DEMystifying NAEP

New Jersey Department of Education
Barbara Smey-Richman, NAEP State Coordinator

Summer Literacy Conference
New Brunswick, NJ
July 28, 2009
Hi! I’m from the “NJDOE” and I’m here to help!!

Barbara Smey-Richman, Ed.D.
New Jersey
NAEP Coordinator
NAEP RHYMES WITH ...

NAEP: National Assessment of Educational Progress

It's also called The Nation's Report Card

or the Gold Standard for assessments
Think, Pair and Share ...

- How did you first hear about NAEP?
- What is your most recent experience with NAEP?
President Obama:
“Now, students in New Jersey rank at the top of the country in reading and math…”
What is NAEP?

NAEP was authorized by Congress in 1969 - 40 years ago

It is designed to create a reliable way of determining areas of strengths and weaknesses in the American school system.
NAEP Is Intended to Answer the Question >>>

Are U.S. students learning what they should be learning?
(Congress, 1969)
Rationale: What is NAEP?

- **NAEP's mission is to produce national and state-level results for student populations**
- **NAEP** does not provide individual student, school, or district results
- **NAEP** is a common yardstick for measuring student performance across states and other jurisdictions
There Are Many NAEPs >>>

The National Assessment of Educational Progress

- **MAIN**
  - National Public & Nonpublic Grades 4, 8, & 12
  - State (Public & Nonpublic (Grades 4 & 8))
  - District -Trial (Public) (Grades 4 & 8)

- **LONG-TERM**
  - National Public & Nonpublic 9, 13, & 17 yr olds
NAEP Generates Much Information

Administered by the National Center for Education Statistics (NCES)

Rich Data Source

Policy makers--National Assessment Governing Board (NAGB)
Many Subjects >>>>

- **NAEP** primary subjects for main NAEP:
  - **Reading-Math** (every 2nd years)
  - **Writing** (2007 -- every 4th year)
  - **Science** (2009 -- every 4th year)

- **NAEP** - Others, e.g., civics, US history, geography, economics, the arts, foreign language . . .

- **NAEP** - “special studies”
## NAEP’s Assessment Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>National</th>
<th>State</th>
<th>Long-Term Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>Reading, Mathematics, Writing</td>
<td>Reading, Mathematics, Writing</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Arts</td>
<td></td>
<td>Reading Mathematics</td>
</tr>
<tr>
<td>2009</td>
<td>Reading, Mathematics, Science, High School Transcript</td>
<td>Reading, Mathematics, Science</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>US History, Geography, Civics, Mathematics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Reading, Mathematics, Writing</td>
<td>Reading, Mathematics, Writing</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Economics (12), Technological Literacy (special study)</td>
<td></td>
<td>Reading Mathematics</td>
</tr>
<tr>
<td>2013</td>
<td>Reading, Mathematics, Science, High School Transcript</td>
<td>Reading, Mathematics, Writing</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>Civics, Foreign Language, Long-term Trend</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A Proposal
You Can’t Refuse >>
Breaking News >>>

Headlines--
NJ NAEP and You - Perfect Together!!
Newest NAEP Requirement

- According to the Title I regulations (*Federal Register, October 28, 2008*):

- States must report their most recently available state NAEP results on their state and district report cards
  - Grades 4 and 8 only
  - Reading and mathematics
  - Achievement level percentages
  - Student participation rates
Rationale . . .

“...ensure that NAEP results are easily accessible and available to parents and the public”

Federal Register Vol. 73, No. 210, 64444
Rationale . . .

“...will provide parents and the public with additional important information about the performance of the students in their State”

Federal Register Vol. 73, No. 210, 64436
# Rounds to zero.

## State Report Cards: Required to Report All Major Groups

<table>
<thead>
<tr>
<th>NJ NAEP 2007 Percentages</th>
<th>Below</th>
<th>Basic</th>
<th>Proficient</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 8 Overall</td>
<td>19</td>
<td>42</td>
<td>35</td>
<td>4</td>
</tr>
<tr>
<td>White</td>
<td>10</td>
<td>42</td>
<td>43</td>
<td>5</td>
</tr>
<tr>
<td>Black</td>
<td>42</td>
<td>42</td>
<td>16</td>
<td>#</td>
</tr>
<tr>
<td>Hispanic</td>
<td>30</td>
<td>48</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>Asian/PI</td>
<td>9</td>
<td>34</td>
<td>47</td>
<td>10</td>
</tr>
<tr>
<td>Am Indian</td>
<td>‡</td>
<td>‡</td>
<td>‡</td>
<td>‡</td>
</tr>
<tr>
<td>Free/Reduced Lunch</td>
<td>38</td>
<td>46</td>
<td>16</td>
<td>#</td>
</tr>
<tr>
<td>SD</td>
<td>54</td>
<td>36</td>
<td>10</td>
<td>#</td>
</tr>
<tr>
<td>ELL</td>
<td>56</td>
<td>39</td>
<td>5</td>
<td>#</td>
</tr>
</tbody>
</table>
State Report Card: Must Report Participation Rates

<table>
<thead>
<tr>
<th>NAEP Participation Rates -</th>
<th>Grade 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students with Disabilities</td>
<td>XX</td>
</tr>
<tr>
<td>English language learners</td>
<td>XX</td>
</tr>
</tbody>
</table>
NJ’s Prototype for State and District Report Cards is:
Example of South Carolina's Report Card, Grade 8
(A Side-by-Side Display)
Think, Pair and Share ...

- What do you think about this requirement to include the NAEP state-level results on the NJ state and district report cards?
Comparing NJASK and NAEP Results
Why Are the Test Results So Different?

