Student Achievement and Growth

Cynthia C Millkin, Ph.D.
Tami Cassel
Terminology

Adequate Growth
Percentile
Median
Adequate Growth

Mean vs. Median

\{73, 47, 32, 62, 82, 51, 24\}

Mean

\[ \frac{73 \times 47 + 32 \times 62 + 82 \times 51 + 24}{7} \]

\[ = \frac{371}{7} = 53 \]

The mean is also called the average.

Median

24 32 47 51 62 73 82

The median is the middle number.

The Mean and the Median both quantify the "middle" of a collection of numbers.
Percentage vs. Percentile

Experiencing Student Growth Percentile

- Using the Student Growth Card, form a group with all of the “students” with the same 3rd grade scale score – academic peers.
- Within your group get in order by 4th grade scale score.
- Turn your cards over and compare your growth percentiles.

Experiencing Median Growth Percentile

- Using your Student Growth card, identify your school (A, B, C, D, E).
- Form a group with others from the same school.
- Put yourselves in order (in a line) by growth percentile.
- Identify the person in the middle (median).
- What is the median student growth percentile for your school?
Adequate Growth

- What is adequate growth?
- Based on catch-up and keep-up growth.

**Adequate Growth**
Just as Observed Growth tells us what the level of growth was for a group of students, Adequate Growth tells us if that was enough growth or not.

Catching Up

To be considered to be Catching Up:

- The student scores below proficient (unsatisfactory or partially proficient) in the previous year
- The student demonstrates growth adequate to reach proficient performance within the next three years or by tenth grade, whichever comes first.

Calculating Adequate Growth for Students Scoring Below Proficient: Catching Up
Calculating Adequate Growth for Students Scoring Below Proficient: Catching Up

<table>
<thead>
<tr>
<th>Grade</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Proficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Calculating Adequate Growth for Students Scoring Below Proficient: Catching Up

76 is the minimum—this student’s adequate growth value.

55th percentile growth will not be enough for this student to catch up — her current growth is not adequate.
Keeping Up

To be considered to be Keeping Up:

- The student scores at the proficient or advanced level in the previous year.
- The student demonstrates growth adequate to maintain proficiency for the next three years or until tenth grade, whichever comes first.

Calculating Adequate Growth for Students Scoring Above Proficient: Keeping Up

<table>
<thead>
<tr>
<th>6th grade</th>
<th>7th grade</th>
<th>8th grade</th>
<th>9th grade</th>
<th>10th grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>79</td>
<td>Proficient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Not Proficient</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Calculating Adequate Growth for Students
Scoring Above Proficient: Keeping Up

Not Proficient

7th grade 8th grade 9th grade 10th grade

6th grade

Proficient

50 50 50 50

25 25 38 38

is the maximum -
this student's adequate
growth value

Proficient

12

Not Proficient

50 50 50 50
Calculating Adequate Growth for Students Scoring Above Proficient: Keeping Up

<table>
<thead>
<tr>
<th>Grade</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficient</td>
<td>52</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>52</td>
</tr>
<tr>
<td>Not Proficient</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

79th percentile growth will be enough for this student to keep up – his current growth is adequate.

Local Views of Student Data

- Individual Student Reports
  - [http://www.schoolview.org/ColoradoGrowthModel2](http://www.schoolview.org/ColoradoGrowthModel2)

- Using School View to look at the growth of individuals within student groups, e.g., caseloads or students with special education in a building
State Disaggregated Data

- 2011 Disaggregated Data
- Students with Speech or Language Impairments

Next Steps:
- Disaggregate data by AU
- Triangulate with local data

Questions?

Cindy Millikin
MiIlkin_c@coe.state.co.us
(303) 866-6619

Tami Cassel
Cassel_t@coe.state.co.us
(303) 866-6114
Thank You!