Academic Growth of Exceptional Children in Reading and Mathematics

*Findings from the National Center on Assessment and Accountability for Special Education*

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NCAASE www.ncaase.com

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Overview

• Standards-based reform in USA-Brief overview
• Growth vs. status measures—a changing focus
• NCAASE purpose and key questions
• Selected NCAASE initial results
• Standards-based reform has dominated educational scene in USA since 1990s
• Theory of action: Articulate high standards, test students on standards, resulting feedback, plus rewards and sanctions will improve student outcomes
• Initially, many students with disabilities were excluded from standards and assessments

• Concern that exclusion of students with disabilities weakening reform and accountability efforts for all students, and leaving students with disabilities behind

• More knowledge about impact of excluding than how to include
No Child Left Behind Act of 2001

- Mandated testing in grades three to eight, including students with disabilities
- Outcomes reported for disaggregated groups—gender, ethnicity, free/reduced lunch (indicator of poverty), English language proficiency status
- Goal: All children in all subgroups will be scoring at grade level proficiency in reading and mathematics by 2014
- NCLB initial metric--% of students scoring at grade level proficiency or above, monitored by examining successive cohorts of students
Stable Subgroup Membership Matters

Mathematics Achievement Gap

- Δ Special Education in Current Year SWD
- ⊙ Special Education at Wave 1 SWD

<table>
<thead>
<tr>
<th>Grade</th>
<th>Mathematics Achievement Gap</th>
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<tbody>
<tr>
<td>3</td>
<td>-1.20</td>
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<td>4</td>
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## Change in Mean Number of Students Reaching Proficiency

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<tr>
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<td>Mean</td>
<td>SD</td>
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<tr>
<td>Current Participation in Special Education Only</td>
<td>40</td>
<td>21</td>
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<tr>
<td>Including Students Two Years Post Dismissal</td>
<td>47</td>
<td>19</td>
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<td>Net Change in Percent Proficient</td>
<td>+7</td>
<td>+6</td>
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</table>
1. What is the **natural developmental progress** in achievement for students with disabilities?

2. What models **best characterize achievement growth** for students with disabilities who are participating in general achievement tests?

3. How do various growth models represent **school effects** for students with and without disabilities, and how do results compare to those derived from the status models now in use?

4. How do results from different types of **interim assessments** of students’ achievement meaningfully contribute to a model of academic growth for students with disabilities?

5. How can information about **opportunity to learn** and achievement growth be used to **enhance academic outcomes** for students with disabilities?
Data Sources for Growth Studies

- North Carolina test data (NCAASE also looking at AZ, OR, PA)
- Sample sizes >90,000 in each sample, followed for 5 years
Mathematics Growth by High Incidence Disability Group

<table>
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<tr>
<th>Grade</th>
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<th>Speech-language Impairment</th>
<th>Specific Learning Disability</th>
<th>Intellectual Disability</th>
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Reading Growth by High Incidence Disability Group

- General Education
- Speech-language Impairment
- Specific Learning Disability
- Intellectual Disability

Reading Scale Score vs. Grade

- Grade 3
- Grade 4
- Grade 5
- Grade 6
- Grade 7
Growth by Starting Proficiency Level-Math

Mathematics Growth Score 2010

General Ed
SWD

Math Proficiency Level 2009
Growth by Starting Proficiency Level – Rdg

![Box plot showing growth by starting proficiency level for reading.](image-url)
Findings to Date

• Students with disabilities are growing in reading and mathematics.

• Large differences in starting point achievement skills within students with disabilities, smaller differences in growth.

• Student improvement may not be reflected in changes in status (Non-proficient/proficient).

• Only considering students currently served in special education biases outcomes for this group.
Future Directions

• Longitudinal studies with other states’ data
• Growth on alternate assessments for students with severe disabilities
• Examining how students with disabilities’ achievement scores are related to outcomes for schools
• Comparisons among different school accountability models
• Examining how to enhance achievement growth for students with disabilities
Thank you!

Questions, comments?

Please visit project website:
www.ncaase.com

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