

Analysis and Comparison of Nevada CRT, NRT, and NAEP Performance

Presented to the:
Legislative Committee on Education
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EXHIBIT E Education

Document consists of **34** pages.

X Entire document provided.

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Meeting Date 11-16-05

Senate Bill 214

- In addition to other requirements, Senate Bill 214 passed in the 2005 Legislature requires:
 - A method for monitoring the accountability system by comparing performance on tests required by NRS 389.015 and 389.550. The system must reveal significant differences at the school and district level and where those exist provide explanation and/or audit local practice.
 - A comparison of performance on the National Assessment of Educational Progress (NAEP) and the tests used to determine adequate yearly progress. If there is a difference of 10% or more in proficiency rates, a study of those differences must occur. The study must include differences in test content and consideration of Nevada's achievement standards.

Today's Focus

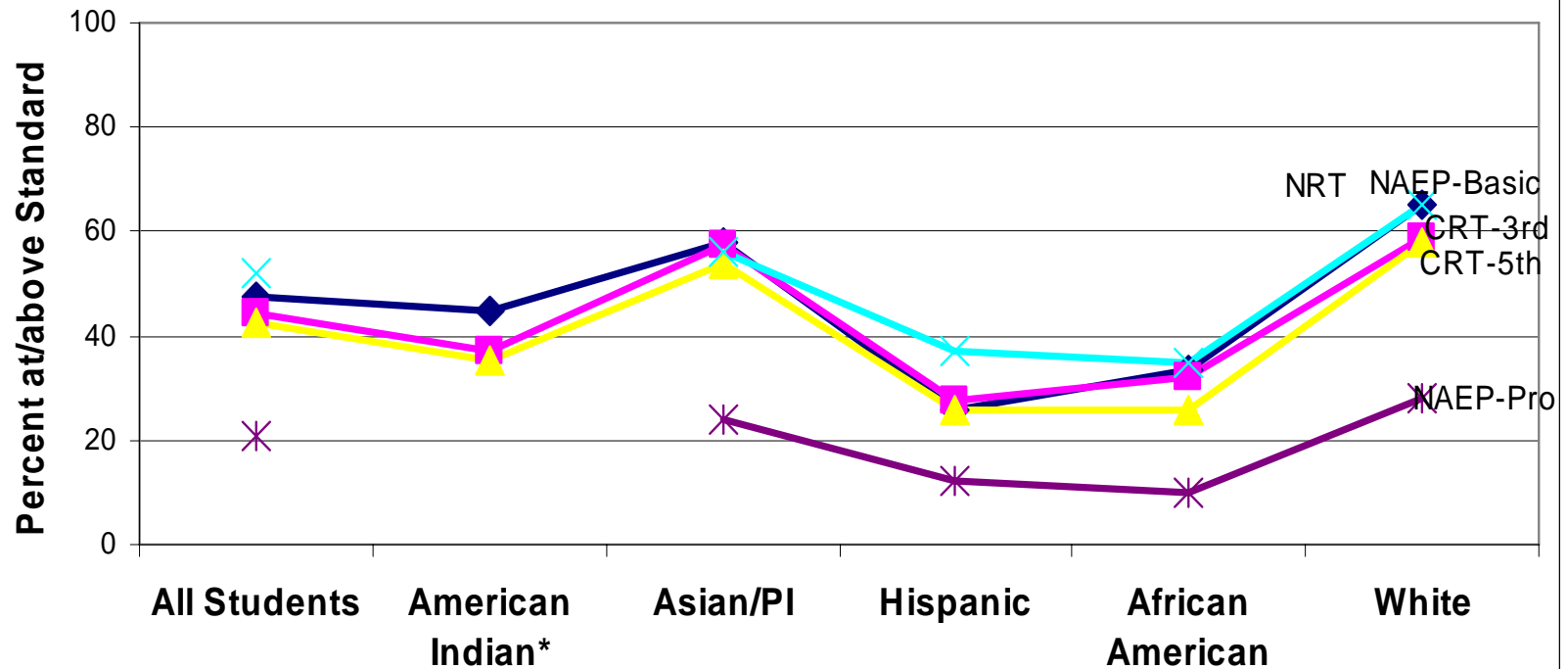
- In this presentation we will focus in on the elementary level of performance but we will touch briefly on middle school performance.
- A full technical report will address elementary, middle and high school performance. It will likely include all of the NRT and NAEP comparisons required by SB14 as well as concentrated focus on disaggregated pass rates on the High School Proficiency Examination.

The Focal Issue

- The focal issue is the extent to which we can have confidence in how students are performing on the state custom tests (CRTs).
 - Does NRT performance validate CRT performance?
 - Does NAEP performance validate CRT performance?

Performance Comparisons

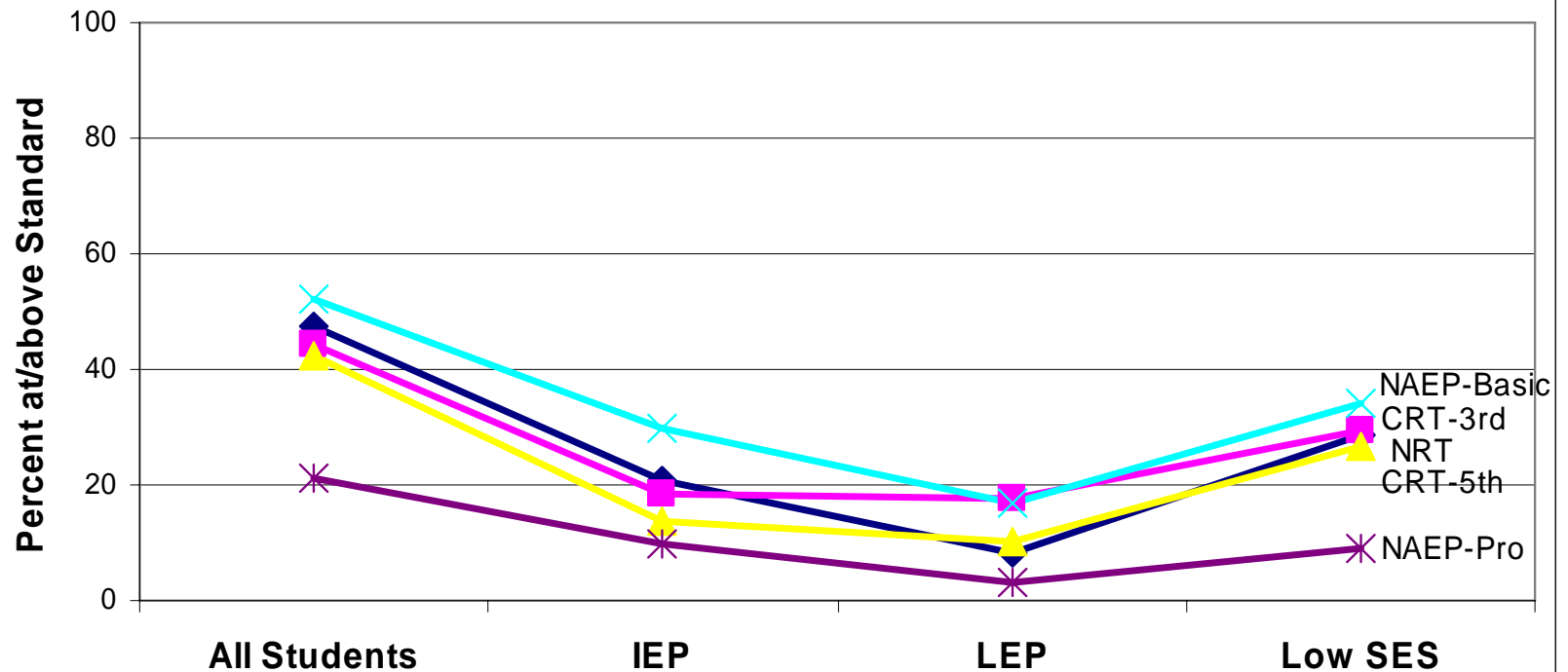
Elementary School Reading Performance: 2005 Cross-Sectional Comparisons (CRT = grade 3 & 5; NRT/NAEP = grade 4)