NAEP and NJ GEPA Language Arts Literacy (LAL): Different Tests Yield Different Results (2003-2005)

GRADE 8

Percent At or Above Proficient

NJ GEPA LAL

- 74% 2003
- 72% 2005

G8 NJ Results

NAEP Reading

- 37% 2003
- 38% 2005

G8 NAEP Results
The Power of the Metaphor

Comparing NAEP with the New Jersey tests is like comparing ....?
Why Do the NAEP and NJ Tests Differ?

**NJASK-HSPA:**
Satisfies NCLB requirements
Reports results for students, schools and districts

**NAEP**
Aims to monitor student performance in an internationally competitive global society
Reports results for student populations only.
Does not provide student, school or district results
Both NAEP & NJ Tests are High-Stakes, but for Different Reasons

NJASK-HSPA tests have consequences (e.g., Adequate Yearly Progress) for

- students
- schools
- districts

NAEP results are used by policymakers to make educational funding and programmatic decisions

NAEP results influence legislation

- The re-authorization of NCLB
- NJ school funding formula
Let's Compare Proficient for NJ and NAEP

- **NJASK and HSPA** - measures grade-level achievement

- **NAEP** - measures “aspirational,” achievement beyond grade-level expectations -- world-class standards
William Shakespeare

We know what we are
but, know not what we
may be.

Hamlet (1610)
What Does Proficient Mean?

The definitions of “proficient” set by states and by NAEP have no observable agreement.
NAEP - The Golf Club
NAEP's 3 Performance Levels

Performance-Level Descriptors (PLD)

- **Basic**: Partial mastery of prerequisite knowledge/skills that are fundamental for proficient work *(At grade level)*
- **Proficient**: Solid academic performance -- demonstrated competency over challenging subject matter
- **Advanced**: Superior performance

[Below Basic: Incomplete knowledge/skills necessary for proficient work]
NAEP: “Rosetta Stone”

- **NAEP Basic** and **NJ Proficient** are roughly the same
- They both indicate grade-level performance
Why Are the Test Results So Different?

NAEP and NJ GEPA Language Arts Literacy (LAL): Different Tests Yield Different Results (2003-2005)

Percent At or Above Proficient

GRADE 8

NJ GEPA LAL

G8 NJ Results

NAEP Reading

G8 NAEP Results

74% 2003
37% 2003

72% 2005
38% 2005

35
Different Purposes = Different Test Designs
An Obvious Differences

Language Arts Literacy

- Combined Tests
- Combined Scores only

Reading and Writing

- Separate R/W Tests
- Separate R/W Scores
Who's Tested?

- NAEP uses a complicated Multi-Stage Stratified Random Sampling method
- Sample sizes for State NAEP
  - Approximately 3,000 students for each subject and grade level (same for all states)
  - NAEP selects about 3% of NJ’s 100,000 students for each grade-level cohort
NAEP’s Matrix Sampling

- Each student answers only a small portion of the NAEP items
- Students in the same classroom receive different booklets

Booklet A = Blocks 1 [Items 1 & 2] & Block 2 [Items 3 & 4]
Booklet B = Blocks 2 [Items 1 & 2] & Block 3 [Items 5 & 6]
NAEP Has Assessment Frameworks & Test Spec's Only

NAEP does not have core curriculum content standards or curricular frameworks

<table>
<thead>
<tr>
<th>NAEP Frameworks</th>
<th>NAEP Test Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define the content and format of the test</td>
<td>Detailed blueprint for constructing the test</td>
</tr>
<tr>
<td>Included the Proficiency Level Descriptors (PDLs)</td>
<td>Distribution of items and response format</td>
</tr>
<tr>
<td></td>
<td>Sample items</td>
</tr>
<tr>
<td>Audience: general public</td>
<td>Audience: test developers</td>
</tr>
</tbody>
</table>

Copies can be downloaded from: [http://www.nagb.org/publications/frameworks.htm](http://www.nagb.org/publications/frameworks.htm)
What's Being Tested?

Similarities?

Does the NAEP and the NJ tests measure a common core of reading and writing abilities?

Are all reading tests the same?
Different Schools of Thought??

- NAEP’s assessments are developed as a result of a national-based process and reflect a national view.
- New Jersey’s NJASK and HSPA reflect the New Jersey perspective.
- Common Core State Standards Initiative:
  - Led by the “Big 5”:
    - NGA Center, CCSSO, Achieve, Inc.,
    - ACT and College Board
  - 49 states including NJ have joined
  - More information at http://www.corestandards.org/
This diagram is only an approximation of how the NAEP reading and New Jersey LAL tests relate to each other. The diagram is not drawn to “scale,” and the extent to which the tests overlap is not based on an alignment study.
NAEP & NJASK Tests Look the Same At 30,000 Miles Up

Concepts appear the same

Items-level may reveal differences
NAEP's 2009 Framework Defines Reading

Reading is defined as an active process that involves

- Understanding written text
- Developing and interpreting meaning, and
- Using meaning as appropriate to the type of text, purpose, and situation
NAEP’s Theoretical Basis (2007)

1. Context for Reading (Purposes for Reading)
   - Literary Experience
   - Information – retrieving information
   - Perform a Task – following instructions (out in 2009)

2. Aspects of Reading (Student Response to Text)
   - General Understanding
   - Interpretations
   - Reader/Text Connection
   - Context and Structure
The NAEP 2009 Content Area Matrix Has Changed

