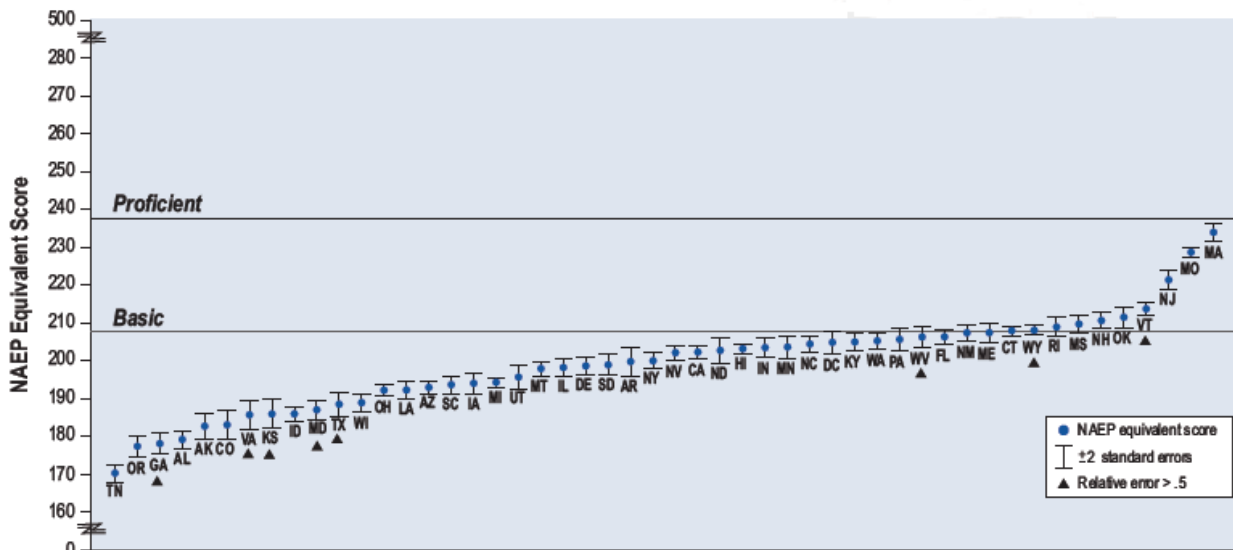


Rigor of State Proficiency Standards as NAEP Equivalent Scores vs. Overall Student Achievement as NAEP Scale Scores, 2009

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Bandeira de Mello estimated NAEP equivalent scores from the percentages of students identified as “proficient or better” reported in 2009 from the different state assessments as illustrated in this “ordered list” graphic for grade 4 reading (Figure 2, p. 10):

Figure 2. NAEP scale equivalents of state grade 4 reading standards for proficient performance, by state: 2009



▲ Inferences based on estimates with relative error greater than .5 may require additional evidence.

The study noted that the estimated rigor of state assessments for many states fell short of the NAEP *Basic* cut-score (which approximates “grade-level expectations” or “C” level work).

