

**Did Any Schools
“Beat the Odds” on the
WASL in Spring 2006?**

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Legislative Direction (2006 Session)

- WSIPP to conduct “*a review and statistical analysis of the Washington assessment of student learning...and identify possible barriers to student success...*” (SSB 6618)
- Effort to find schools that performed **better than expected** on the WASL given the demographic characteristics of their students.
- The practices and strategies of schools that “beat the odds” could be **emulated by other schools** with similar demographics.

Method of Analysis

- We compared schools' actual and “predicted” met-standard rates on the WASL.
- **Predicted rates** are based on statistical analyses of WASL performance given the following student characteristics:
 - Enrollment in special education (–)
 - Language barriers (–)
 - Parents' educational attainment (+)
 - Racial/ethnic minorities (–)
 - Poverty (–)
 - Gender (±)

Method of Analysis

(4th Grade)

- Analysis limited to schools with at least 25 WASL completers
 - **Reading/Writing** (n=995 schools)
 - **Math** (n=998 schools)
- Schools “beat the odds” when actual met-standard rates exceeded predicted rates by more than 1 standard deviation
 - **Reading/Writing:** + 16 percent
 - **Math:** + 17 percent

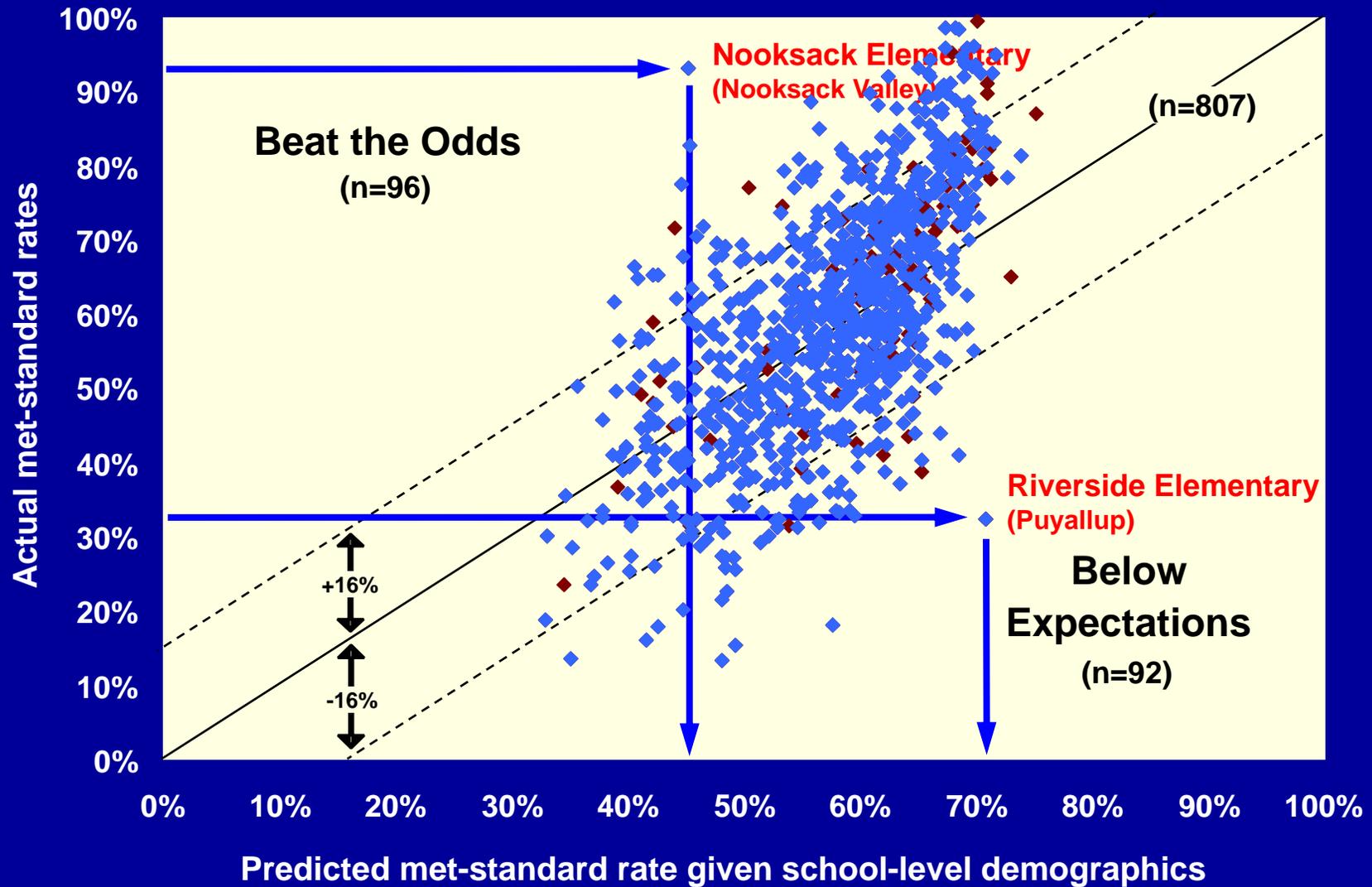
Method of Analysis

(10th Grade)

- Analysis limited to schools with at least 25 WASL completers
 - **Reading/Writing** (n=309 schools)
 - **Math** (n=303 schools)
- Schools “beat the odds” when actual met-standard rates exceeded predicted rates by more than 1 standard deviation
 - **Reading/Writing:** + 12 percent
 - **Math:** + 16 percent