<table>
<thead>
<tr>
<th>Text Types</th>
<th>Cognitive Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Locate/reCALL (LR)</td>
</tr>
<tr>
<td></td>
<td>Integrate/interpret (II)</td>
</tr>
<tr>
<td></td>
<td>Critique/evaluate (CE)</td>
</tr>
<tr>
<td>Literary Text (LT)</td>
<td>LT/LR</td>
</tr>
<tr>
<td></td>
<td>LT/II</td>
</tr>
<tr>
<td></td>
<td>LT/CE</td>
</tr>
<tr>
<td>Informational Text (IT)</td>
<td>IT/LR</td>
</tr>
<tr>
<td></td>
<td>IT/II</td>
</tr>
<tr>
<td></td>
<td>IT/CE</td>
</tr>
</tbody>
</table>
NAEP 2009 Additional Content Changes

- Systemic vocabulary assessment
- Poetry at all grades
- Expert judgment and readability formulas for reading passages
## NAEP 2009 Reading

<table>
<thead>
<tr>
<th>Grade</th>
<th>Literary Text</th>
<th>Informational Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>8</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>12</td>
<td>30%</td>
<td>70%</td>
</tr>
</tbody>
</table>
# NAEP Writing Framework

## NAEP Purposes for Writing

<table>
<thead>
<tr>
<th>Type of Writing</th>
<th>Purpose(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Narrative Writing</strong></td>
<td>• Telling a story&lt;br&gt;• Fosters&lt;br&gt;  ➢ imagination and&lt;br&gt;  ➢ creativity</td>
</tr>
<tr>
<td><strong>Informative Writing</strong></td>
<td>• Informing the reader&lt;br&gt;• May involve:&lt;br&gt;  ➢ reporting events or&lt;br&gt;  ➢ analyzing concepts</td>
</tr>
<tr>
<td><strong>Persuasive Writing</strong></td>
<td>Persuading the reader to:&lt;br&gt;  ➢ take action or&lt;br&gt;  ➢ bring about a change</td>
</tr>
</tbody>
</table>
A Host of Other Differences

- **Test length**
  - Content questions take 50 minutes per student; total test would take 7 hours

- **Content and skills assessed**
  - NAEP tests include more items and thus, can test a wider domain of knowledge

- **Average scale score (SS) points for reading tests**
  - NAEP has 500 & NJASK has 300 point scale

- **Student motivation**
  - NAEP has no consequences for the students (Not high-stakes for students)
  - Are students focused and trying their best?

Major problem at grades 8 & 12
A Host of Other Differences

- **Standard-setting methods**
  - *NAEP’s* process for determining the achievement levels may be different from that used by the individual states
  - **Cut points** vary according to the method used and to the panel assembled

- **Item difficulty and format**
  - *NAEP items* may be more difficult
  - *For NAEP, about half the time is spent on short/extended constructive response items*
  - *Also has multiple choice items*
Food For Thought >>>>

- NAEP and the NJ tests are inherently different tests
- Test developers caution against making comparisons
- Controversial Question (Related to the new Title I mandate): Can NAEP be used to verify overall trends found in state results?
Using NAEP Scores to Benchmark Other Assessments
“NAEP Score Equivalents” (NSE) As A Common Metric

- NAEP score equivalents are used to:
  - Compare the rigor of state tests
  - The procedure focuses mainly on where the states place their cut scores
  - It is an attempt to show that some state tests are much easier than others
NAEP Mapping Studies are Funded by NCES

- The NAEP 2005 State Mapping Study is the only study currently available

- The NAEP 2007 State Mapping Study will be released in a few weeks

- Additional NAEP State Mapping studies will be provided in conjunction with the biennial state NAEP assessments in the future (2009, 2011, etc.)
Think, Pair and Share …

- How do you think the New Jersey reading tests at grade 4 compare in rigor with other states?

- How about at grade 8?
NAEP 2005: NSE To Determine State-Test Rigor at Grade 4

Below Basic

2005 NJASK 4 is within the Below-Basic level
NAEP 2005: NSE To Determine State-Test Rigor, Grade 8

NCES, Mapping 2005 State Proficiency Standards onto the NAEP Scales (2007)
NAEP Scores Can Be Used to Benchmark US and State Performance Internationally
Interpreting Results

Census Regions and Divisions of the United States
Two States of Interest to New Jersey

![Maps of Connecticut and Massachusetts with state symbols](image-url)
State Context is Everything

- The 3 E’s that heavily influence overall student performance in each jurisdiction:
  - **Economic status**: Poverty-level (NAEP and NJ currently use free and reduced lunch data provided by the National School Lunch Program)
  - **Educational-level of the parents**: especially the mother
  - **Ethnic/Racial**: The proportion of different ethnic groups within the jurisdiction
NJASK 4: District Factor Groups

From the Instructional Data Management System, www.idms.com
Grade 8 Reading, NJ Parental Education, 2007, Achievement Level Percentages
ANAGRAMS

STRESSED = ?

AMERICA = ?