*No NAEP results available

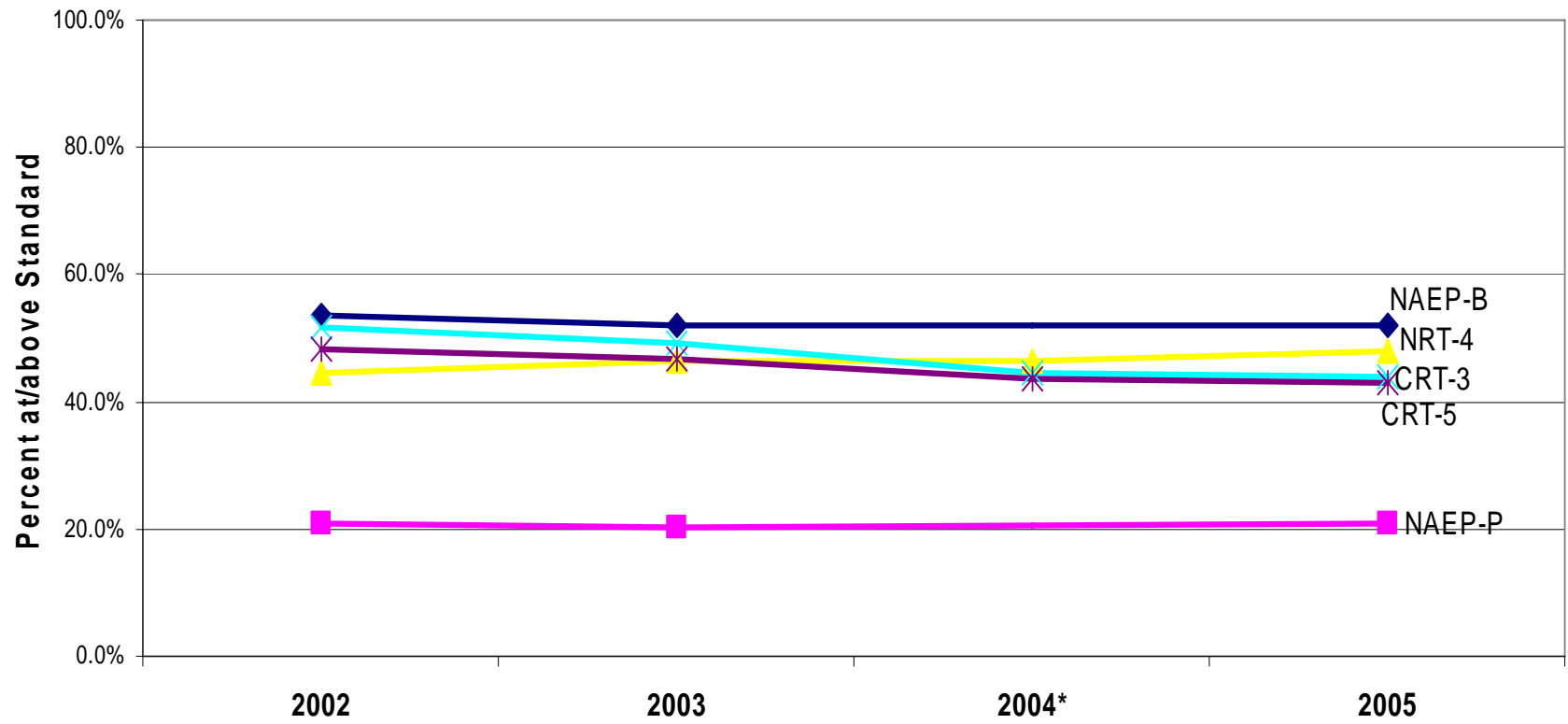
Performance Comparisons

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Performance Comparisons

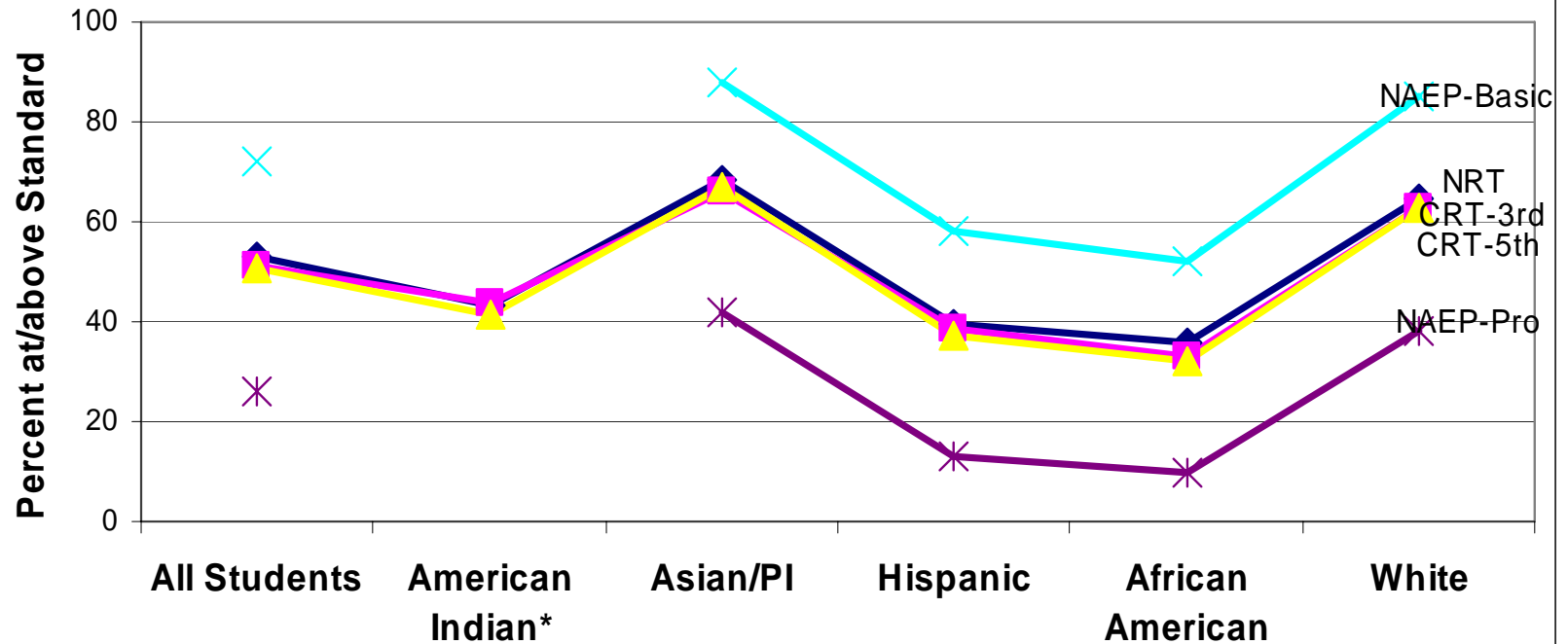
Trends in CRT, NRT, and NAEP Reading Performance among Elementary Students in Nevada
(CRT = grade 3 & 5; NRT/NAEP = grade 4)



* No NAEP data available for 2004

Performance Comparisons

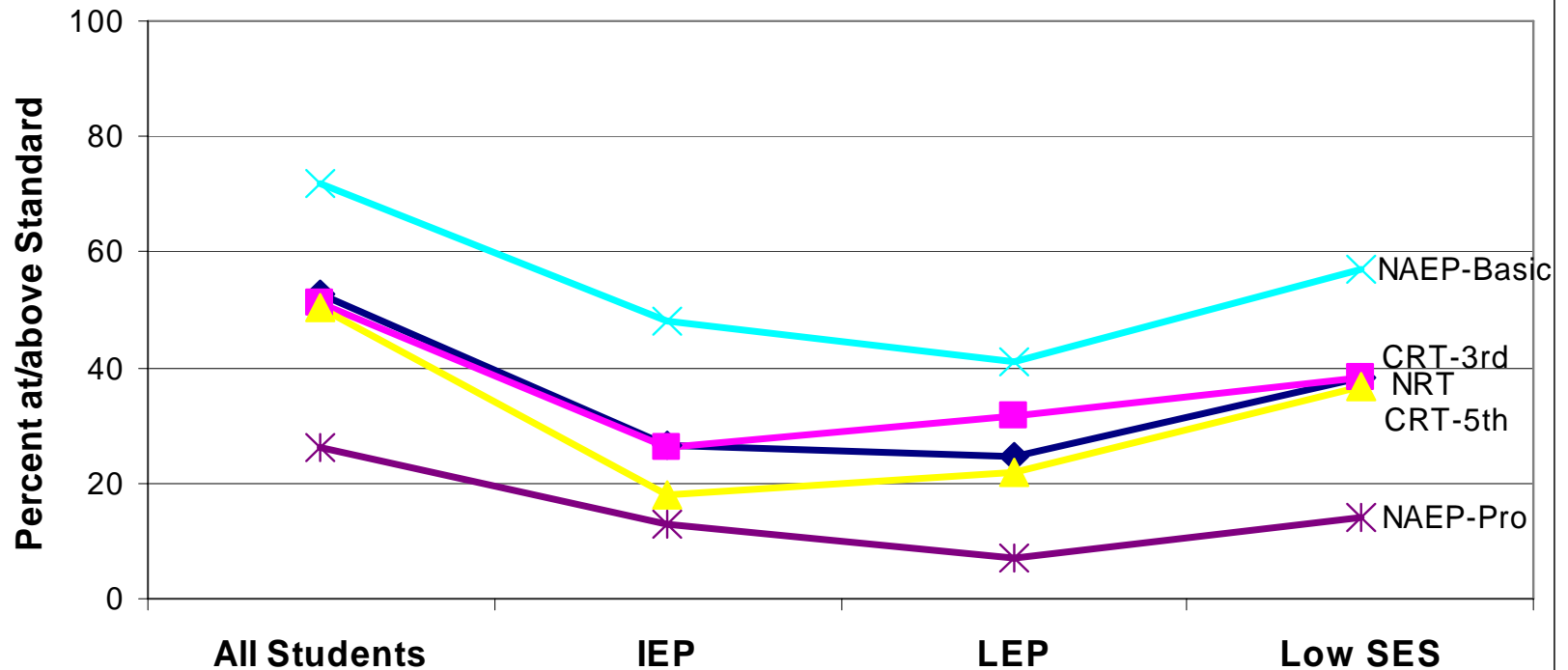
**Elementary School Math Performance:
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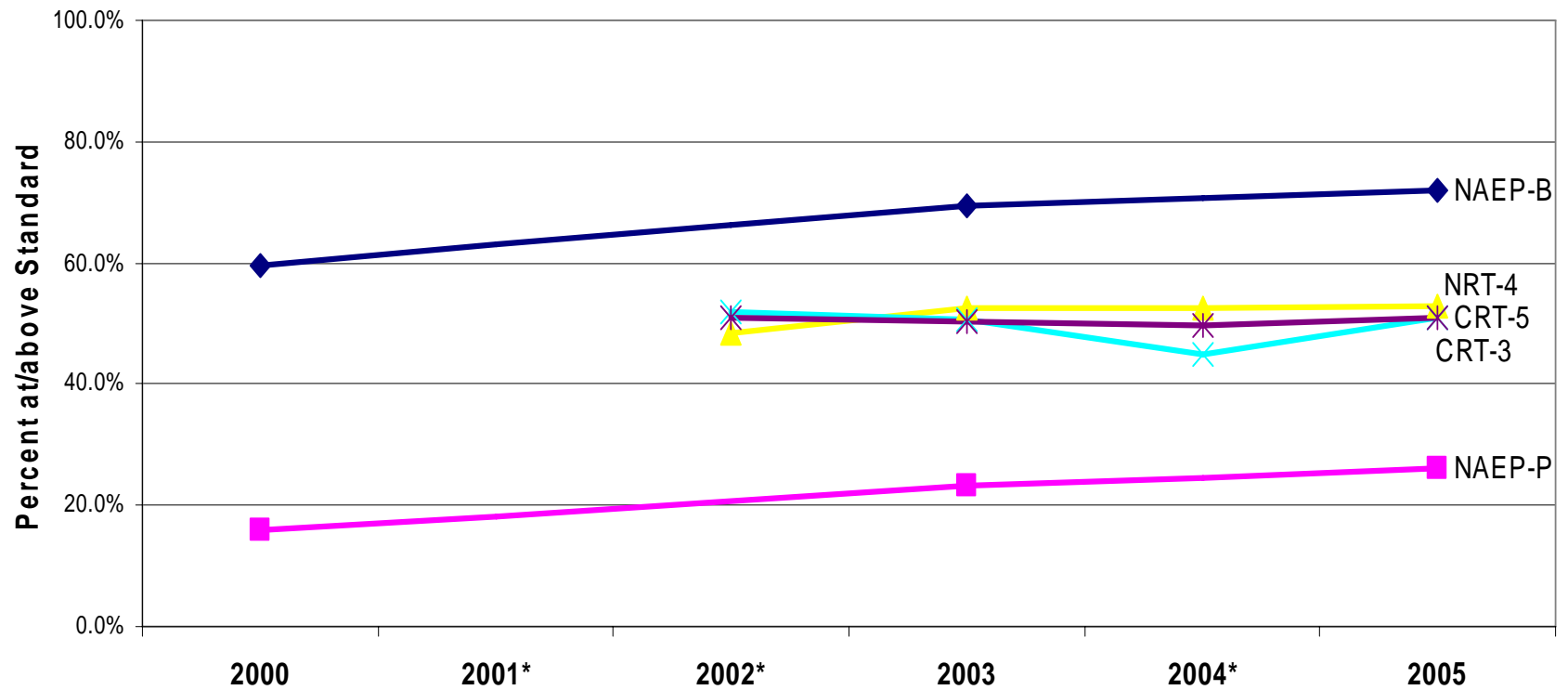
Performance Comparisons