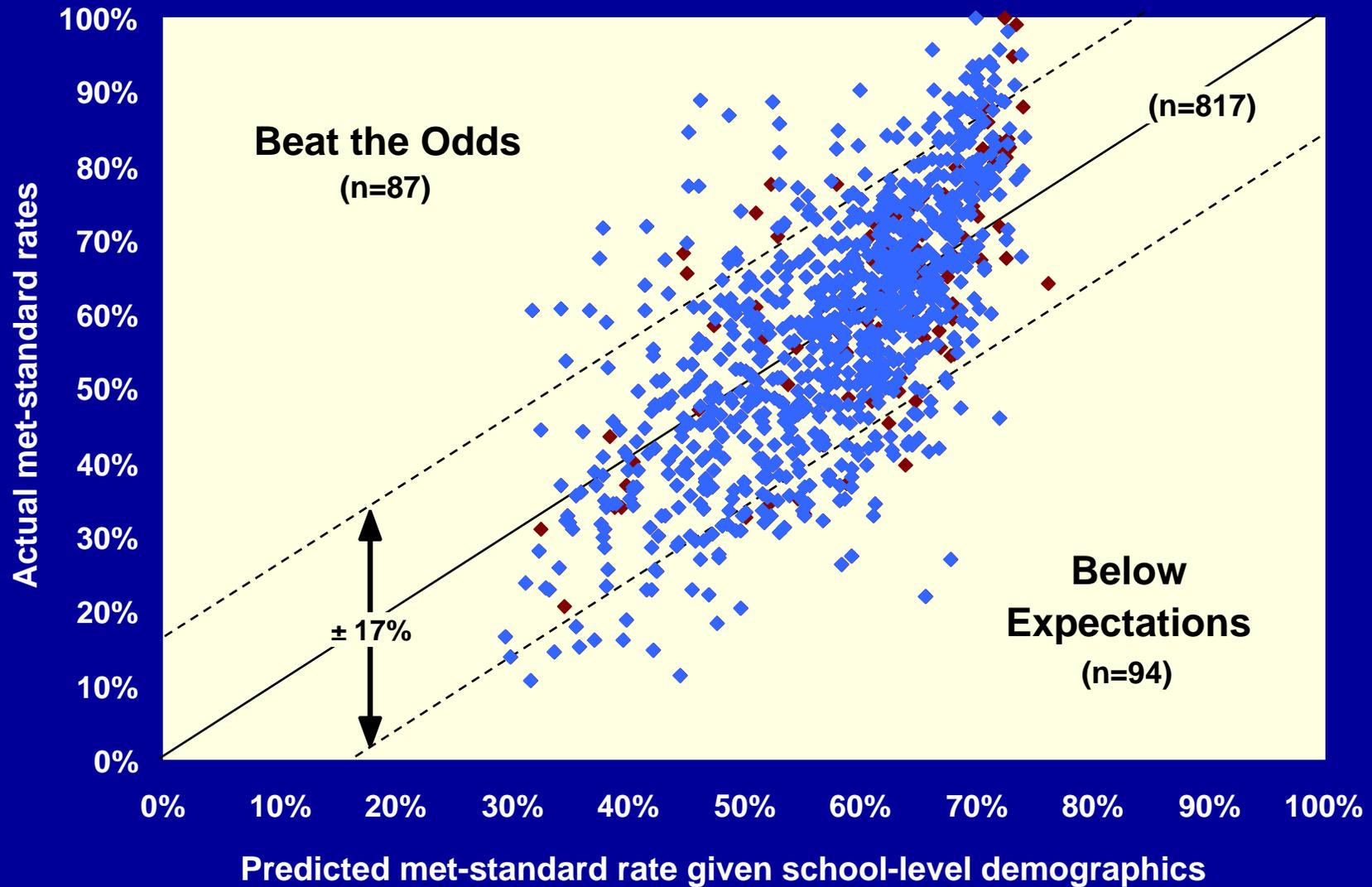
Reading and Writing: 4th Grade

Distinguishing Small Schools (25-100 SWAS In Completers)



