

Features of the Value-Added Models and Indicators Used to Measure the Performance of Milwaukee Schools

- **Separate models.** The school performance indicators were derived from separate models of achievement growth from February 2001 to 2002 by subject (English language arts, math, and reading), and cohort (students in 4th grade through 10th grade in school year 2001-2002).
- **Mobile students included.** All students with pretest and posttest data were included in the analysis sample, including students who changed schools from the spring to the fall. A 'school change' indicator was included as a control variable to capture possible adverse effects of changing schools. This approach maximizes the number of students in the school accountability system.
- **Control variables.** The model included controls for prior student achievement, gender, race/ethnicity, income status (free lunch, reduced-price lunch), school change from spring to fall, and the schools attended in the spring and fall (two separate sets of fixed effects).
- **Measurement Error.** The estimation procedure adjusted for measurement error in prior achievement. Estimates of measurement error were obtained using a new statistical method that computes estimates that are accurate in finite samples.
- **Optimal weighting.** The school performance estimates from different grades were aggregated to form an average performance rating per grade. The average rating was computed using optimal weights (the reciprocal of the estimation error variance of the separate ratings). This approach made it possible to include schools that were missing ratings in some grades. The weighting procedure in effect gave greater weight to grade levels within schools that had high numbers of students.