**Elementary School Math Performance:
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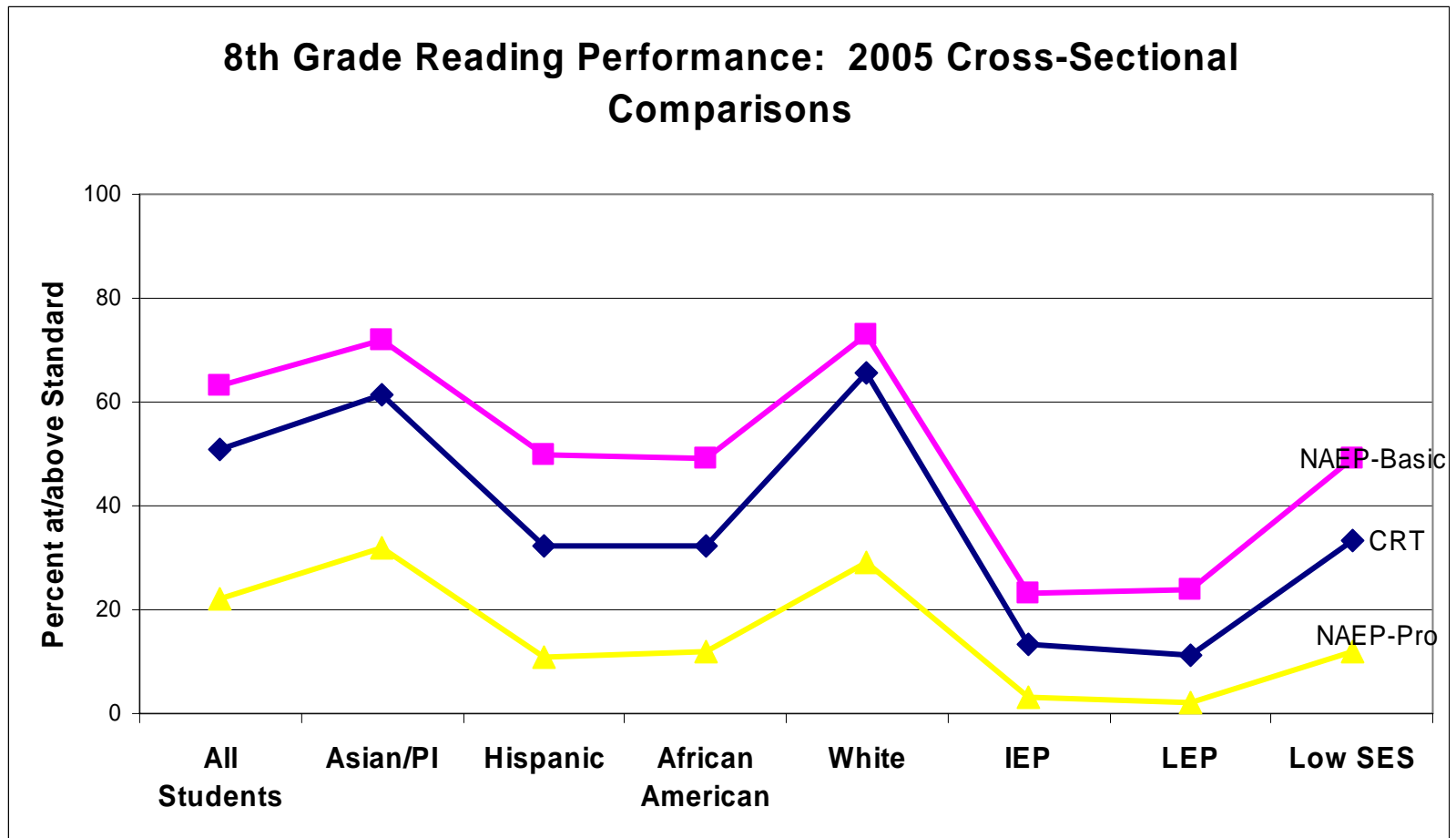
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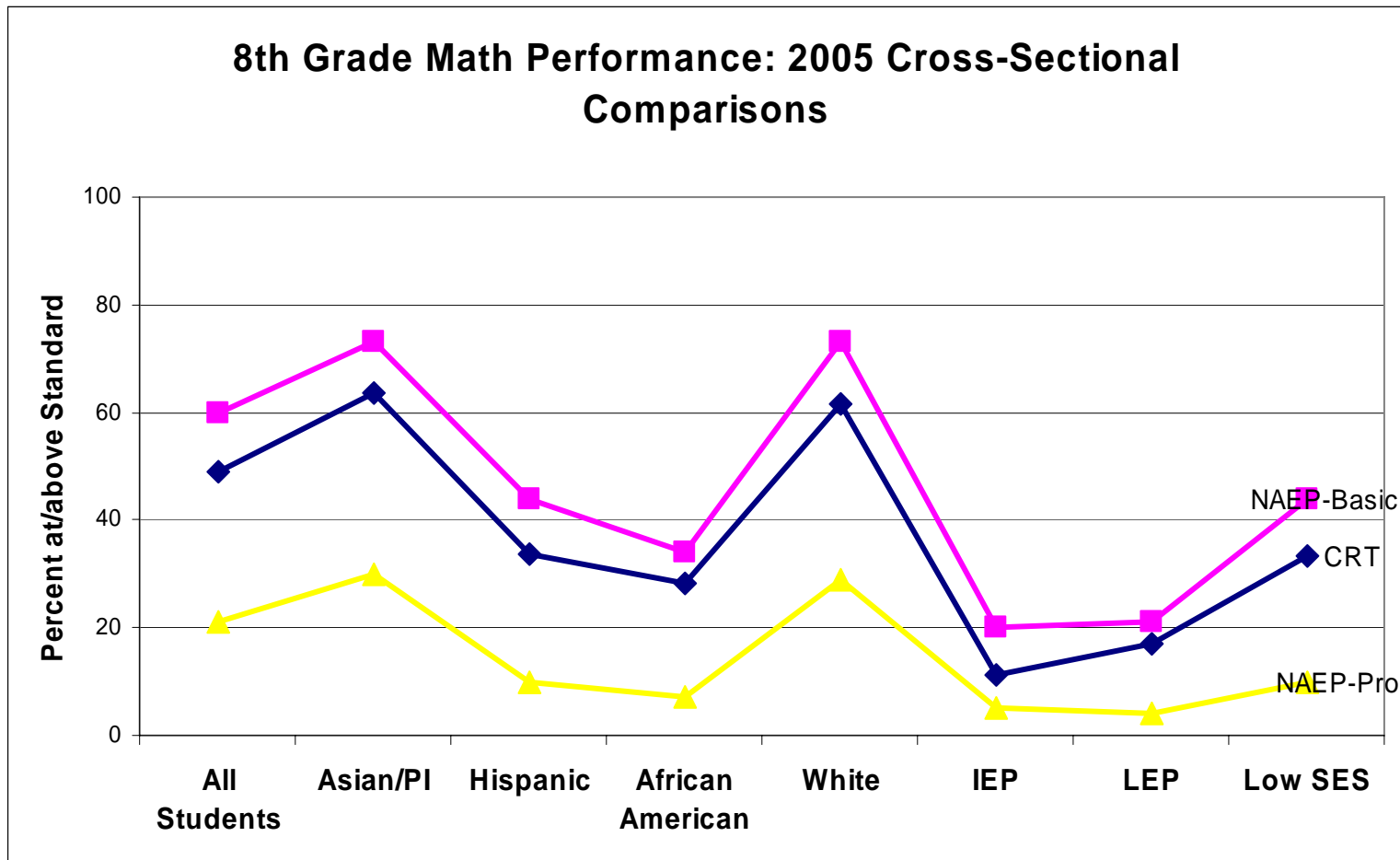


