Using Growth Data to Improve Learning, Teaching, and School Functioning

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Presentation at the CCSSO National Conference on Student Assessment – Part of the session, *Applications of Growth Models to Making Decisions about States, Schools, Programs and Students*

Detroit, MI  June 23, 2010
Overview

- Some things we know about using Growth
- Some important challenges to making Growth more useful
Some important things we’ve learned about growth

- Growth is different than Status
- Multiple views of performance are useful
- Use dictates the appropriate growth model
- For accountability, “good enough” growth is a key decision
## Four Views of School Performance

(Carlson, 2001; Gong, 2002)

<table>
<thead>
<tr>
<th></th>
<th>Status</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Achievement</strong></td>
<td>“Status”: How high do students in this school score on state assessments?</td>
<td>“Improvement”: Is the performance of successive groups increasing from one year to the next?</td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td>“Growth”: Are individual students learning as they progress from one grade to the next?</td>
<td>“Acceleration”: Is the school becoming more effective or improving more rapidly?</td>
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</tbody>
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Multiple views of performance can be useful.

2006–2007 Rhode Island Math School Results:
Student Growth versus Student Achievement by Percent Minority

Growth Status

Percentage Minority Students
- Greater than 75 percent
- 50 to 75 percent
- 10 to 50 percent
- Less than 10 percent

Betebenner, Jan. 2008, for RI project
Use dictates the appropriate growth/measurement model

- Accountability
  - Relation to goal/criterion
- Program & personnel evaluation
  - Attribution, “like” comparison
- Instruction
  - Diagnosis and feedback

Goldschmidt, 2004
Deciding “good enough” growth
a central issue

<table>
<thead>
<tr>
<th>Empirically-based</th>
<th>Policy-based</th>
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<tbody>
<tr>
<td><strong>Normative</strong></td>
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<tr>
<td><strong>Absolute</strong></td>
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What is the Criterion?
Will it be Conditioned? On what?

Gong & Hill, 2004
Some challenges to making more useful growth measures

- Define desired growth in terms of content, in relation to curriculum
- Interpret in terms of scale, content, and curriculum
- Focus on strong uses across levels, then match measurement
Define desired growth

- Growth is increase in performance on the same thing, towards mastery.
- Growth is learning one topic and then learning a more advanced topic in a sequence of content.
- Growth is increase in expertise on the same thing (e.g., a more powerful mental model, increased fluency, greater independence).
- Growth is increase in integration across content and skills.
- Growth is increase of knowledge and skills outside the defined areas.
Bases for Interpretation

- Scale
- Content/skill analysis
  - Design, e.g., standards-based
  - Cognitive analysis
- Curriculum/instructional referenced
  - “Leveled” performances
- Experimental design
A Use Cycle

1. Specify Purpose & Use
2. Choose what to measure
3. Measure
4. Interpret
5. Use
Another Use Cycle

1. Define problem & commit to improve
2. Implement solution
3. Evaluate to Improve
4. Hypothesize solution
5. Monitor results

Gong – Center for Assessment – “Using Growth to Improve L/T” – CCSSO NCSA 6/23/10
Levels of Decisions & Actions

- Coherent assessment information that leads to action
- Comprehensive systems include all functions, levels

<table>
<thead>
<tr>
<th>Function</th>
<th>National/State</th>
<th>District</th>
<th>School</th>
<th>Classroom/Individual</th>
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</thead>
<tbody>
<tr>
<td>Signal</td>
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<tr>
<td>Evaluate</td>
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<tr>
<td>Inform</td>
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</tbody>
</table>

Gong, 2008; Stiggins, 2008
Example

- State – Proficiency-based Graduation Requirement
- District – Dropout
- School – Support program
References


- Gong, B. (2008). Assessment, learning, equity: What will it take to move to the next level?
For more information:

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