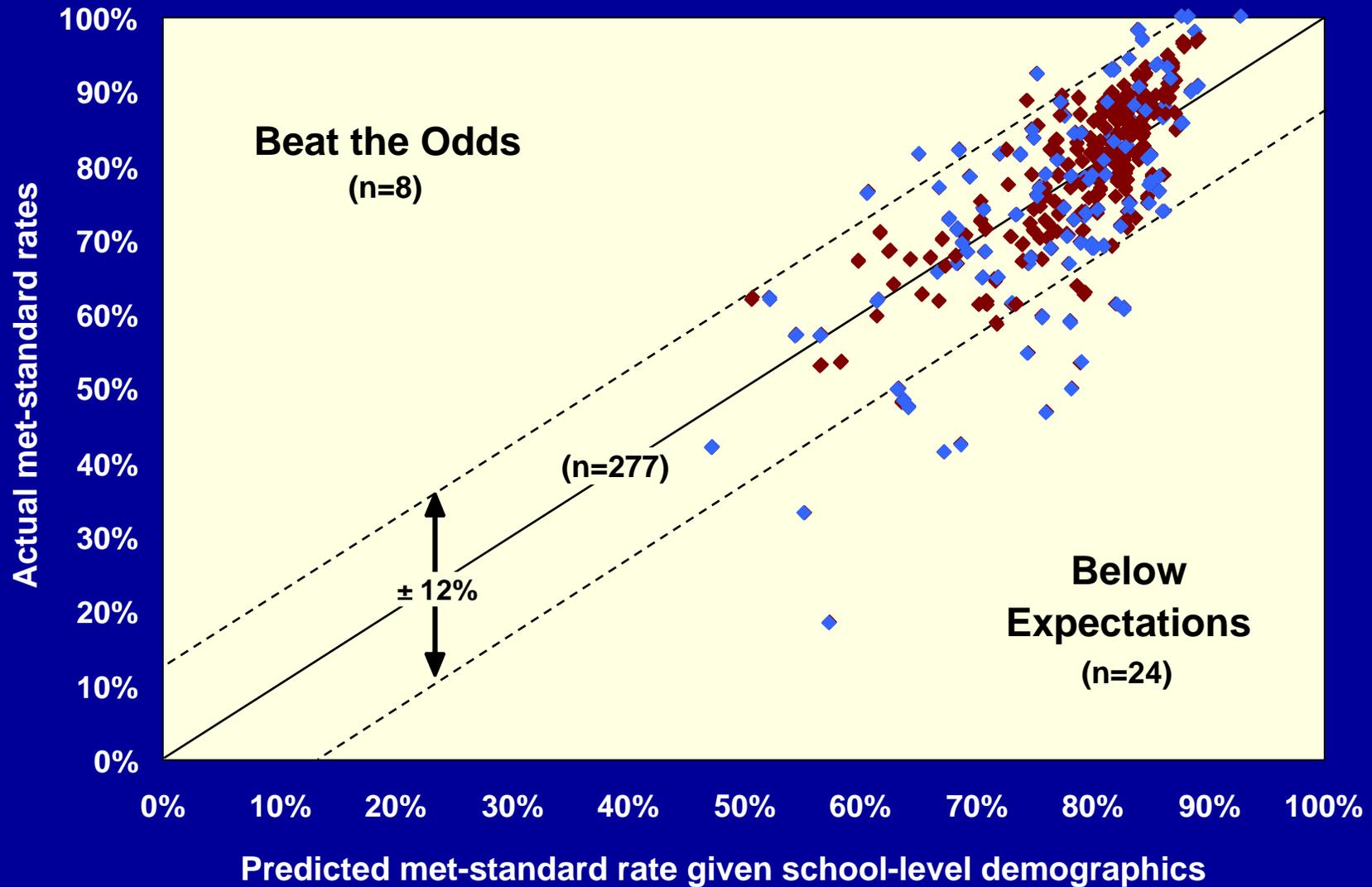
Math: 4th Grade

Distinguishing Small Schools (25-100 SWAS in completers)