* No NAEP data available in 2001, 2002, & 2004

8th Grade Performance Comparisons



8th Grade Performance Comparisons



NRT Comparisons

- CRTs (grades 3 & 5) in comparison to NRTs (grade 4)
 - There is little difference between CRT and NRT performance at the “meets” standard level.
 - The disparities in performance at the subpopulation level are very consistent. African American, American Indian, Hispanic, IEP, LEP, and Low SES students consistently perform below average and Asian and White students score above average.
 - School level correlations range from .69 to .74
 - Student level correlations range from .75 to .76

NRT Comparisons

- School by school CRT/NRT differences
 - A significant difference is defined using a 95% confidence test

Subject Area	Comparison	Total Number of Schools	# of Schools CRT > NRT	# of Schools NRT > CRT
Reading	CRT Grade 3 v. NRT Grade 4	318	6	20
	NRT Grade 4 v. CRT Grade 5	319	1	60
Math	CRT Grade 3 v. NRT Grade 4	313	2	2
	NRT Grade 4 v. CRT Grade 5	316	21	32

CRT > NRT = A significantly greater percentage of students were proficient on the CRT compared to the NRT
 NRT > CRT = A significantly greater percentage of students were proficient on the NRT compared to the CRT

NAEP Comparisons

- CRTs (grade 3 & 5) in comparison to NAEP (grade 4)
 - CRT performance at the state level is more similar to NAEP Basic performance than it is to NAEP Proficient performance
 - The disparities in performance at the subpopulation level are consistent. African American, American Indian, Hispanic, IEP, LEP, and Low SES students consistently perform below average and Asian and White students score above average.
 - The State of Nevada does not have access to student, school, and district level NAEP data and so it must rely on the federal government for school level comparative information.

NAEP Comparisons

- The Department has previously presented information pertaining to NAEP to the LCE (fall, 2003), and at national educational conferences.
- Additionally, in 2004-05 the Department worked with Dr. Don McLaughlin, American Institutes of Research, to look more closely at performance comparisons among Nevada students and schools.
- Don McLaughlin at that time was the chief scientist coordinating the NAEP validity studies.
- Much of the following information was extracted from a presentation made by Dr. McLaughlin to the Nevada State Board of Education on January 22, 2005 and it is augmented by previous department presentations.

NAEP Comparisons

	<i>Nevada CRT</i>	<i>NAEP</i>
<i>Content Standards</i>	State Standards	National Standards
<i>Test Format</i>	20% open response	50% open response
<i>Test Length & Achievement</i>	Achievement level based on total test performance	Achievement level estimated on “short” form performance
<i>Proficiency Defined</i>	Concrete expectation	Goal statement
<i>Who Participates</i>	All students Extensive accommodations No exclusions	Sample of students (voluntary) Limited accommodations Allows exclusions
<i>When administered</i>	Mid Spring -- Annually	Early Spring -- Biannually
<i>Reporting Level Turnaround</i>	Student, school, district + Approximately 1 month	Nation, state, some districts Approximately 6 months
<i>“Stakes”</i>	Primary AYP measure Public reporting	Public reporting

NAEP Comparisons

Can NAEP be used for validation?

Correlations of school percentages meeting standards in Nevada

Reading

Mathematics

Grade 4

.86

.81

Grade 7/8

.78

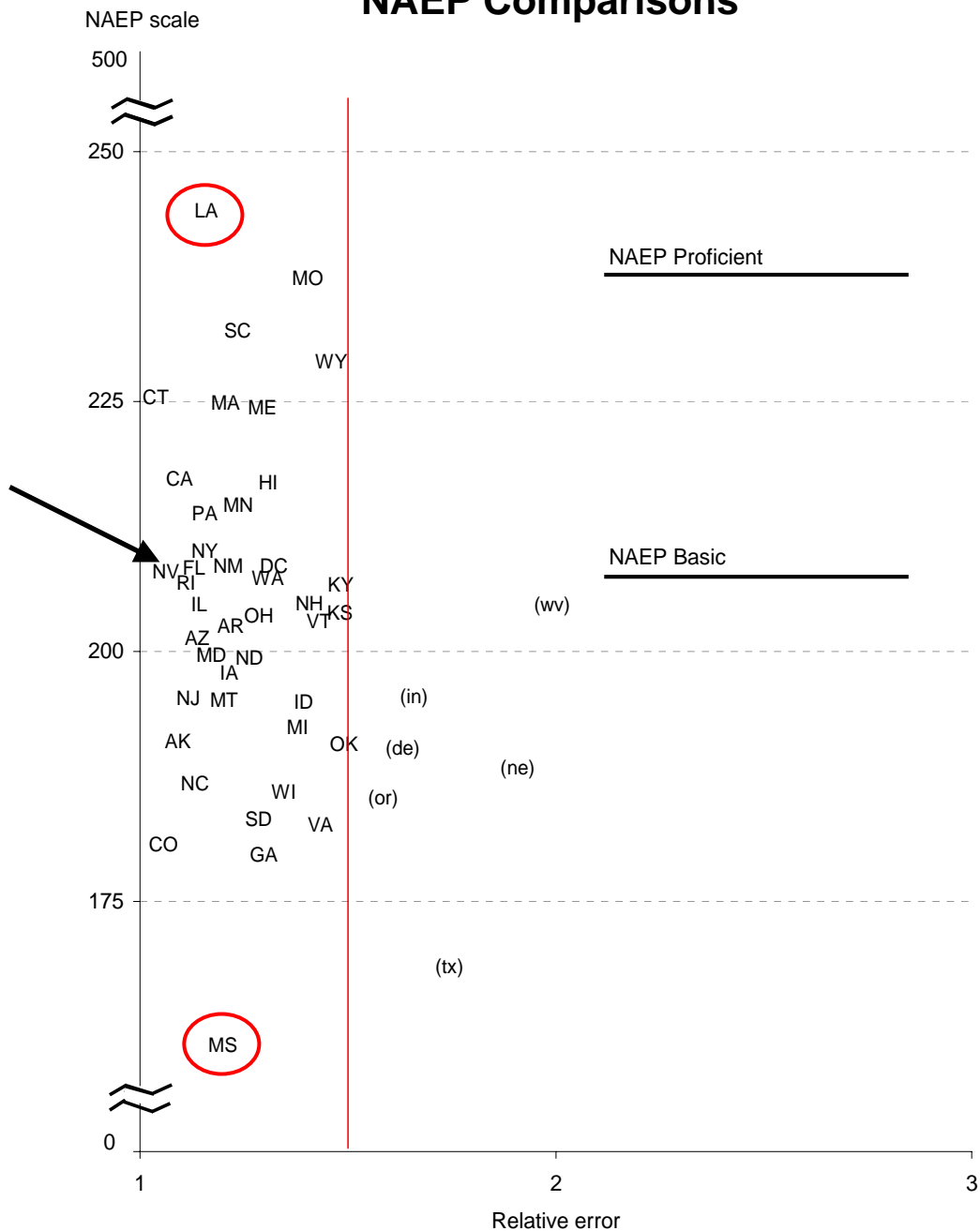
.82

NAEP Comparisons

- Nevada's standards are between NAEP's basic and proficient standards, except grade 4 reading is at the NAEP basic level.
- States' standards vary greatly, and Nevada's is near the middle.
- States with high and low standards do about equally well on NAEP.
- States with higher standards have fewer students meeting them.