I am race!!
Proportion of Ethnic Groups Differ Greatly By State (2006 CCD)
## Current Demographic Differences For NJ, CT and MA

<table>
<thead>
<tr>
<th></th>
<th>NJ</th>
<th>CT</th>
<th>MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>55.7</td>
<td>66.0</td>
<td>72.9</td>
</tr>
<tr>
<td>Black</td>
<td>17.4</td>
<td>13.90</td>
<td>08.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>18.8</td>
<td>16.0</td>
<td>13.6</td>
</tr>
<tr>
<td>ELL</td>
<td>n/a</td>
<td>04.6</td>
<td>04.9</td>
</tr>
<tr>
<td>Poverty</td>
<td>27.3</td>
<td>27.3</td>
<td>28.9</td>
</tr>
<tr>
<td>Title I Schools</td>
<td>50.5</td>
<td>37.4</td>
<td>50.3</td>
</tr>
</tbody>
</table>
Simpson's Paradox Is Important for Understanding NJ's NAEP Results

- Overall national and state results are informative at a general level
- The proportional representation of subpopulations should be considered
- To truly understand what students are learning, one must examine how the subgroups are performing (Also a premise of NCLB argument also)
NAEP 2005: NJ Grade 4 Subgroups Show Significant Gains in Reading, But the Overall State Average is Flat

<table>
<thead>
<tr>
<th></th>
<th>Percent of the Sample</th>
<th>Av. Scale Score</th>
<th>Gains</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NJ Overall State Average</strong></td>
<td>100% 100%</td>
<td>223 223</td>
<td>0</td>
</tr>
<tr>
<td>White</td>
<td>69% 58%</td>
<td>233 232</td>
<td>-1</td>
</tr>
<tr>
<td>Black</td>
<td>16% 17%</td>
<td>198 199</td>
<td>+1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>11% 16%</td>
<td>195 206</td>
<td>+11</td>
</tr>
<tr>
<td>Asian</td>
<td>4% 8%</td>
<td>231 241</td>
<td>+10</td>
</tr>
</tbody>
</table>
Simpson’s Paradox: Grade 4 (2005)

- Jurisdiction
  - Massachusetts: 231
  - New Hampshire: 227
  - New Jersey: 223
  - Vermont: 227

Average Scale Score
When we examine the average scale scores by ethnic group we find:

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Jersey</td>
<td>232</td>
<td>199</td>
<td>206</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>228</td>
<td>++ (1%)</td>
<td>++ (2%)</td>
</tr>
<tr>
<td>Vermont</td>
<td>227</td>
<td>++ (1%)</td>
<td>++ (1%)</td>
</tr>
</tbody>
</table>

++ Reporting standards not met
NAEP 2007
Grade 4
Reading Results
What state consistently scores highest on NAEP?
Grade 4 Reading, 2007
(Scale Scores)

Using Average Scale Scores to Compare States

- One state higher than NJ.
- NJ the same as 3 states.
- NJ outperformed 45 states.

Focal state/jurisdiction (New Jersey)
Higher average scale score than New Jersey (1 jurisdiction)
Not significantly different from New Jersey (4 jurisdictions)
Lower average scale score than New Jersey (nation and 46 jurisdictions)
We Have
Reason
To Cheer!!
# Reading 2007 Up for Key Subgroups, Grade 4 (Scale Scores)

## Grade 4 Reading

<table>
<thead>
<tr>
<th>Average Scale Score</th>
<th>New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Overall</td>
<td>231</td>
</tr>
<tr>
<td>Males</td>
<td>228</td>
</tr>
<tr>
<td>Females</td>
<td>234</td>
</tr>
<tr>
<td>White</td>
<td>238</td>
</tr>
<tr>
<td>Black</td>
<td>212</td>
</tr>
<tr>
<td>Hispanic</td>
<td>214</td>
</tr>
<tr>
<td>Eligible for Free-Reduced Lunch</td>
<td>210</td>
</tr>
<tr>
<td>Not Eligible for Free-Reduced Lunch</td>
<td>238</td>
</tr>
<tr>
<td>Students with Disabilities</td>
<td>202</td>
</tr>
<tr>
<td>Students without Disabilities</td>
<td>233</td>
</tr>
<tr>
<td>English language learners</td>
<td>188</td>
</tr>
<tr>
<td>Not English language learners</td>
<td>232</td>
</tr>
</tbody>
</table>
Why NJ Grade 4 Reading Gains?

- High Quality Preschool Education
- Early Literacy Task Force begun in 2002
- Reading coaches and professional development for teachers, K-3, though the
  - Abbott Intensive Early Literacy Program
  - Reading First Grant, and
  - Governor’s Literacy Initiative
Grade 4 Reading, Overall Score Changes, 2005-2007
NJ Grade 4 Reading: White/Hispanic Changes, 2005 to 2007
NJ Grade 4 Reading, 2007, Race/Ethnicity, Achievement Level Percentages
Grade 4, NJ Reading Gaps, 2005-2007

- The White/Black gap (26 pts) reduced by 7 scale score points
- The White/Hispanic gap (24 pts) reduced by 2 scale score points
- The male/female achievement gap (6 pts) was unchanged
Grade 4 Reading: NJ Black/All Others, Male/Female, 1992-2007

NAEP Reading, Average Scale Scores, New Jersey Black and Other Students, Grade 4, 1992-2007

*NAEP: 2007 scale score significantly higher

By special request from NJ State Board of Education members
Achievement Gaps*
Grade 4 & 8

* Significant difference
NAEP Report: W/B Gaps (Released July 14, 2009)
NJ Reading White/Black Gaps, Grade 4 (1992-2007)

New Jersey
(Black: 15%, White: 59%)

Source: National Center for Education Statistics (2009). Achievement Gaps: How Black and White Students in Public Schools Perform in Mathematics and Reading...
Patterns of Gaps in NAEP

Source: National Center for Education Statistics (2009). *Achievement Gaps: How Black and White Students in Public Schools Perform in Mathematics and Reading on NAEP.*
NAEP Reading: NJ W& B Students Improved, Grade 4 (1992-2007)

NAEP: New Jersey is 1 of 3 States to Narrow White/Black Gap (1992-2007)