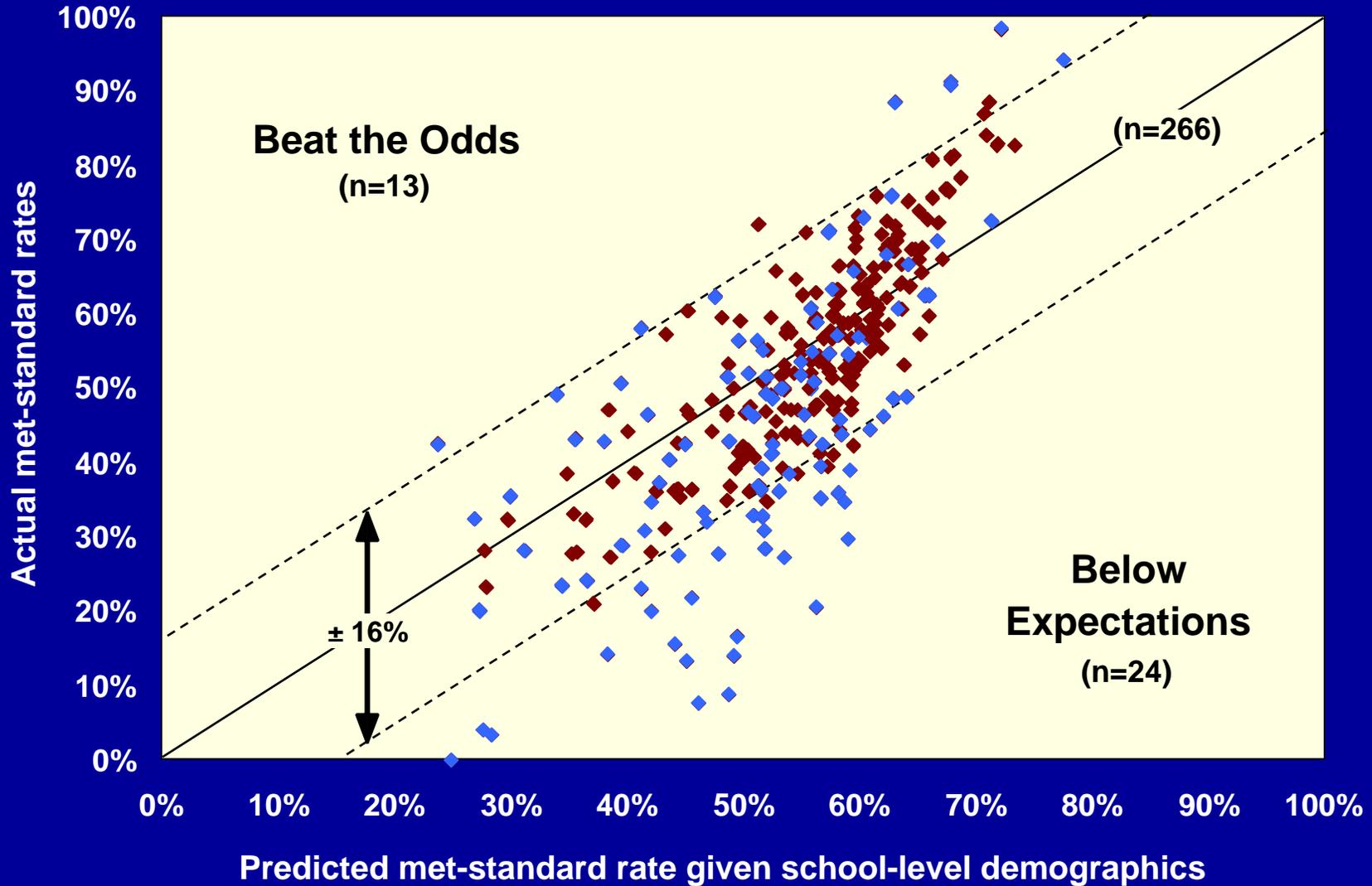
Reading and Writing: Grade 10

Distinguishing Results With Alternative Schools Excluded (n=277)



Math: Grade 10

Distinguishing Results With Alternative Schools Excluded (n=266)



Summary of Results

- Using our criteria, more elementary schools than high schools beat the odds given the demographic characteristics of their students:
 - ✓ 4th grade
 - Reading/Writing: 96 out of 995 schools (9.6%)
 - Math: 87 out of 998 schools (8.7%)
 - ✓ 10th grade
 - Reading/Writing: 8 out of 309 schools (2.6%)
 - Math: 13 out of 303 schools (4.3%)

