March 2007

WASL PERFORMANCE TRENDS IN GRADES 4, 7, AND 10

The 2006 Legislature directed the Washington State Institute for Public Policy (Institute) to conduct a "review and statistical analysis of Washington assessment of student learning [WASL] data" in order to "identify possible barriers to student success or possible causes of the lack of success."[1] One possible barrier to success on the 10th-grade WASL is a lack of student progress on the 4th- and 7th-grade assessments.

This report summarizes student performance in reading, writing, and math on the WASL in grades 4, 7, and 10.

We analyze WASL performance in two ways. First, we examine met-standard rates in each subject area—reading, writing, and math—for grades 4, 7, and 10. This method compares subject-area and grade-level performance over time. Second, we analyze WASL performance for student cohorts. This method tracks met-standard rates for classes of students as they progress through elementary, middle, and high school.

The data in this report come from the Office of Superintendent of Public Instruction's Washington State Report Card website.[2]

Exhibit 1 presents a timeline for the implementation of the WASL at different grade levels.[3] The WASL became mandatory for 4th graders in 1998 and for 7th and 10th graders in 2001. As part of the accountability system established under the No Child Left Behind Act, the WASL was administered to students in grades 3, 5, 6, and 8 for the first time in 2006.[4]

SUMMARY

This report summarizes student performance in reading, writing, and math on the WASL in grades 4, 7, and 10.

Performance Over Time

- Overall, met-standard rates in all three subjects have increased for each grade level over time.

- Two anomalous "blips" occurred in 2006: a surge in met-standard rates on the 10th-grade writing WASL and a sudden decline in performance on the 7th-grade reading WASL.

- Met-standard rates in reading and math are highest on the 4th-grade WASL and lowest (for most years) on the 7th-grade WASL.

- Compared with reading and math, met-standard rates in writing are much more comparable across grade levels.

Student Cohort Performance

- For recent cohorts, met-standard rates in reading and math are lower in 7th grade than in the 4th and 10th grades.

- Conversely, results for writing depict progress as students advance through school.

Exhibit 1
Implementation of the WASL

Level of Schooling	WASL Available for Voluntary Use	WASL Became Mandatory
Elementary school (4th grade)	1997	1998
Middle school (7th grade)	1998	2001
High school (10th grade)	1999	2001

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[1] SSB 6618, Chapter 352, Laws of 2006.

[2] http://reportcard.ospi.k12.wa.us/

[3] http://www.k12.wa.us/assessment/WASL/systimp.aspx

[4] http://www.k12.wa.us/Communications/pressreleases2006/WASLScoreRelease2006.aspx

WASL MET-STANDARD RATES OVER TIME

Exhibit 2 plots met-standard rates for the WASL in grades 4, 7, and 10. Separate charts display performance trends for each of three subject areas: reading, math, and writing.

Reading

In general, met-standard rates in reading have increased over time. Reading performance is highest on the 4th-grade WASL. Met-standard rates on the 10th-grade WASL slightly trail but closely track performance on the 4th-grade WASL until 2006, when the rates are nearly equivalent. Met-standard rates are lowest on the 7th-grade WASL: average performance changed little between 1997 and 2001, increased thereafter until 2005, and then declined abruptly the following year.[5]

Math

As with reading, met-standard rates in math are highest for the 4th-grade WASL: the percentage of students meeting standard increased until 2004 before tapering off and then declining slightly over the next two years. Met-standard rates in 7th grade trail 4th-grade WASL performance by an average of 14 percentage points. Compared with 4th and 7th graders, performance on the 10th-grade math WASL has improved steadily but at a slower rate.