State Reading Gaps Closing: Grade 4

Source: National Center for Education Statistics (2009). *Achievement Gaps: How Black and White Students in Public Schools Perform in Mathematics and Reading...*
NJ Grade 4: Narrowed Gaps, Reading and Math

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts</td>
<td>125</td>
<td>129</td>
<td>166 points</td>
<td>170 points</td>
</tr>
<tr>
<td>Michigan</td>
<td>128</td>
<td>132</td>
<td>142</td>
<td>147</td>
</tr>
<tr>
<td>New Jersey</td>
<td>123</td>
<td>126</td>
<td>135</td>
<td>138</td>
</tr>
</tbody>
</table>

**Source:** National Center for Education Statistics (2009). *Achievement Gaps: How Black and White Students in Public Schools Perform in Mathematics and Reading…*
Limitations to the NAEP Data

NAEP data cannot tell us:

- Why gaps exist
- Policies for closing gaps
- Suggestions for interventions to improve student learning
Grade 8 Reading, 2007
(Scale Scores)

Using Average Scale Scores to Compare States

- No state higher than NJ.
- NJ the same as 14 states.
- NJ outperformed 35 states.
Grade 8, New Jersey Reading, 2007

- Both New Jersey and US reading results are flat since 2003

- No change in the New Jersey racial/ethnic gaps since 2003
NJ Grade 8 Reading, 2007, Race/Ethnicity, Achievement Level Percentages
NAEP Reading White/Black Gaps, Grade 8 -- No Change (1992-2007)

State Reading Trends: Grade 8

No NJ results

Source: National Center for Education Statistics (2009). Achievement Gaps: How Black and White Students in Public Schools Perform in Mathematics and Reading...
Grade 8 Reading: NJ Black/All Others, Male/Female (2003-2007)

Lower score in 2007
Grade 8: Little Change in NJ White/Black Scores 2005-2007
Grade 8: Slight Change Throughout the Distribution for NJ Hispanics, but Not White Students 2005-2007

NJ Eligible for Free or Reduced Lunch

<table>
<thead>
<tr>
<th>Category</th>
<th>Below Basic</th>
<th>At Basic</th>
<th>At Proficient</th>
<th>At Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>54</td>
<td>31</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>2005</td>
<td>55</td>
<td>28</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Not Eligible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>20</td>
<td>32</td>
<td>34</td>
<td>14</td>
</tr>
<tr>
<td>2005</td>
<td>22</td>
<td>32</td>
<td>33</td>
<td>12</td>
</tr>
</tbody>
</table>

At or Above Basic
NAEP 2007
Grade 8
Writing Results
Grade 8 Writing, 2007
(Scale Scores)

Using Average Scale Scores to Compare States

- No state higher than NJ
- NJ the same as 1 state
- NJ outperformed 43 states

Focal state/jurisdiction (New Jersey)
Has a higher average scale score than the focal state/jurisdiction
Is not significantly different from the focal state/jurisdiction
Has a lower average scale score than the focal state/jurisdiction
Did not participate or did not meet minimum participation rates
How Did the NJ Subgroups Perform?
## Grade 8 Writing, 2007, NJ Better than US Subgroups (Scale Scores)

<table>
<thead>
<tr>
<th></th>
<th>NJ</th>
<th>US Public</th>
<th>NJ vs US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>175</td>
<td>154</td>
<td>↑</td>
</tr>
<tr>
<td>Males</td>
<td>168</td>
<td>144</td>
<td>↑</td>
</tr>
<tr>
<td>Females</td>
<td>183</td>
<td>164</td>
<td>↑</td>
</tr>
<tr>
<td>White</td>
<td>184</td>
<td>162</td>
<td>↑</td>
</tr>
<tr>
<td>Black</td>
<td>152</td>
<td>140</td>
<td>↑</td>
</tr>
<tr>
<td>Hispanic</td>
<td>162</td>
<td>141</td>
<td>↑</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>191</td>
<td>166</td>
<td>↑</td>
</tr>
<tr>
<td>Eligible for FRL</td>
<td>155</td>
<td>141</td>
<td>↑</td>
</tr>
<tr>
<td>Not Eligible for FRL</td>
<td>183</td>
<td>164</td>
<td>↑</td>
</tr>
<tr>
<td>Students with Disabilities</td>
<td>139</td>
<td>118</td>
<td>↑</td>
</tr>
<tr>
<td>Students without Disabilities</td>
<td>181</td>
<td>159</td>
<td>↑</td>
</tr>
</tbody>
</table>
Grade 8 Writing, 2007, NJ Hispanics Tied at the Top (Scale Scores)

No state higher than NJ
NJ the same as 1 state
NJ outperformed all other eligible state

- Focal state/jurisdiction (New Jersey)
- Has a higher average scale score than the focal state/jurisdiction
- Is not significantly different from the focal state/jurisdiction
- Has a lower average scale score than the focal state/jurisdiction
- Did not participate or did not meet minimum participation rates
- Was not selected for comparison
- Sample size is insufficient to permit a reliable estimate
Grade 8 Writing, 2007, New Jersey and US Black Students

- NJ Black students performed higher than the US Black students
- NJ Black students performed similar to the average for all US
- 87% NJ Black students were at or above Basic (grade-level)
- 13% NJ Black students were below Basic (below grade-level)
NAEP Results
Grade 12
Reading
NAEP’s 12th-Grade Assessments Include

- High School Transcript Study
  (most recent results in 2005)

- NAEP Long-Term Trend
  (since the 1970’s)

- NAEP Grade 12 Reading, national results
  (most recent results in 2007)

- NAEP 2009 Grade 12 State Assessment
High School Transcript Study, (1990-2005)

- Graduates completed more rigorous curriculum than previous graduates
  - 41% took college prep
  - 10% took AP or International Baccalaureate Program

- The overall grade-point average (GPA)
  - climbed since 1990 and
  - was 2.98 in 2005
NAEP Grade 12

Does tougher curricula and higher GPA result in higher NAEP scores?
Reading: US Scores for Whites & Blacks Lower in 2005 than in 1992, Grade 12 (Main NAEP)
Are the Nation's Reading Scores Improving? (Long-term Trend) (2004)

View data with standard errors for age 9, age 13, and age 17.