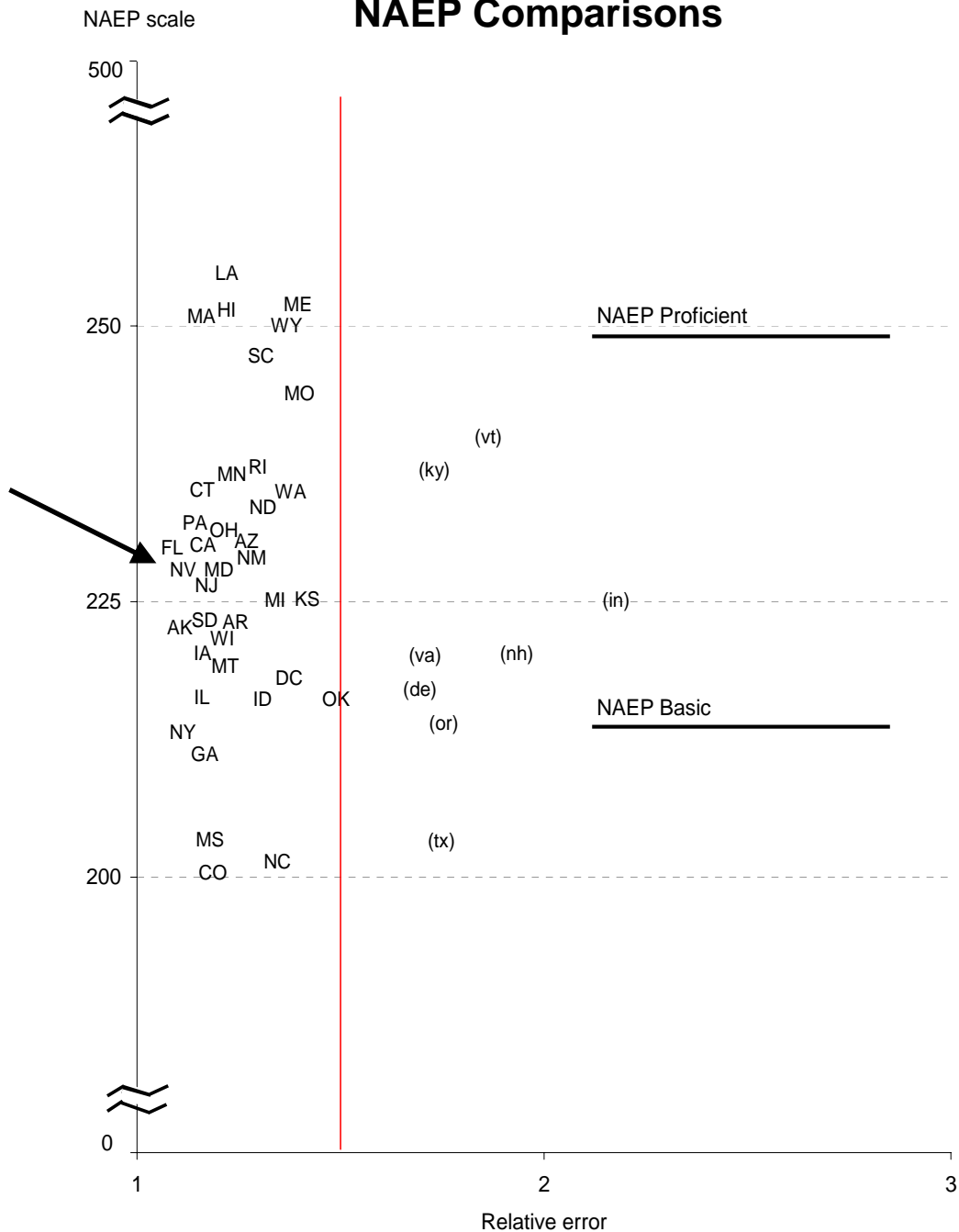
NAEP Comparisons

4th Grade
Reading



4th Grade Math

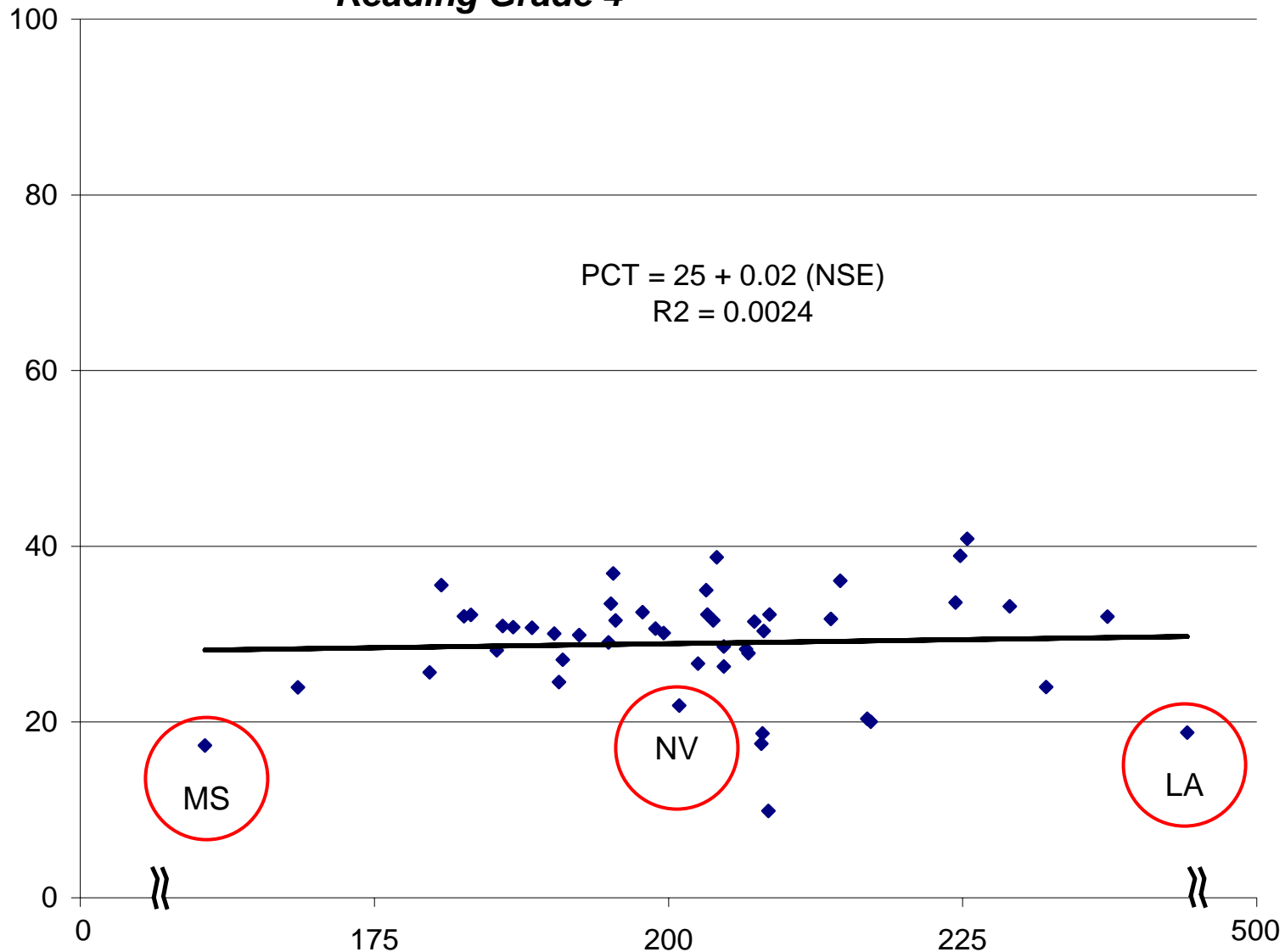
NAEP Comparisons



States that set high standards do not achieve better on NAEP.

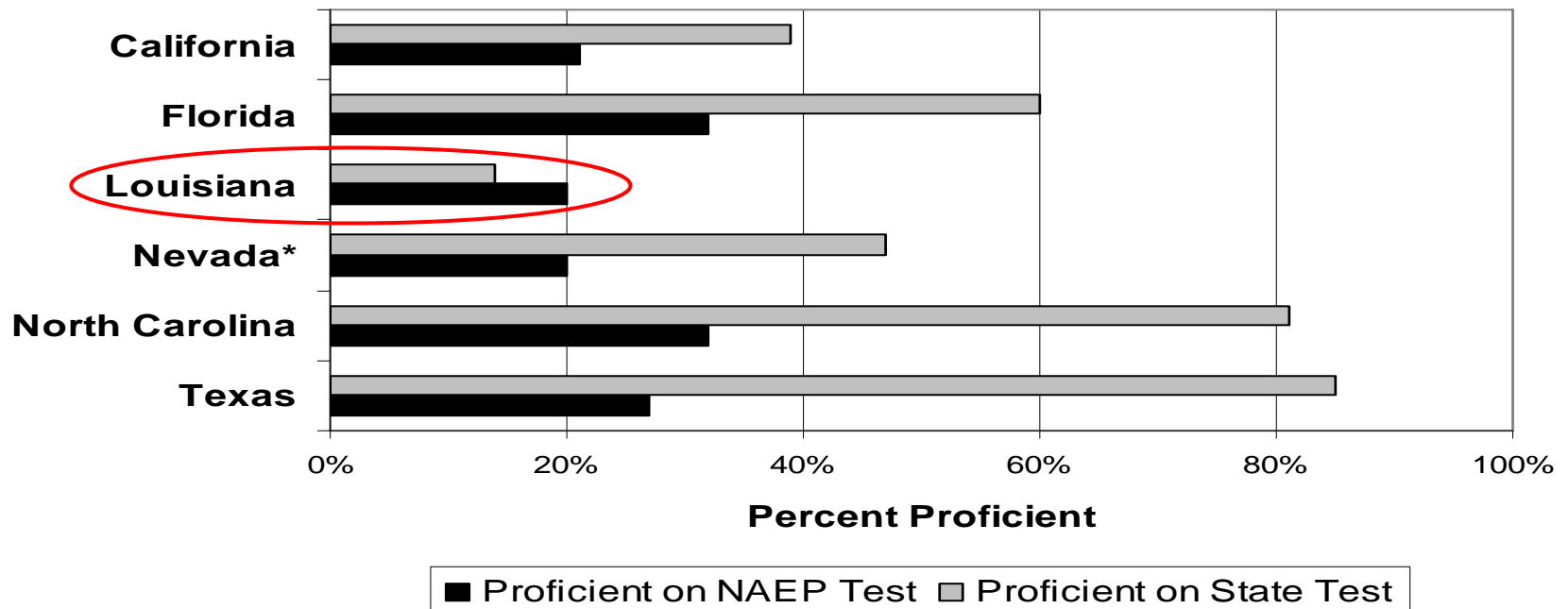
Percent proficient on
NAEP (PCT)