Writing

Relative to reading and math, performance trends in writing are much more comparable across grade levels, with a few notable exceptions. An initial decline in met-standard rates on the 4th- and 10th-grade writing assessments reversed direction in 1999 and 2000, respectively. Moreover, performance on the 10th-grade WASL has outpaced the 4th- and 7th-grade assessments since 2000, due largely to improved scores on the Content, Organization, and Style strand.[6] Between 2005 and 2006 alone, met-standard rates on the 10th-grade assessment increased from 65 to 80 percent.
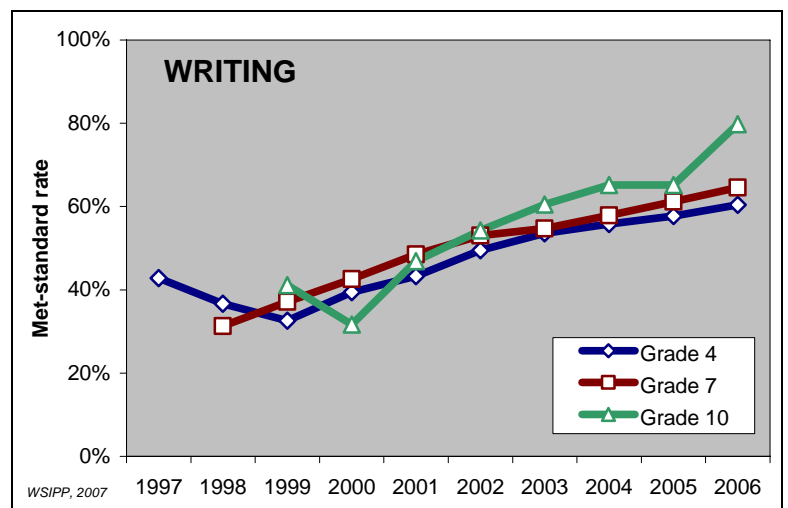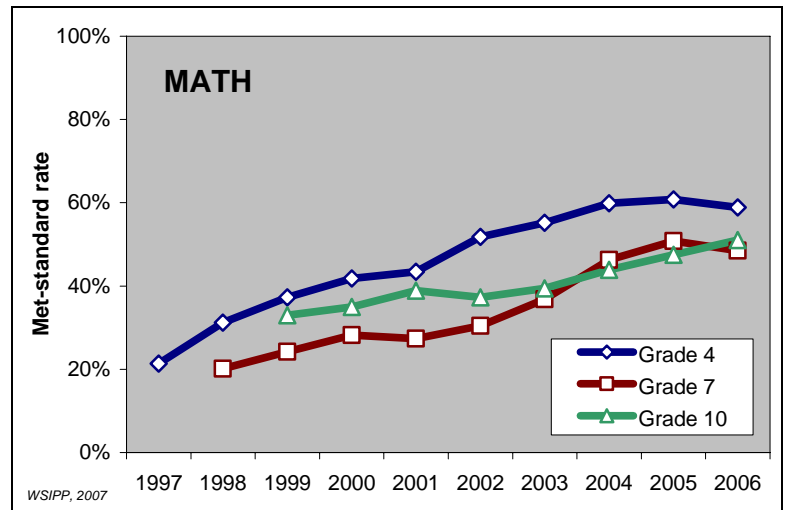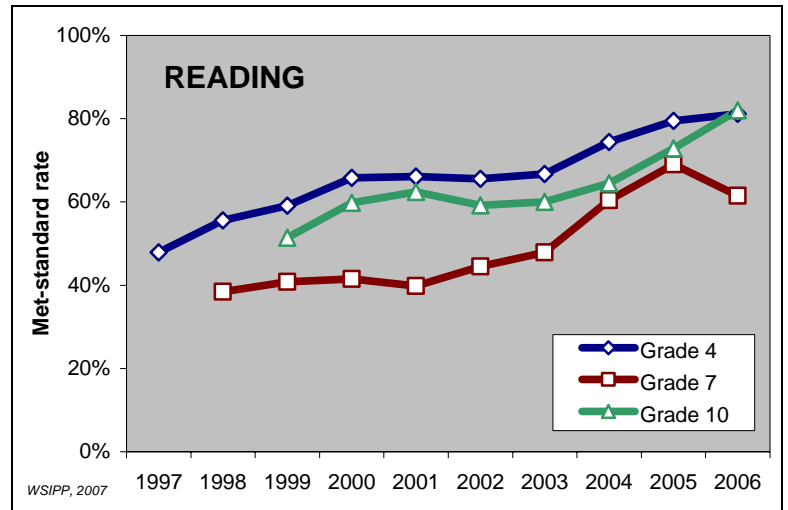
Summary of Results Over Time

Over time, performance in reading, math, and writing has increased for all grade levels, with few exceptions. However, changes in met-standard rates for one grade do not correspond to changes in subsequent grades. The next section of this report follows cohorts of students to examine more closely how 4th-grade results compare with 7th- and 10th-grade results.

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[5] The Office of Superintendent of Public Instruction attributes some of the decline in 7th-grade reading performance in 2006 to annual adjustments in the conversion of raw scores into scale scores.

[6] W. Cole & R. Barnoski. (2006). *Tenth-grade WASL strands: Student performance varies considerably over time.* Olympia: Washington State Institute for Public Policy, Document No. 06-11-2205.

Exhibit 2
Met-Standard Rates on the 4th-, 7th-, and 10th-Grade WASL

READING — Met-standard rate, 1997–2006. Grade 4, Grade 7, Grade 10.

WSIPP, 2007

MATH — Met-standard rate, 1997–2006. Grade 4, Grade 7, Grade 10.

WSIPP, 2007

WRITING — Met-standard rate, 1997–2006. Grade 4, Grade 7, Grade 10.

WSIPP, 2007

TRACKING WASL PERFORMANCE FOR STUDENT COHORTS

Exhibit 3 tracks student performance on the WASL for four cohorts of students: the classes of 2005 through 2008. The results show how a group of students who took the WASL in 4th grade subsequently performed on the 7th- and 10th-grade assessments.

Reading

Two trends are evident. First, met-standard rates in reading are lowest for the 7th-grade WASL. Performance declines precipitously between grades 4 and 7 and then rebounds in grade 10. Second, performance trends for the classes of 2006, 2007, and 2008 are roughly parallel and stacked, with the most recent cohort on top. This indicates that the same pattern of WASL performance repeats over time, but that overall met-standard rates have increased with each successive cohort. The gap between trend lines represents the improvement in met-standard rates from one cohort to the next.