* Significantly different from 2004.

US Grade 12 Reading: Achievement Levels **Lower** in 2005 than in 1992 (Main NAEP)

<table>
<thead>
<tr>
<th>Category</th>
<th>Below Basic</th>
<th>At Basic</th>
<th>At Proficient</th>
<th>At Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students</td>
<td>22</td>
<td>41</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td>1992</td>
<td>27</td>
<td>39</td>
<td>31</td>
<td>4</td>
</tr>
<tr>
<td>1994</td>
<td>25</td>
<td>37</td>
<td>33</td>
<td>5</td>
</tr>
<tr>
<td>1998</td>
<td>28</td>
<td>38</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>2002</td>
<td>29</td>
<td>38</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>2005</td>
<td>29</td>
<td>38</td>
<td>29</td>
<td>4</td>
</tr>
</tbody>
</table>

Percent **Below Basic** increased over time
Question?

- Does this downward trend for 12th-grade students apply to New Jersey students?
NJ Participated in the 2009 Grade 12 NAEP State Test

- This is the first-ever 12th grade state-level NAEP in reading and mathematics
- 2009 NAEP will provide baseline data for the Transforming Secondary Education in New Jersey initiative:
  - Personalized-learning plans for all students
  - End-of-year competency testing
  - Preparedness for the workplace and a post-secondary school education
NJ Selected to Participate in the 2009 Grade 12 State NAEP?

1. Arkansas
2. **Connecticut**
3. Florida
4. Idaho
5. Illinois
6. Iowa
7. **Massachusetts**
8. New Hampshire
9. **New Jersey**
10. South Dakota
11. West Virginia

116
State Context is Everything

- The eleven states are not a representative sample of the nation’s public schools
- The demographic composition of the eleven states varies
- Data taken from the Common Core of Data 2006-07 unless otherwise noted
### Student Poverty (all grades, from the Common Core of Data (CCD) 2006)

<table>
<thead>
<tr>
<th>State</th>
<th>Percent Eligible for F/R Lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR</td>
<td>58.65</td>
</tr>
<tr>
<td>WV</td>
<td>49.59</td>
</tr>
<tr>
<td>FL</td>
<td>45.20</td>
</tr>
<tr>
<td>IL</td>
<td>37.50</td>
</tr>
<tr>
<td>ID</td>
<td>37.26</td>
</tr>
<tr>
<td>IA</td>
<td>32.10</td>
</tr>
<tr>
<td>MA</td>
<td>28.92</td>
</tr>
<tr>
<td>SD</td>
<td>28.88</td>
</tr>
<tr>
<td><strong>NJ</strong></td>
<td><strong>27.28</strong></td>
</tr>
<tr>
<td>CT</td>
<td>27.25</td>
</tr>
<tr>
<td>NH</td>
<td>17.66</td>
</tr>
</tbody>
</table>
## State Per-Pupil Expenditures
*(CCD, 2006)*

<table>
<thead>
<tr>
<th>State</th>
<th>$ Per Pupil</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>8,036</td>
</tr>
<tr>
<td>SD</td>
<td>9,130</td>
</tr>
<tr>
<td>AR</td>
<td>9,749</td>
</tr>
<tr>
<td>WV</td>
<td>10,092</td>
</tr>
<tr>
<td>IA</td>
<td>10,368</td>
</tr>
<tr>
<td>IL</td>
<td>10,932</td>
</tr>
<tr>
<td>FL</td>
<td>11,270</td>
</tr>
<tr>
<td>NH</td>
<td>12,344</td>
</tr>
<tr>
<td>MA</td>
<td>13,843</td>
</tr>
<tr>
<td>CT</td>
<td>16,172</td>
</tr>
<tr>
<td>NJ</td>
<td>17,937</td>
</tr>
</tbody>
</table>
2005 Grade 8 Reading: Will the Same Pattern Persist for 12th-graders in 2009?
Question?

Where can I find the NAEP student results?
Easy Entry Point for the NAEP Online Data and Questions Tools

URL: http://www.nces.ed.gov/nationsreportcard/itmrls/
Session Handouts Provide More Information about the NAEP Results
NAEP Questionnaires
Grades 4 & 8
NAEP Questionnaires: Students, Teachers, and School Questionnaires

NAEP questionnaires are important because they provide a “rich” source of background information linked to students’ NAEP scores.
Disclaimers About the Use of NAEP Questionnaire Information

- The background data are descriptive, *not* “scientific” in nature
- Do not use these data to attribute causality
- The data may suggest the need for further investigation into the relationship between
  - student achievement and
  - factors influencing achievement
- The background-questionnaire data are available on the NAEP Data Explore at http://nces.ed.gov/nationsreportcard/naepdata/
Student: Affective Disposition / Difficulty of Assessment

Student Questionnaire, Grade 8 NAEP 2007 Reading

Q: How hard was this test compared to most other tests you have taken this year in school?"