Summary of Results

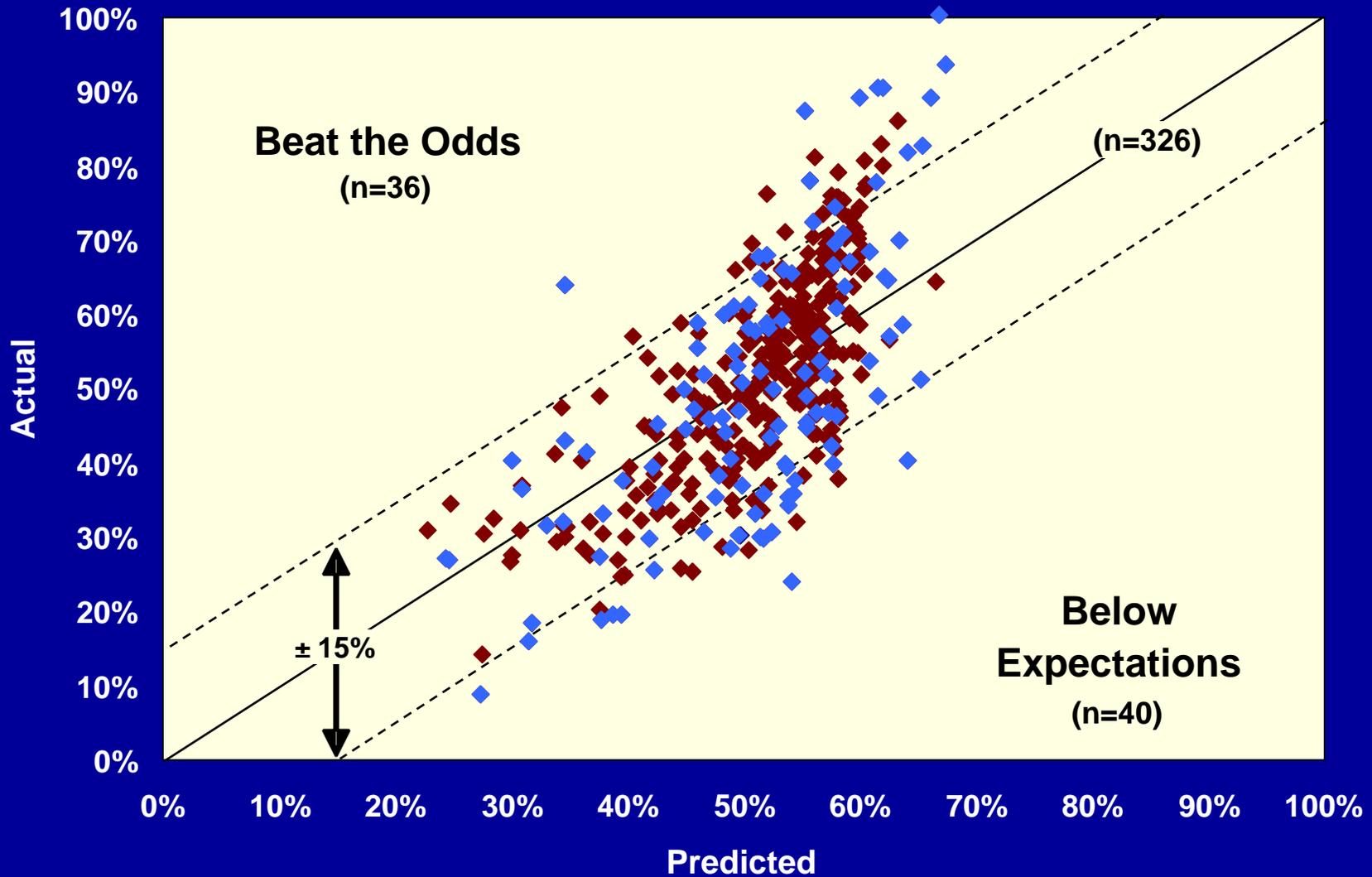
- **Small schools (25-100 WASL completers) account for the bulk of “outliers”**
 - ✓ 4th grade
 - 165 out of 183 beat-the-odds schools (90.2%)
 - 171 out of 186 below-expectations schools (91.9%)
 - ✓ 10th grade
 - 15 out of 21 beat-the-odds schools (71.4%)
 - 39 out of 48 below-expectations schools (81.3%)
- **Many of the highest- and lowest-performing schools on the 10th-grade WASL are alternative schools**
 - 5 of 21 beat-the-odds schools
 - 25 of 48 below-expectations schools

