
 - Takes growth of ALL students into account, not just “bubble kids” or non-proficient students
 - Explainable to parents and those outside the educational field
 - Not just another measure of proficiency

What was the process?

- Work Group selected the **Student Growth Percentile Model** after considering five different state models.
- The model selected is most like that being used in Colorado.

Student Growth Percentiles - Explained

- What are SGPs?
 - Indicators of student growth: test scores compared with scores of students with similar score histories (academic peers).
- What can SGPs tell us about student growth?
 - How much a student grew, relative to his or her academic peers. A student with an SGP of 65 performed better than 65% of his or her academic peers.
- Which states are using SGPs?
 - Colorado, Arizona, Utah, Washington, and others
 - Allows SD to leverage the programming, communications, and lessons learned.

Background

Points

Contact

What does it look like?

Background

Points

Contact

The next slide shows two students – one of whom scored a 220 on an assessment, one of whom scored a 280 on an assessment in third grade.

We see that in fourth grade, both students earned the same score – a 310.

Despite having scored the same in fourth grade, they do not have identical SGPs.

Our student who initially scored a 220 earned an SGP of 310. That student grew more than 75 percent of her academic peers – the other students who also scored around a 220 in grade 3.

Our student who scored a 280 in grade 3 earned an SGP of 42. That student only grew more than 42 percent of his academic peers – those also scoring around a 280 in grade 3.

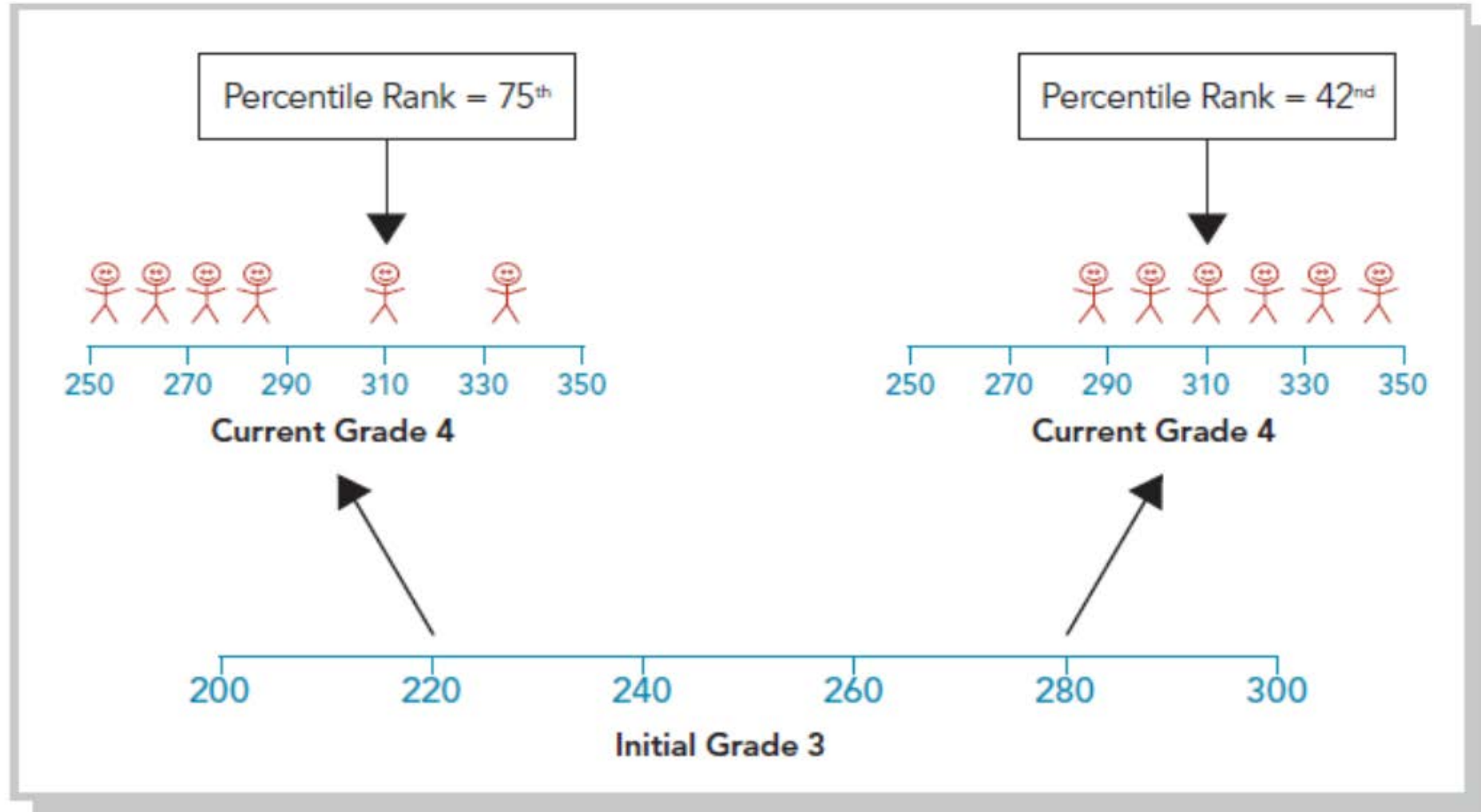
This is the underlying premise of the model.