Students chose from the following options:

- Easier than other tests
- About as hard as other tests
- Harder than other tests
- Much harder than other tests
**Student: Perception of the Test Difficulty**

**Student Questionnaire, Grade 8 NAEP 2007 Reading**

These data show that the easier the test was perceived to be by the students, the higher their scale scores.

<table>
<thead>
<tr>
<th>Difficulty Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easier than others</td>
<td>62%</td>
</tr>
<tr>
<td>As hard as others</td>
<td>30%</td>
</tr>
<tr>
<td>Harder than others</td>
<td>6%</td>
</tr>
<tr>
<td>Much harder</td>
<td>2%</td>
</tr>
</tbody>
</table>

Scale score: 0 to 500
Teacher: LAL Classroom Organizational Structure

Teacher Questionnaire, Grade 8 NAEP 2007 Reading

Q: Which best describes how language art instruction is organized for 8th graders at your school?

Teachers chose one from the following:

- Language arts is taught primarily as a discrete subject with little or no integration with instruction in other subjects. [Discrete]
- Some language arts instruction is integrated with other subjects, and some language arts instruction is presented as a discrete subject [Combined].
- Language arts lessons are primarily integrated with instruction in other subjects. [Integrated]
NAEP 2007 data shows that 65% of Grade 8 students were in “Combined” language arts classes.

The students in primarily “Integrated” courses scored lower than their peers.

*Significantly higher than “Integrated”
Measure Up Newsletters Include More Examples of NAEP Results:

- **Grade 4:**
  - 4th-graders who had a class discussion about something the class had read at least once a week scored higher than students who had a class discussion once or twice a month.

- **Grade 8:**
  - 8th graders who read at least 11 pages each day in school or for homework scored higher than those who read 10 or fewer pages.
NAEP Released
Test Items
A Quick Reference Guide to the NAEP Questions Tool (NQT)

NAEP Questions Tool provides easy access to:
- NAEP questions
- Student responses
- Scoring guides

- 374 reading items/also writing items
- 2,000 items for all subjects
Easy Entry Point for the NAEP Questions Tool

URL: http://www.nces.ed.gov/nationsreportcard/itmrls/
Is This Passage Similar to Those Released by NJDOE?

Ellis Island: Doorway to America

by Bill Walter
Explore NAEP Questions

After each assessment, NAEP releases dozens of sample questions to the public—more than 2,000 questions are currently available. The tools featured here can be used to supplement classroom instruction, provide additional insight into the content of the assessment, and show what students nationally or in your state or district know and can do. Explore the tools and find out more about NAEP.

- **Questions Tool >>**
  Explore a database of released NAEP questions, student responses, question-level data, and scorer's commentary.

- **Item Maps >>**
  See examples of what students at each achievement level are likely to know and can do in a subject.

- **Test Yourself >>**
  Try out actual questions administered to students in the NAEP assessments.

- **Scoring >>**
  Learn how NAEP questions are scored.

**What's New?**
- 206 civics, economics, and U.S. history assessments
- 207 multiple-choice and 67 constructed-response questions from the 2006 civics, economics, and U.S. history assessments now available in the Questions Tool

**NCES HEADLINES**
- Comparative Indicators of Ed in the US & Other G-8 Countries: 2006
- Persistence and Attainment of 2003-04 BPS: After Three Years
- Differential Characteristics of 2-Year Postsecondary Institutions
The Search Results Provide a List of Questions to be Selected

<table>
<thead>
<tr>
<th>Year</th>
<th>Grade</th>
<th>Block</th>
<th>No.</th>
<th>Type</th>
<th>Diff.</th>
<th>% Correct</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>4</td>
<td>R3</td>
<td>1</td>
<td>CR</td>
<td>Easy</td>
<td>70.47</td>
<td>Beetle: Who would win race</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
<td>R3</td>
<td>2</td>
<td>MC</td>
<td>Easy</td>
<td>76.82</td>
<td>Beetle: Describe beetle -- well-mannered</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
<td>R3</td>
<td>3</td>
<td>CR</td>
<td>Med.</td>
<td>51.09</td>
<td>Beetle: Person like rat or beetle</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
<td>R3</td>
<td>4</td>
<td>CR</td>
<td>Hard</td>
<td>25.99</td>
<td>Beetle: Is beetle sneaky?</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
<td>R3</td>
<td>5</td>
<td>MC</td>
<td>Med.</td>
<td>50.51</td>
<td>Beetle: Describe parrot -- wise</td>
</tr>
<tr>
<td>2006</td>
<td>4</td>
<td>R3</td>
<td>6</td>
<td>CR</td>
<td>Hard</td>
<td>28.08</td>
<td>Beetle: What parrot means/concealed wing</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
<td>R3</td>
<td>7</td>
<td>ECR</td>
<td>Med.</td>
<td>42.87</td>
<td>Beetle: Rat's different feelings</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
<td>R3</td>
<td>8</td>
<td>MC</td>
<td>Med.</td>
<td>46.84</td>
<td>Beetle: Beetle chooses color -- of world</td>
</tr>
<tr>
<td>2005</td>
<td>4</td>
<td>R3</td>
<td>9</td>
<td>CR</td>
<td>Med.</td>
<td>53.17</td>
<td>Beetle: New and different title</td>
</tr>
<tr>
<td>2005</td>
<td>4 (8)</td>
<td>R7</td>
<td>1</td>
<td>MC</td>
<td>Easy</td>
<td>71.62</td>
<td>Ellis Island: Passage is about -- struggle</td>
</tr>
<tr>
<td>2005</td>
<td>4 (8)</td>
<td>R7</td>
<td>2</td>
<td>CR</td>
<td>Easy</td>
<td>75.86</td>
<td>Ellis Island: Passage is about -- feelings</td>
</tr>
<tr>
<td>2005</td>
<td>4 (8)</td>
<td>R7</td>
<td>3</td>
<td>CR</td>
<td>Hard</td>
<td>30.25</td>
<td>Ellis Island</td>
</tr>
</tbody>
</table>

Click box to add question to print folder

Tool Help and Tutorial
Ellis Island Passage: Student Results, Grade 8

How did the immigrants probably feel when they saw the Statue of Liberty?