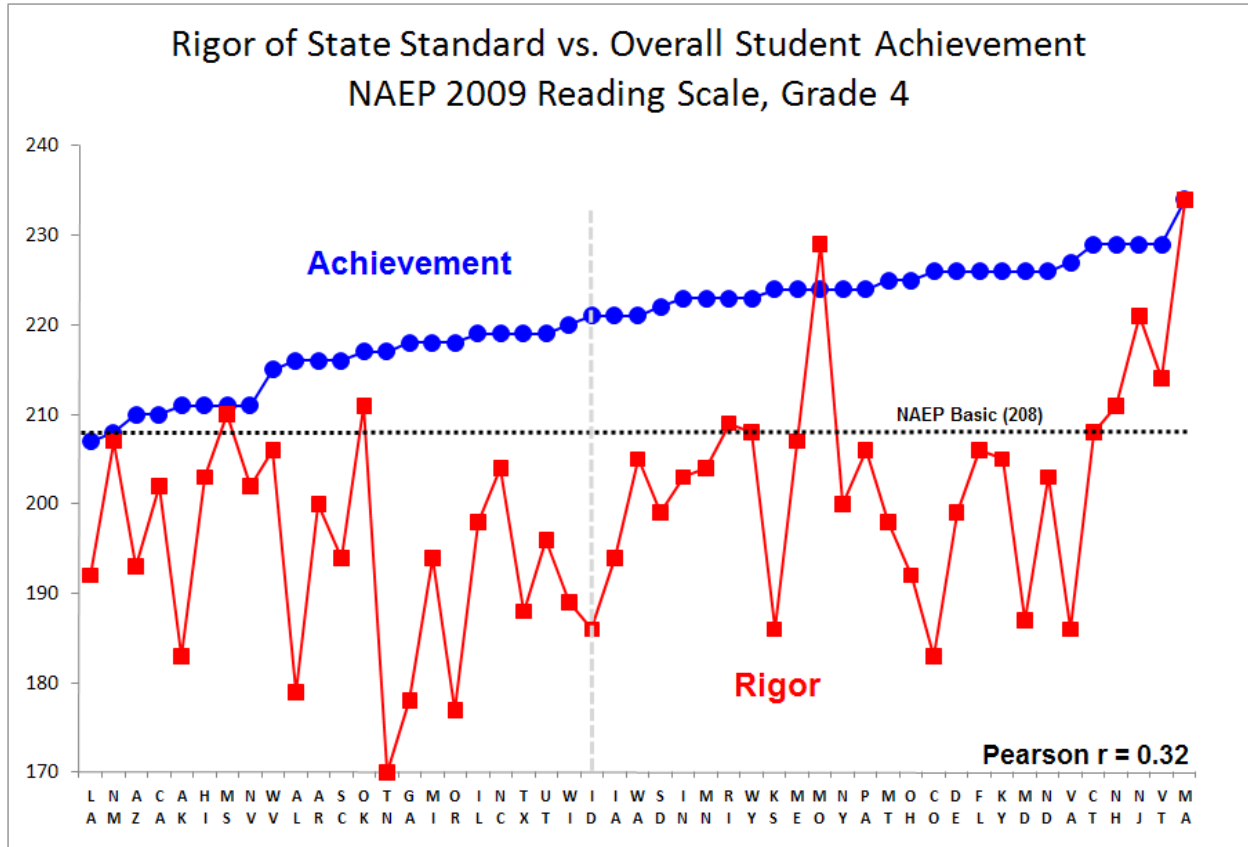
The study, however, did not go on to correlate the estimated “rigor” scores with the overall student achievement in the various states (both on the same NAEP scale). The graphics that follow illustrate the correlations for reading and mathematics for grades 4 and 8 in 2009. Each suggests little correlation between state proficiency standards and overall achievement.

Data Sources:

Bandeira de Mello, V. (2011). *Mapping State Proficiency Standards onto the NAEP Scales: Variation and Change in State Standards from Reading and Mathematics, 2005-2009* (NCES 2011-458). Washington, D.C.: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved August 10, 2011, from <http://nces.ed.gov/nationsreportcard/studies/statemapping/>

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 Mathematics and Reading Assessments. Retrieved August 1, 2011, via the NAEP Data Explorer from <http://nces.ed.gov/nationsreportcard/naepdata/>

Rigor of State Performance Standard vs. Overall Student Achievement NAEP 2009 Reading Scale, Grade 4



Narratives: Reading, Grade 4

The mapping study estimated that the rigor of the 2009 fourth-grade reading assessments from 39 of 49 states fell below NAEP *Basic*. [Note: State reading testing results were unavailable for Nebraska in 2009.]