Reading Grade 4



NAEP Comparisons

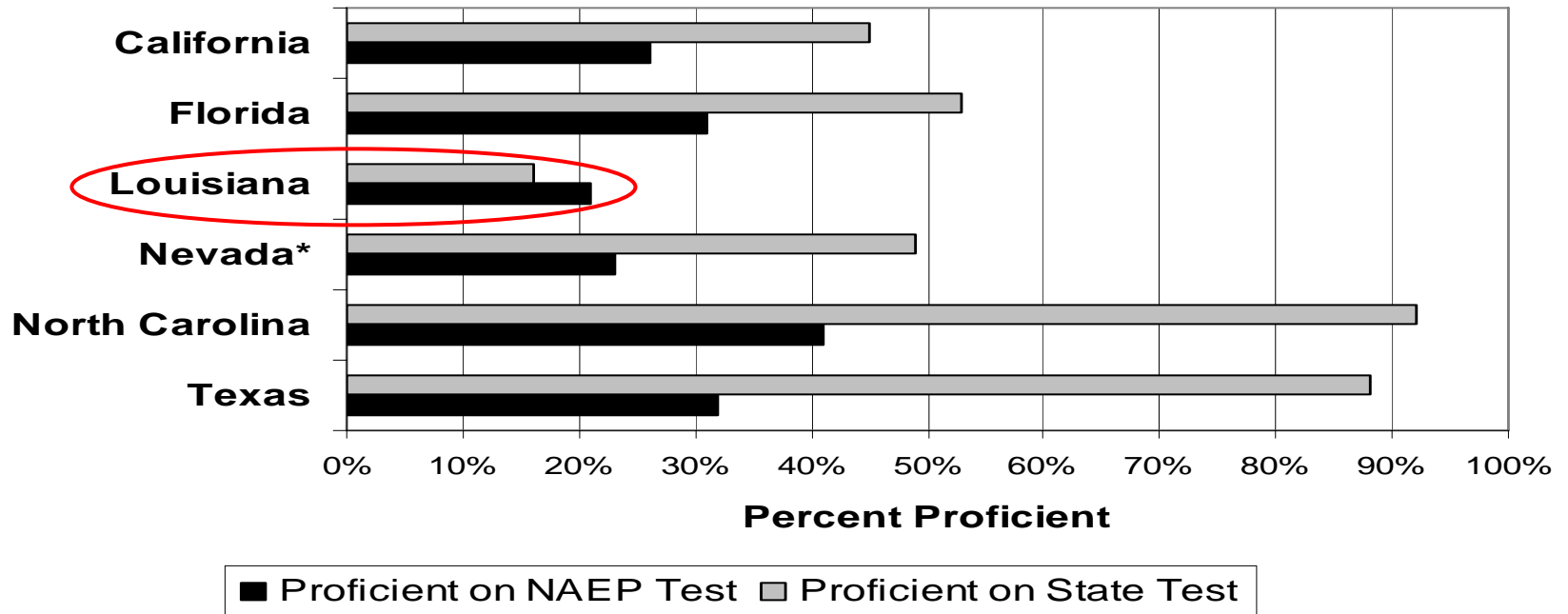
Select State Comparisons of 4th Grade Reading Proficiency as Measured by NAEP and State Tests



- There are a handful of states that as part of their reform movement have adopted achievement levels that mimic NAEP definitions (e.g. Louisiana).
- It seems likely that among these states, especially those that are diverse in terms of student population, more schools will be identified as In Need of Improvement and in a shorter timeframe.

NAEP Comparisons

Select State Comparisons of 4th Grade Math Proficiency as Measured by NAEP and State Tests

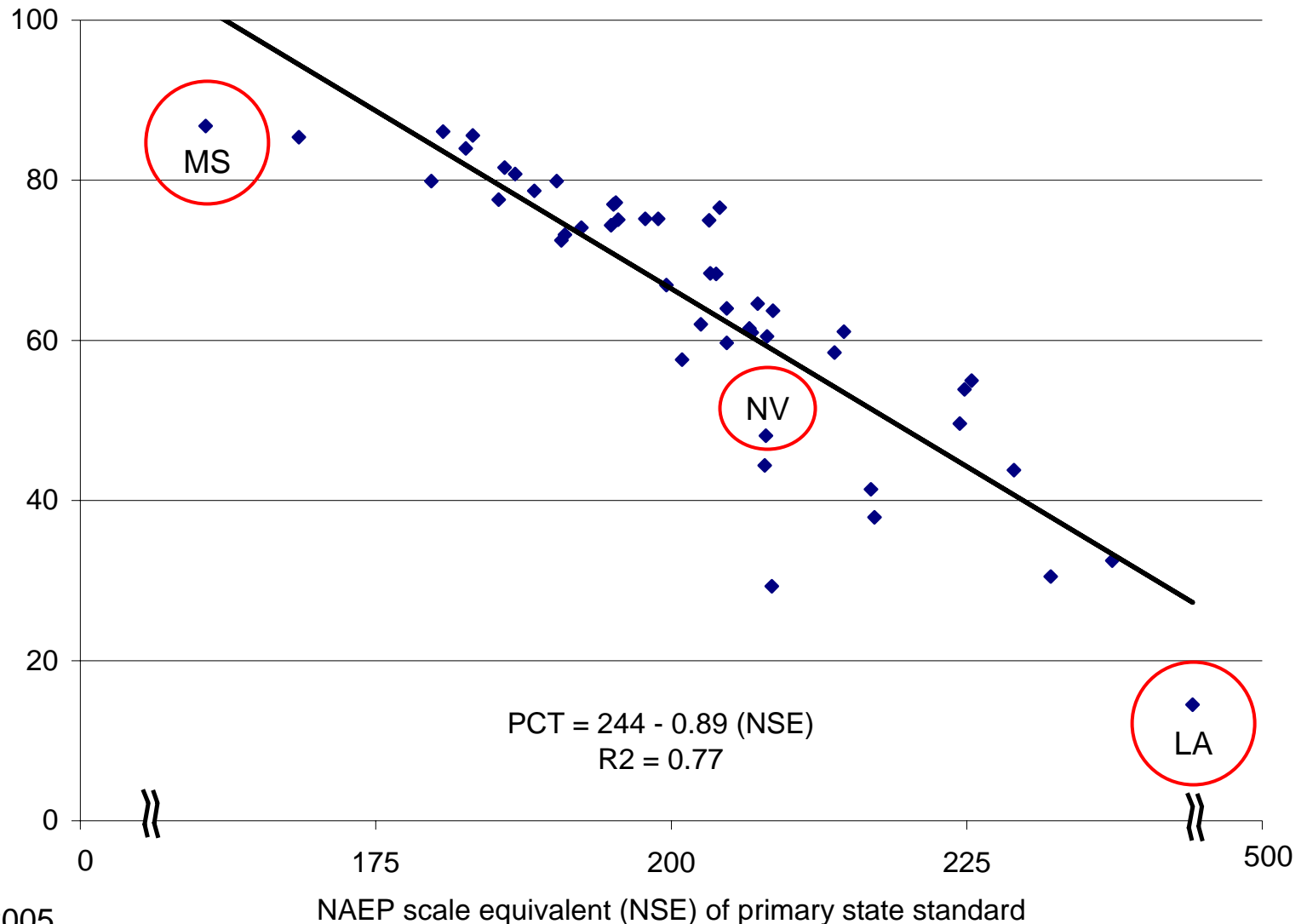


- For the majority of states, the percentage of students identified as proficient on their custom assessments surpasses the percentage identified as proficient using NAEP
- Arguably, this is a function of differences in the qualitative definition of what it means to be proficient

States that set high standards have fewer students meeting them.

Percent of students
achieving
primary standard (PCT)

Reading Grade 4



NAEP Comparisons

- Is it appropriate for Nevada's cut point for Meeting Standard to be more similar to NAEP Basic than NAEP Proficient?
- In the NAEP validity study titled Federal Sample Sizes for Confirmation of State Tests in the No Child Left Behind Act (May, 2004), Mosquin and Chromy state:

“the proportion at or above the basic achievement level will both have the greatest correlation with the adequate yearly progress statistic and also be the most directly comparable” (pg. 12).
- This is a federal acknowledgement that qualitative differences in proficiency definitions exist and the appropriate use of the basic achievement level to validate state proficiency trends.

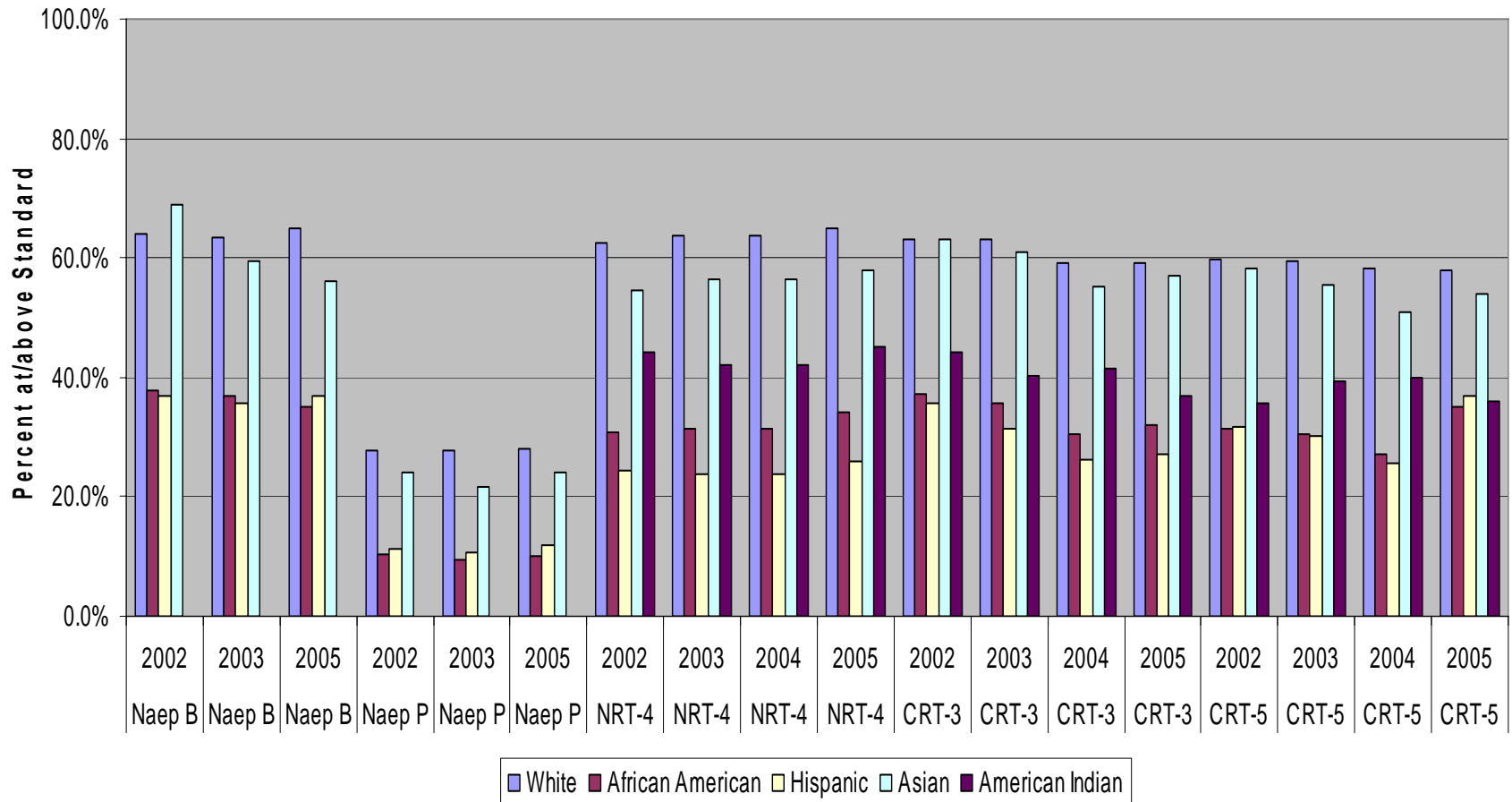
Conclusion

- In general, NRT and NAEP results provide validation for state assessment results at the elementary level. That is true for school level comparisons, disparities in student group performance, and performance trends.