2005 National Performance Results

<table>
<thead>
<tr>
<th>Score</th>
<th>Percentage of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unacceptable</td>
<td>10%</td>
</tr>
<tr>
<td>Acceptable</td>
<td>89%</td>
</tr>
<tr>
<td>Omitted</td>
<td>1%</td>
</tr>
<tr>
<td>Off task</td>
<td>#</td>
</tr>
</tbody>
</table>

Note:
- These results are for public and nonpublic school students.
- Percentages may not add to 100 due to rounding.
Ellis Island: Are these student responses acceptable? (Grade 8)

2. How did the immigrants probably feel when they saw the Statue of Liberty?

Happy and sad

2. How did the immigrants probably feel when they saw the Statue of Liberty?

Rough felt... sad

Unacceptable - Student Response

Scorer Comments:
Both responses provide feelings, but they are unexplained and have no relation to the text. The first response provides an appropriate feeling the immigrants may have had upon seeing the Statue of Liberty, happy, but contradicts that feeling with an inappropriate feeling, sad. The second response provides only the feeling of sad, which is unexplained and is not text-based.
Ellis Island: Are these student responses acceptable? (Grade 8)

2. How did the immigrants probably feel when they saw the Statue of Liberty?

- They felt happy. They were crying because they made it to America.

- I think they felt very happy to see land. After all the time on the high sea.

Acceptable - Student Response

Scorer Comments:
Both responses provide feelings that are explained in relation to the text. The first response provides a positive feeling and explains that feeling in relation to the immigrants reaching their destination of America. The second response provides a positive feeling and explains that feeling in relation to the immigrants arriving on land after a difficult journey at sea.
NAEP National Reading Grade 4 2005 Accommodations Permitted
Average Scale Score with Percentages (with Standard Errors in Parentheses), Reading
Beetle: Rat’s different feelings [R017007]

<table>
<thead>
<tr>
<th></th>
<th>Unsatisfactory</th>
<th>Partial</th>
<th>Essential</th>
<th>Extensive</th>
<th>Omitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>All students</td>
<td>197 (0.5)</td>
<td>25 (0.3)</td>
<td>218 (0.5)</td>
<td>24 (0.3)</td>
<td>234 (0.5)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Unsatisfactory</th>
<th>Partial</th>
<th>Essential</th>
<th>Extensive</th>
<th>Omitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>195 (0.8)</td>
<td>26 (0.5)</td>
<td>218 (0.7)</td>
<td>26 (0.5)</td>
<td>234 (0.5)</td>
</tr>
<tr>
<td>Female</td>
<td>198 (0.8)</td>
<td>25 (0.4)</td>
<td>220 (0.7)</td>
<td>22 (0.5)</td>
<td>235 (0.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region of the country (2003 and later)</th>
<th>Unsatisfactory</th>
<th>Partial</th>
<th>Essential</th>
<th>Extensive</th>
<th>Omitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>204 (1.3)</td>
<td>21 (0.9)</td>
<td>222 (1.2)</td>
<td>23 (0.8)</td>
<td>237 (1.1)</td>
</tr>
<tr>
<td>Midwest</td>
<td>200 (1.3)</td>
<td>24 (0.7)</td>
<td>219 (1.2)</td>
<td>24 (0.7)</td>
<td>236 (0.8)</td>
</tr>
<tr>
<td>South</td>
<td>197 (0.9)</td>
<td>26 (0.4)</td>
<td>219 (1.9)</td>
<td>25 (0.5)</td>
<td>234 (0.7)</td>
</tr>
<tr>
<td>West</td>
<td>190 (1.1)</td>
<td>26 (0.7)</td>
<td>214 (1.0)</td>
<td>25 (0.6)</td>
<td>231 (1.2)</td>
</tr>
<tr>
<td>DoDEA International</td>
<td>† (3)</td>
<td>† (3)</td>
<td>† (3)</td>
<td>† (3)</td>
<td>† (3)</td>
</tr>
</tbody>
</table>

Shows additional data for each question by various subgroups (gender, race/ethnicity, Title I, etc.)

Also, provides results for each state.
What Have We Learned?
Rationale: NAEP Tracks Student Achievement Trends for Policymakers
Rationale: State-NAEP Makes the Comparisons of Student Scores Across States Possible

July 16, 2009 (PNC Bank Arts Center, Holmdel, NJ)
NJ students rank at the top of the country in reading and math... President Obama

- Is this accurate?
- What is the evidence?
- What facts might refute this generalization?
Results: NAEP and the NJ State Assessments Differ Greatly

Language Arts
Literacy

Reading and Writing

“Proficient” -- no observable similarity
NAEP Released Test Items Are A Valuable Resource for Teachers

NAEP Reading & Writing Items Are Easily Accessible Online

NJ NAEP Portal
http://www.nj.gov/njded/assessment/naep
NAEP Results Are Only Possible Because of the Cooperation of Districts, Schools and Students

THANK YOU
Do you Have Any Questions?
Contact Me for Further NAEP Information or Training

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