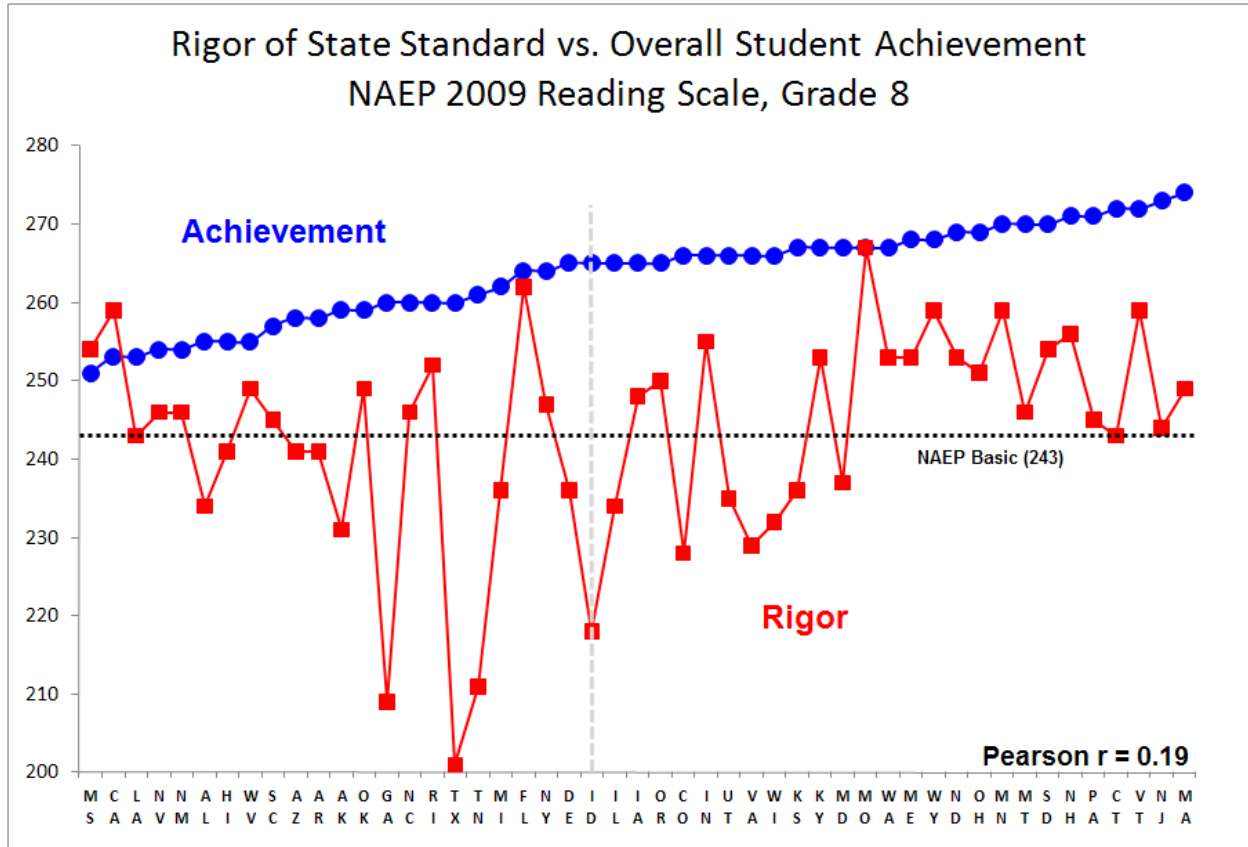
In 2009, 48 states had an NAEP achievement scale score at or above the NAEP *Basic* cut score (208) for grade 4 reading. One state scored one scale score point below NAEP *Basic*, which was not significantly different from NAEP *Basic*.

The Pearson *r* correlation between the estimated rigor of the state assessments and the overall achievement in those states for reading in grade 4 in 2009 was 0.32.

In 2009, Idaho received a “rigor score” for the state fourth-grade reading test of 186, and a NAEP reading achievement score of 221.

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Rigor of State Performance Standard vs. Overall Student Achievement NAEP 2009 Reading Scale, Grade 8



Narratives: Reading, Grade 8

The mapping study estimated that the rigor of the 2009 eighth-grade reading assessments from 18 of 49 states fell below NAEP *Basic*. [Note: State reading testing results were unavailable for Nebraska in 2009.]