The Bottom Line

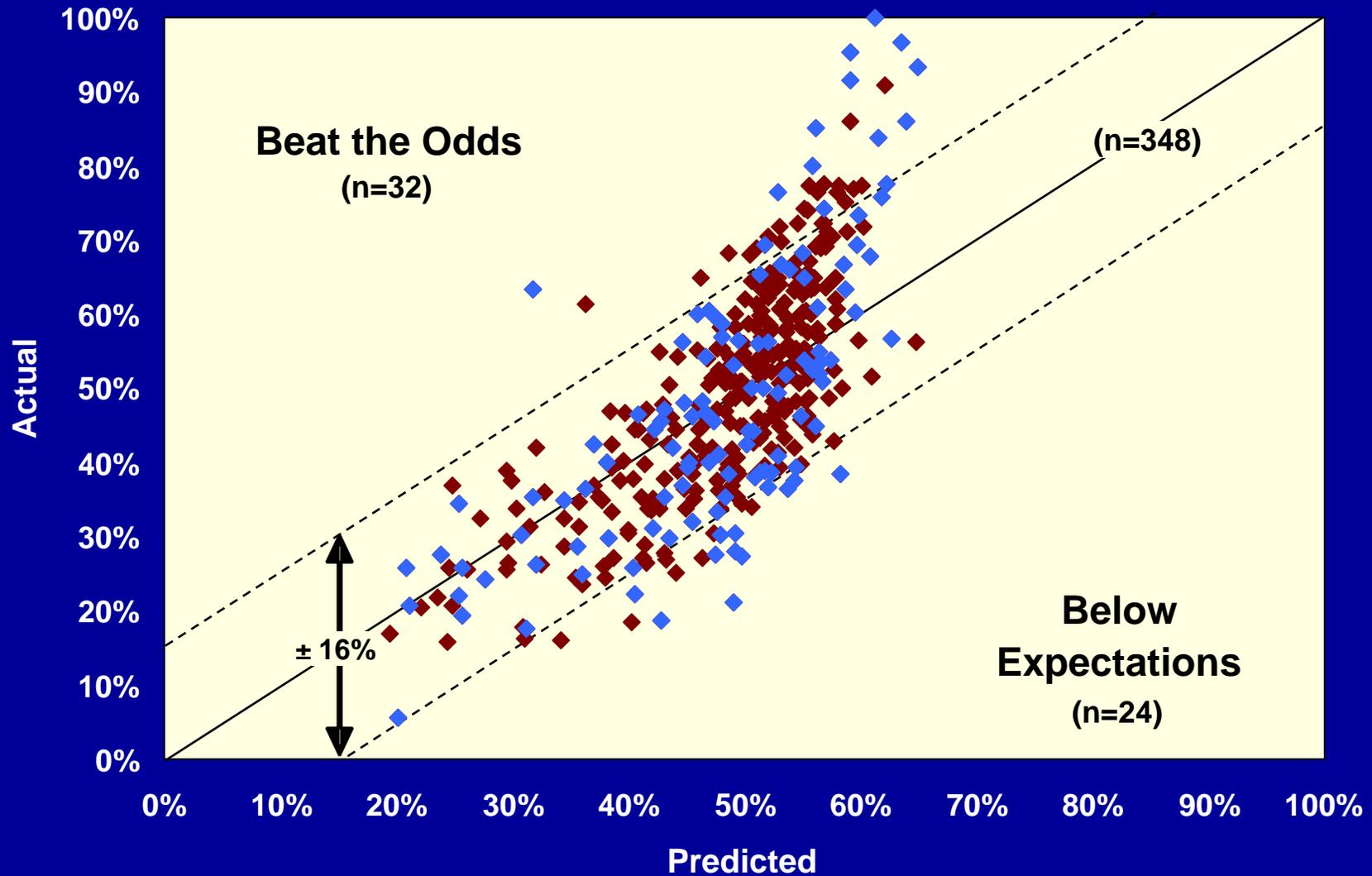
- We identified few if any high schools that beat the odds on the 10th-grade WASL.
- Several elementary schools beat the odds on the 4th-grade WASL; further investigation of these schools may yield practices that other schools could emulate.
- School-level performance on the 7th-grade WASL falls between the results for grades 4 and 10.