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Illustration of a Heuristic Approach to Computing Student Growth Percentiles



Points to Consider:

- The “academic peers” used for the model are only South Dakota students. South Dakota students will be compared to other South Dakota students across the state with similar score histories.
- The 2015 assessment serves as a baseline for calculating academic growth. The model will first be calculated following the administration of the 2016 assessment.
- As more years are built into the system, the data will become more robust and give a better projection of how South Dakota students are likely to grow in the future.

Background

Points


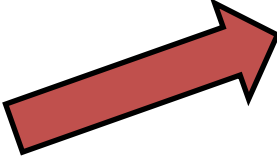
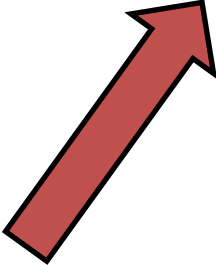
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**Great, but how does my school
earn SPI points?**

Academic Growth only calculated at the elementary and middle school levels.

Schools earn points for students meeting the growth standard via three avenues:

Meeting Standard:

Keeping Up	
Catching Up	
Very High Growth	

What do those mean?

“**Keeping Up**” and “**Catching Up**” designations are based on the cut scores for proficiency; i.e., taking a normative-based measure and making it criterion based.

- Assumes: Same relative growth for the student.
- Assumes: Same patterns of growth statewide.
- Projects a student’s performance out three years.
- **Keeping up:** Is the student already proficient? If yes, is she projected to maintain that proficiency in three years, based on her past score history? If yes, then she is “keeping up.”
- **Catching up:** If the student is not already proficient, is his score projection three years out high enough to get him to proficiency within that time frame? If yes, then “catching up.”

What do those mean, continued?

“**Very High Growth**” as a third avenue is unique to South Dakota.

- Again, projects a student’s growth out three years based on her previous score history.
- She is far enough behind that even with tremendous growth, still cannot get to proficient within three years.
- If she earns an SGP of 70 or above, her growth will be considered to be meeting standard for the purposes of awarding SPI points, despite not getting to that proficient level.
- Recognizes and rewards the tremendous work her teachers are doing to get her caught up, despite starting from so far behind her classmates.

Translating it into points:

Academic Growth as an SPI key indicator is worth 40 points (out of a total 100 SPI points).

- Half (20 points) awarded based on the performance of all students.
- Half (20 points) awarded based on the performance of a school's lowest quartile.

Why a lowest quartile and not the Gap Group?

- This is a different measure from student achievement.
- Some schools are 100% Gap. Some schools have no Gap group. All schools have a 25% of students who have the most room to grow.

The 40 points are broken down as follows:

	Math	ELA	Total
			Max. Points
All Students	0-10	0-10	20
Lowest 25%	0-10	0-10	20
Total			40

Taking the chart from the previous slide, below is a hypothetical situation of what a school's point distribution might look like, based on the percentage of kids scoring in any of the three "sufficient growth" categories:

	Math		ELA		Total	
	%	Points	%	Points	%	Points
All Students	78.00%	7.80	73.09%	7.31		15.11
Lowest 25%	61.30%	6.13	59.03%	5.90		12.03
Total						27.14

Background

Points

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