- Appendix
 - Select Disaggregations

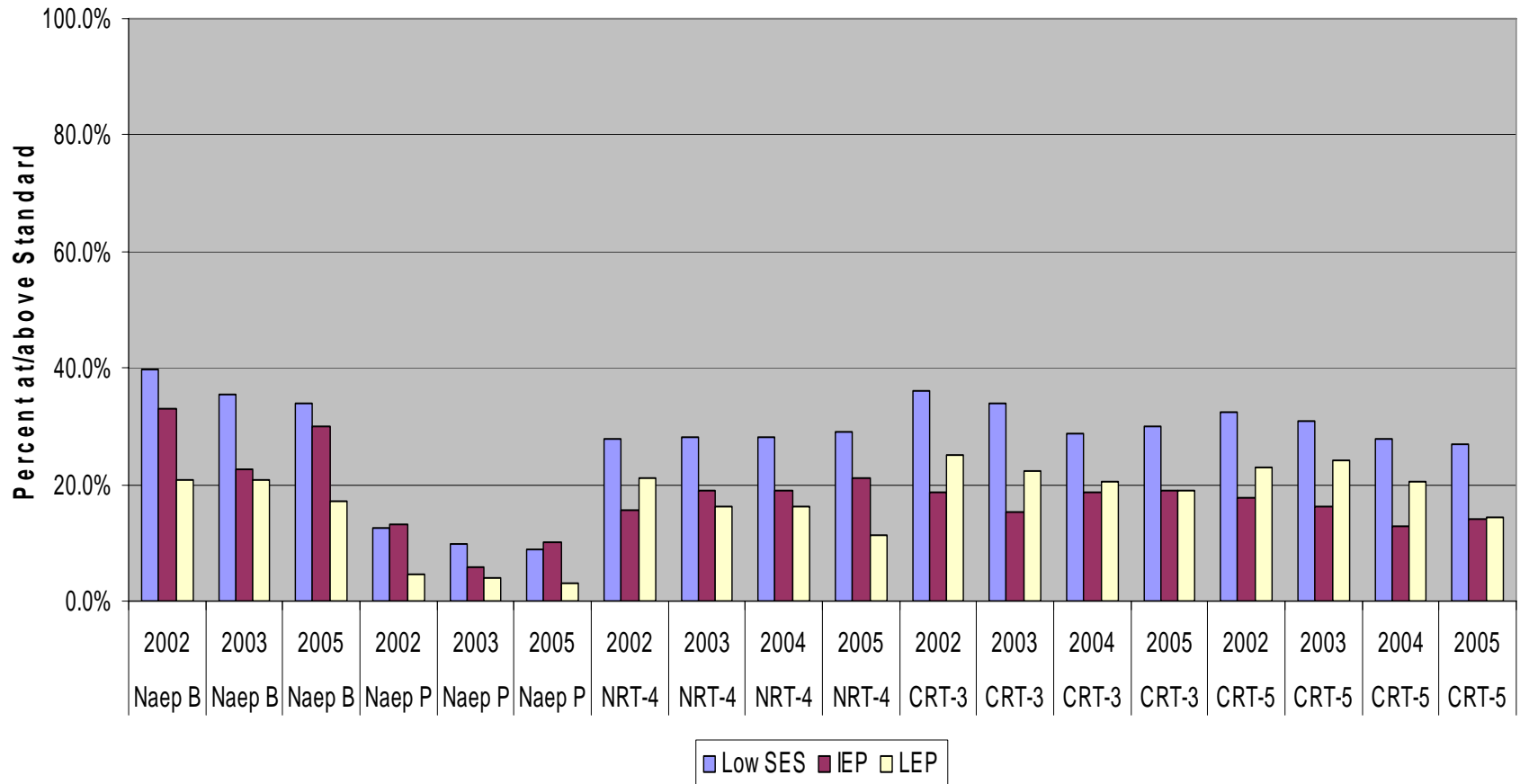
Performance Comparisons

Trends in CRT, NRT, NAEP Reading Performance by Ethnicity (Elementary)



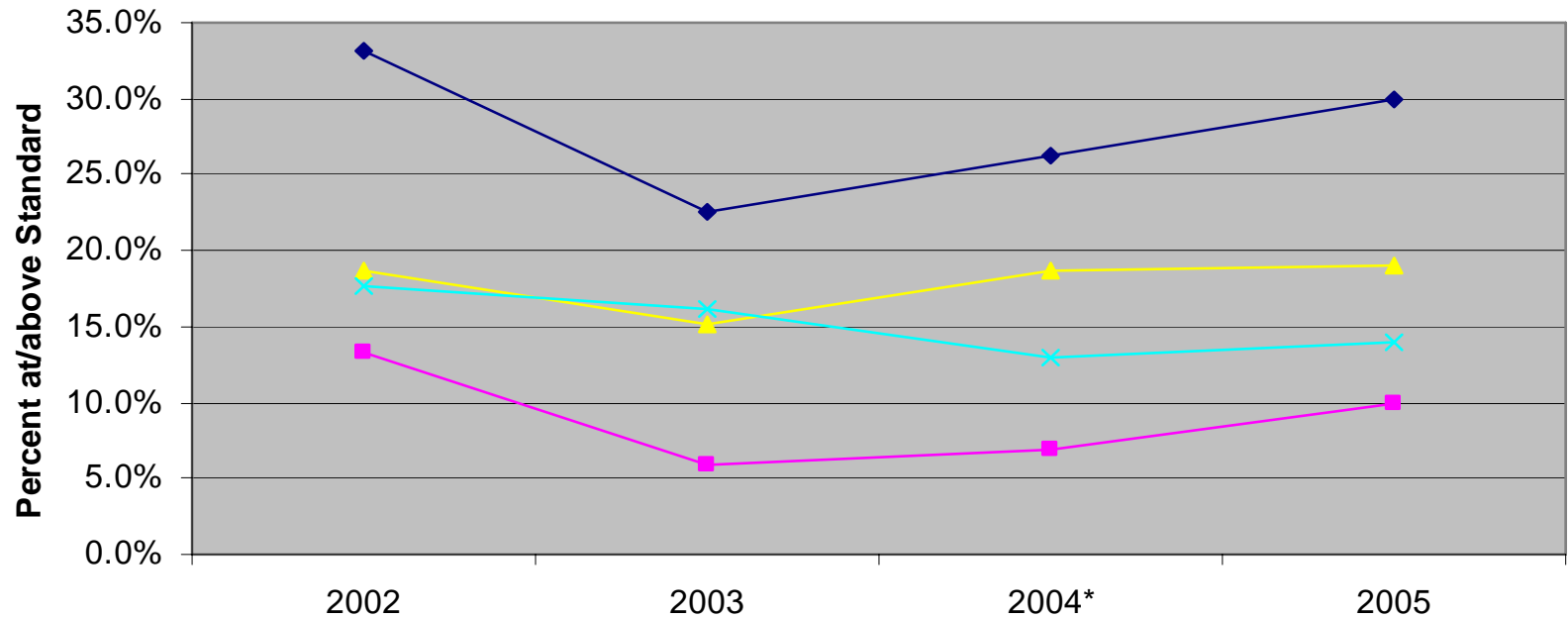
Performance Comparisons

Trends in CRT, NRT, and NAEP Reading Performance by Special Population (Elementary)