Reading and Writing 7th Grade



Math 7th Grade



Met-Standard Rates on the 2006 WASL Grades 4, 7, and 10

	Reading	Writing	Math
10th grade	82.0%	79.8%	51.0%
7th grade	61.5%	64.6%	48.5%
4th grade	81.2%	60.4%	58.9%

Source: OSPI, Washington State Report Card (reportcard.ospi.k12.wa.us)

Descriptive Statistics: Reading and Writing

(Significant differences from zone-of-expectation schools in red)

	Beat the odds	Below expectations	Zone of expectation
Met-standard rates			
Actual (%)	89.5	54.0	80.1
Predicted (%)	75.4	73.6	79.6
Male (%)	53.1	48.0	49.3
African American (%)	1.5	5.4	3.8
Hispanic (%)	14.1	16.6	10.7
American Indian (%)	2.4	7.7	2.4
Asian (%)	7.0	3.9	6.9
Poverty (%)	39.4	48.4	28.9
Special education (%)	7.6	5.6	5.6
Language	.93	.86	.67
Parents' education	2.91	2.50	3.10
No. of students	52	99	221

Descriptive Statistics: Math

(Significant differences from zone-of-expectation schools in red)

	Beat the odds	Below expectations	Zone of expectation
Met-standard rates			
Actual (%)	76.9	25.7	53.9
Predicted (%)	56.4	48.9	54.1
Male (%)	50.5	47.7	49.8
African American (%)	2.0	2.4	4.1
Hispanic (%)	14.9	12.4	11.2
American Indian (%)	2.8	5.4	2.6
Asian (%)	10.4	3.0	6.8
Poverty (%)	28.0	39.6	30.4
Special education (%)	4.5	4.8	6.1
Language	1.01	.77	.67
Parents' education	3.40	2.50	3.07
No. of students	134	56	226

Why Some Schools With Latino Children Beat the Odds...And Others Don't

(Morrison Institute for Public Policy, Arizona State University)

- Regression analysis to predict Stanford 9 (a national standardized exam) reading and math test scores based on:
 - % Latino/a
 - % Other minority
 - % FRPL
 - % Spanish speakers
 - Student mobility
- Characteristics of beat-the-odds schools (based on a survey of matched pairs):
 - ✓ Clear standards and goals
 - ✓ Ongoing assessment
 - ✓ Strong, focused principals
 - ✓ Collaboration among teachers
 - ✓ “Sticking with the program”
 - ✓ Customized—individualized—instruction

Similar Students, Different Results: Why Do Some Schools Do Better?

(EdSource, Stanford University, UC-Berkeley, American Institutes for Research)

- Comparison of Academic Performance Index (API) scores for schools matched on the School Characteristics Index (SCI)
 - API: Based on California Standard Test (CTS) performance
 - SCI: Ethnicity, ELL, Mobility, Parents' education, FRPL (student-level); Class size, Teachers with emergency credentials (school-level)
- Domains highly correlated with higher API scores:
 - ✓ Clear, high expectations for student achievement
 - ✓ Standards-based instruction (curriculum alignment)
 - ✓ Use of assessment data to diagnose achievement
 - ✓ Teacher characteristics (experience, credentials/content knowledge, familiarity with standards, use of diagnostic information)

Successful California Schools in the Context of Educational Adequacy

(American Institutes for Research and Stanford University)

- Regression analysis of California Standard Test (CTS) scores
 - Poverty (FRPL)
 - Language barriers (Spanish)
 - Students with disabilities
- Use of residuals (actual minus predicted values) to identify BTO schools (positive residuals for FRPL, ELL, Hispanic, and Black students for 3 consecutive years)
- Factors associated with beating the odds:
 - ✓ Teacher education and experience
 - ✓ Teacher training (linked to standards); instructional coaches; mentoring
 - ✓ Standards-based curriculum (alignment)
 - ✓ Differentiated instruction; use of diagnostic assessment data
 - ✓ School-level control over personnel decisions
- Not related to class size; BTOs have lower per-pupil expenditures than do low performers.