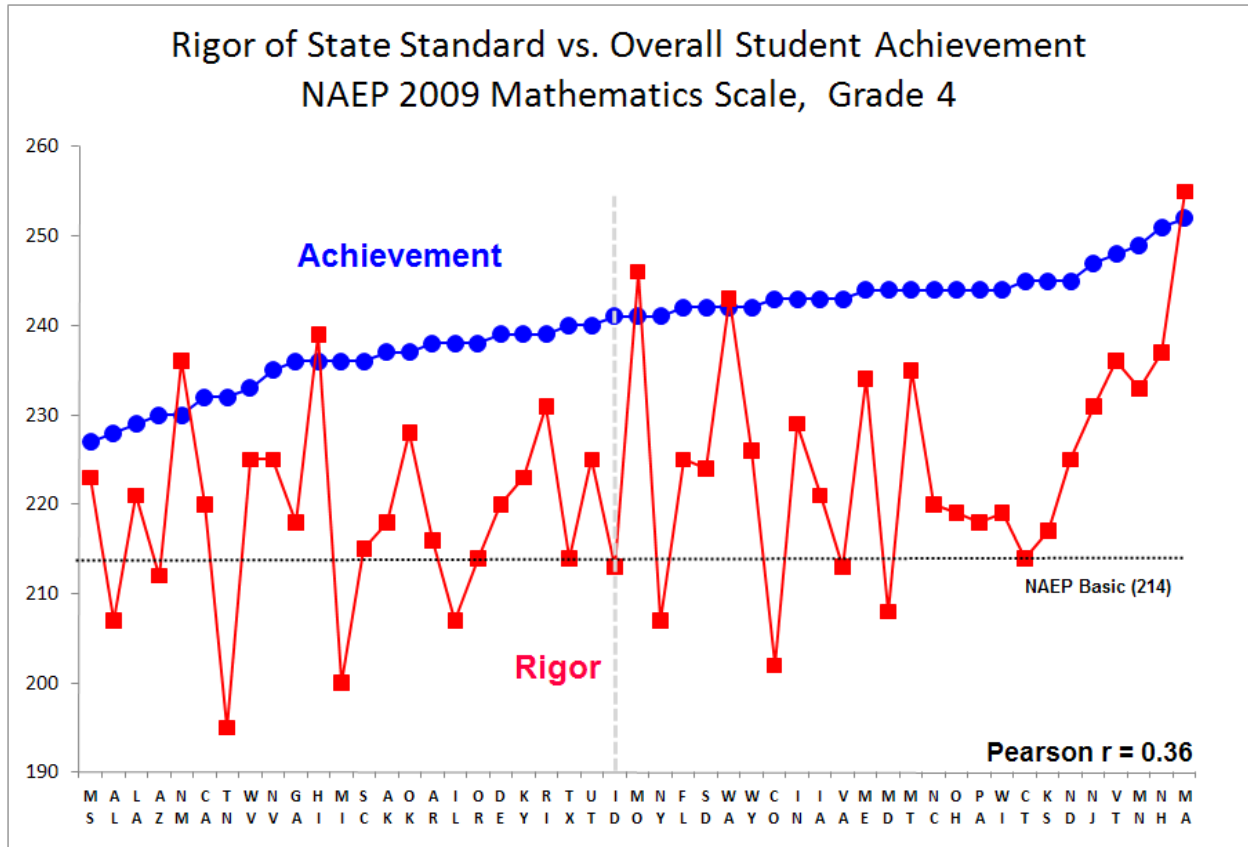
In 2009, all 49 states had a NAEP achievement scale score that was above NAEP *Basic* cut score (243) for grade 8 reading.

The Pearson *r* correlation between the estimated rigor of the state assessments and the overall achievement in those states for reading in grade 8 in 2009 was 0.19.

In 2009, Idaho received a “rigor score” for the state eighth-grade reading test of 218, and a NAEP reading achievement score of 265.

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Rigor of State Performance Standard vs. Overall Student Achievement NAEP 2009 Mathematics Scale, Grade 4



Narratives: Mathematics, Grade 4

The mapping study estimated that the rigor of the 2009 fourth-grade mathematics assessments from 10 of 49 states fell below NAEP *Basic*. [Note: State mathematics testing results were unavailable for Nebraska in 2009.]