Performance Comparisons

Trends in Reading Performance among Students with Disabilities

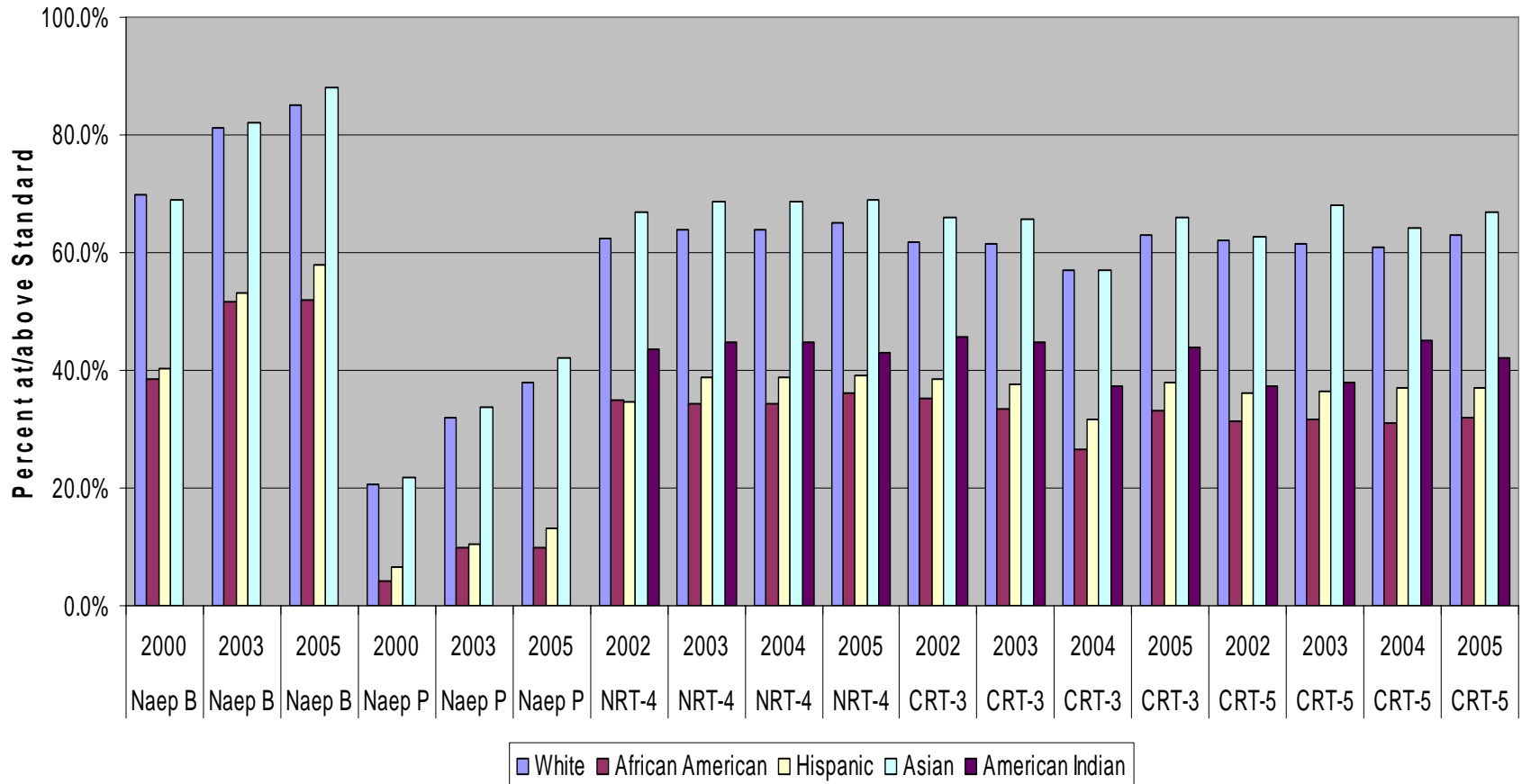


* No NAEP data available



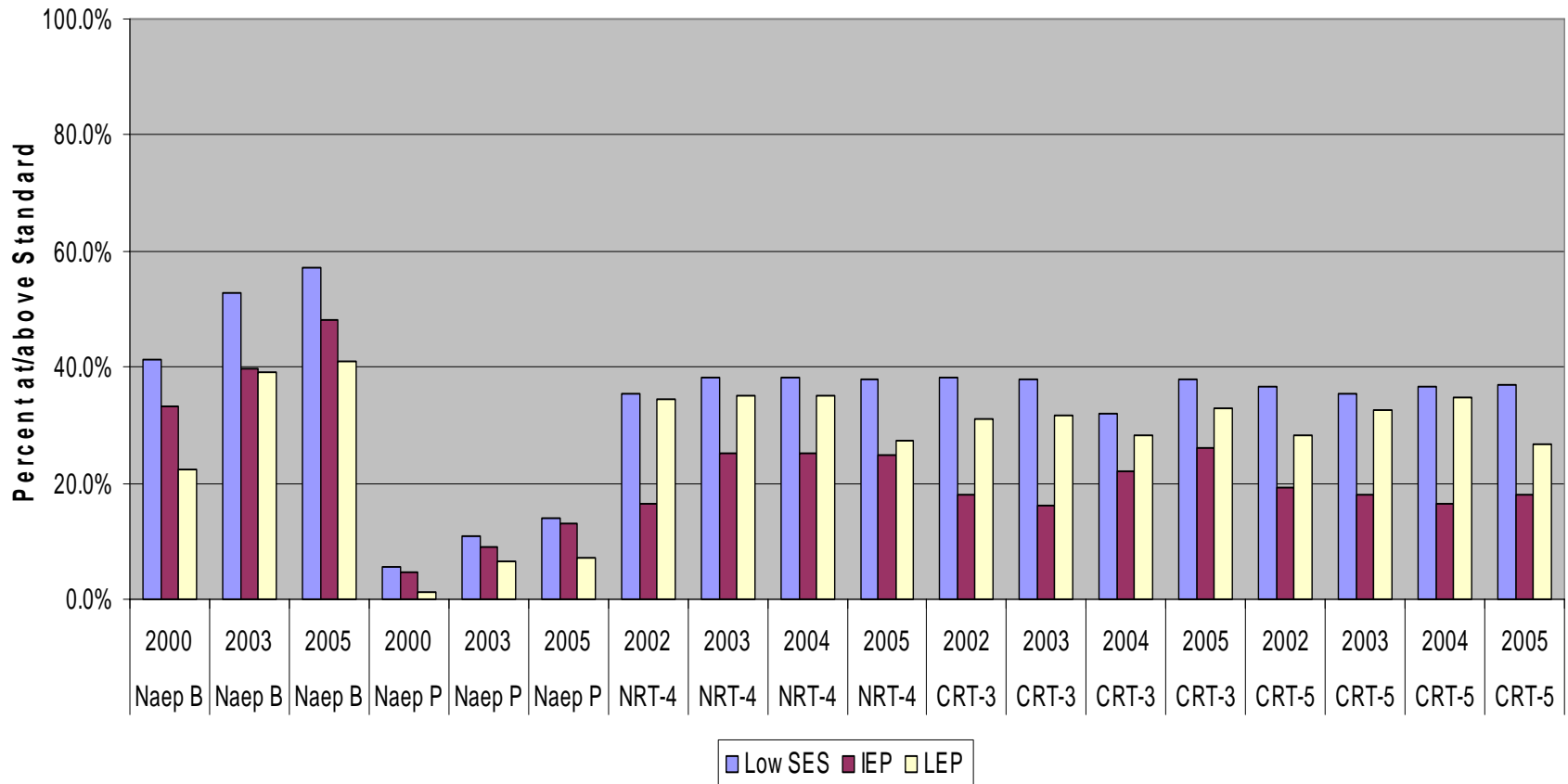
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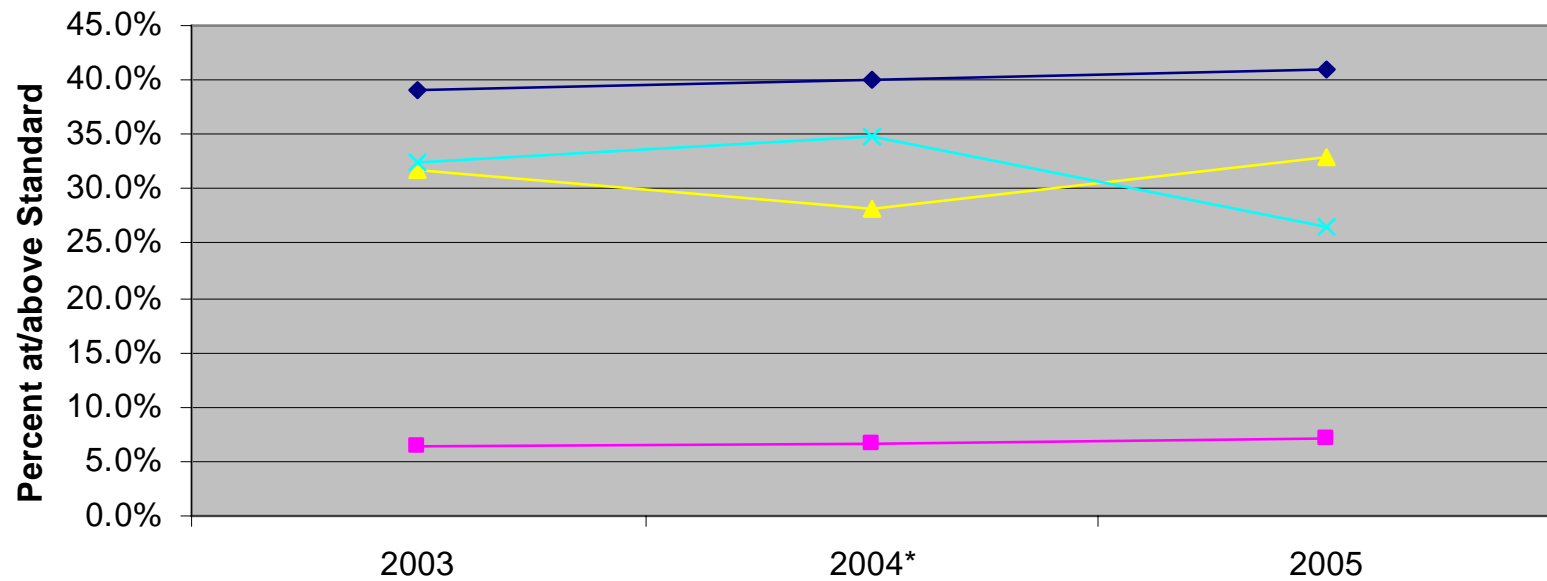
Performance Comparisons

Trends in CRT, NRT, and NAEP Math Performance by Special Population



Performance Comparisons

Trends in Math Performance among Students with Limited English Proficiency



* No NAEP data available

—◆— NAEP-B —■— NAEP-P —▲— CRT-3 —×— CRT-5