Math

Performance trends in math are similar to but less pronounced than reading trends. For the classes of 2006, 2007, and 2008, met-standard rates on the 7th-grade math WASL declined slightly relative to the 4th-grade WASL, but increased by an average of 15 percentage points on the 10th-grade WASL. Met-standard rates on reading and math assessments in other states do not show the same decline in middle-school performance.[7]

Writing

Cohort-specific performance trends in writing are markedly different from reading and math because they do not show the same decline in 7th-grade met-standard rates. Beginning with the class of 2006, met-standard rates in writing have increased as students progressed through grades 4, 7, and 10. Tenth-grade performance is highest for students in the class of 2008.[8]

Summary of Cohort Results

In general, met-standard rates for reading and math are lowest on the 7th-grade WASL. One possible explanation for this decline is that the WASL is not designed to measure student progress across grades. Nevertheless, results for writing depict progress over time, such that met-standard rates increase as students advance from elementary to middle and high school.

Exhibit 3
Tracking WASL Performance for Student Cohorts Across Grades 4, 7, and 10

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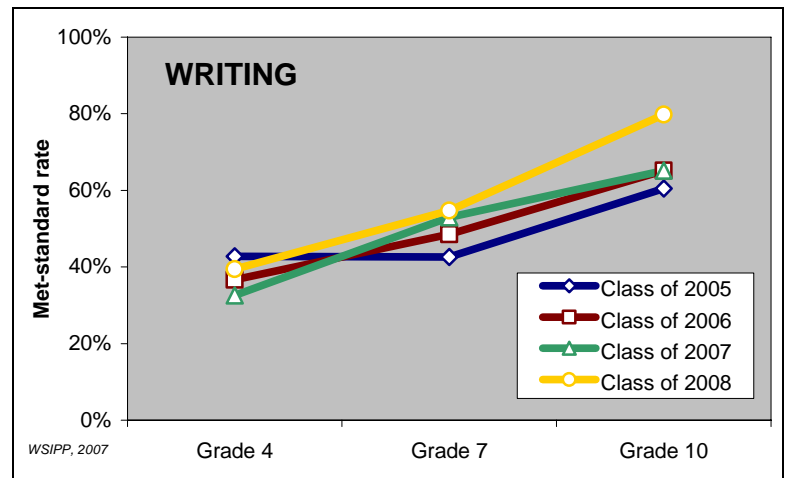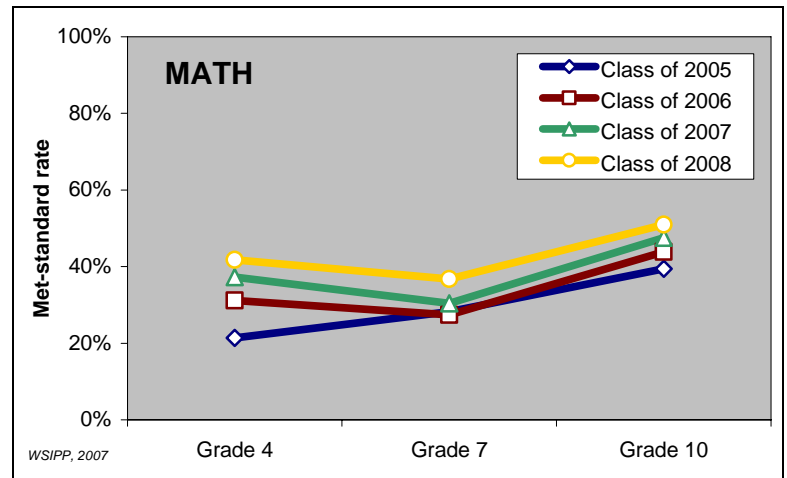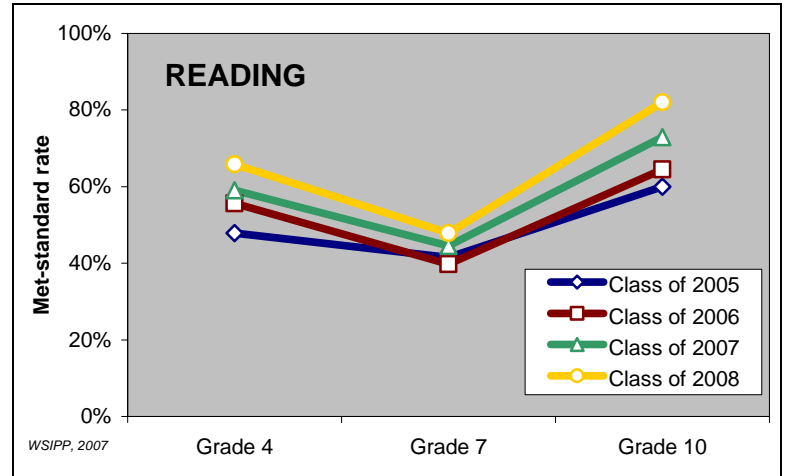
[7] These results are available upon request.

[8] For each subject area, note that performance trends for students in the class of 2005 differ from the general pattern for students in subsequent cohorts.