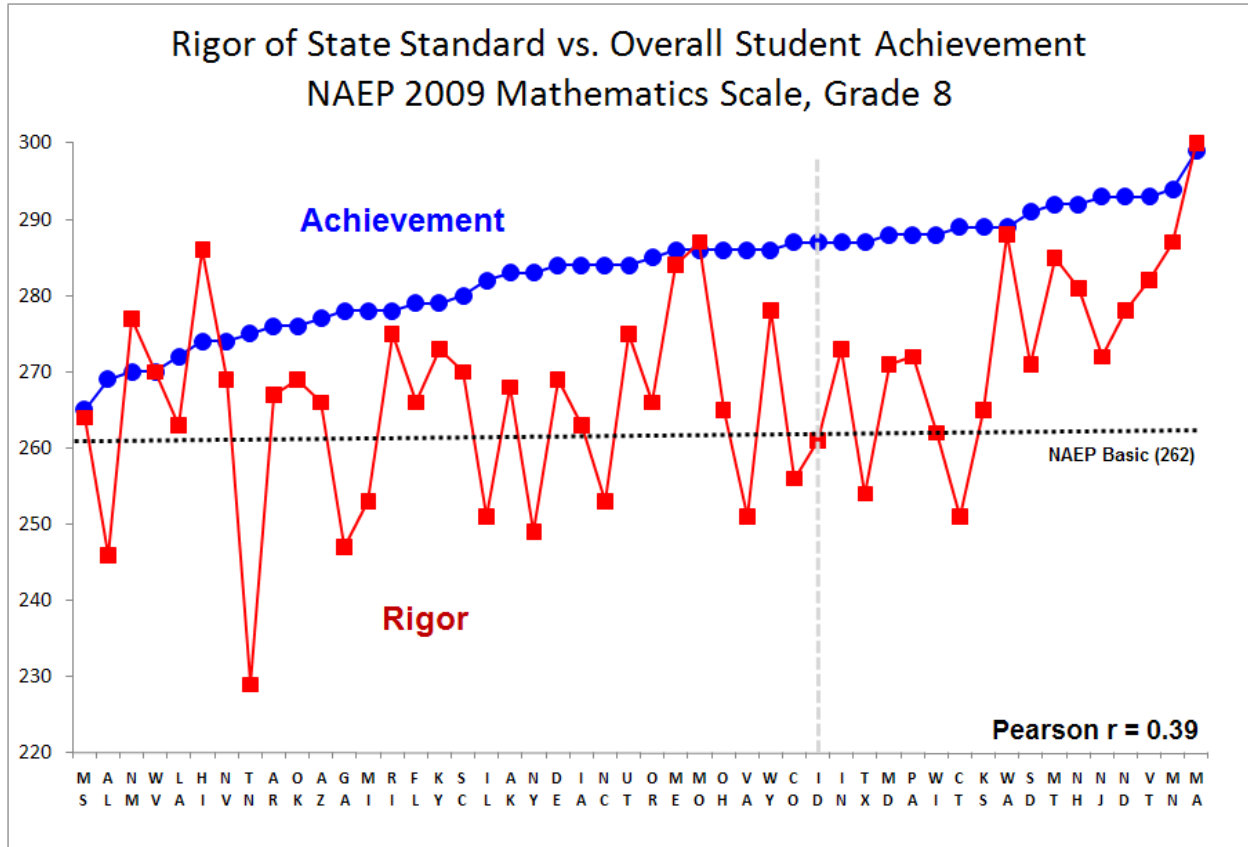
In 2009, all 49 states had a NAEP achievement scale score that was above NAEP *Basic* cut score (214) for grade 4 mathematics.

The Pearson *r* correlation between the estimated rigor of the state assessments and the overall achievement in those states for mathematics in grade 4 in 2009 was 0.36.

In 2009, Idaho received a “rigor score” for the state fourth-grade mathematics test of 213, and a NAEP mathematics achievement score of 241.

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Rigor of State Performance Standard vs. Overall Student Achievement NAEP 2009 Mathematics Scale, Grade 8



Narratives: Mathematics, Grade 8

The mapping study estimated that the rigor of the 2009 eighth-grade mathematics assessments from 12 of 48 states fell below NAEP *Basic*. [Note: State mathematics testing results were unavailable for California and Nebraska in 2009.]

In 2009, all 48 states had a NAEP achievement scale score that was above NAEP *Basic* cut score (262) for grade 8 mathematics.

The Pearson *r* correlation between the estimated rigor of the state assessments and the overall achievement in those states for mathematics in grade 8 in 2009 was 0.39.

In 2009, Idaho received a “rigor score” for the state eighth-grade mathematics test of 261, and a NAEP mathematics achievement score of 287.

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