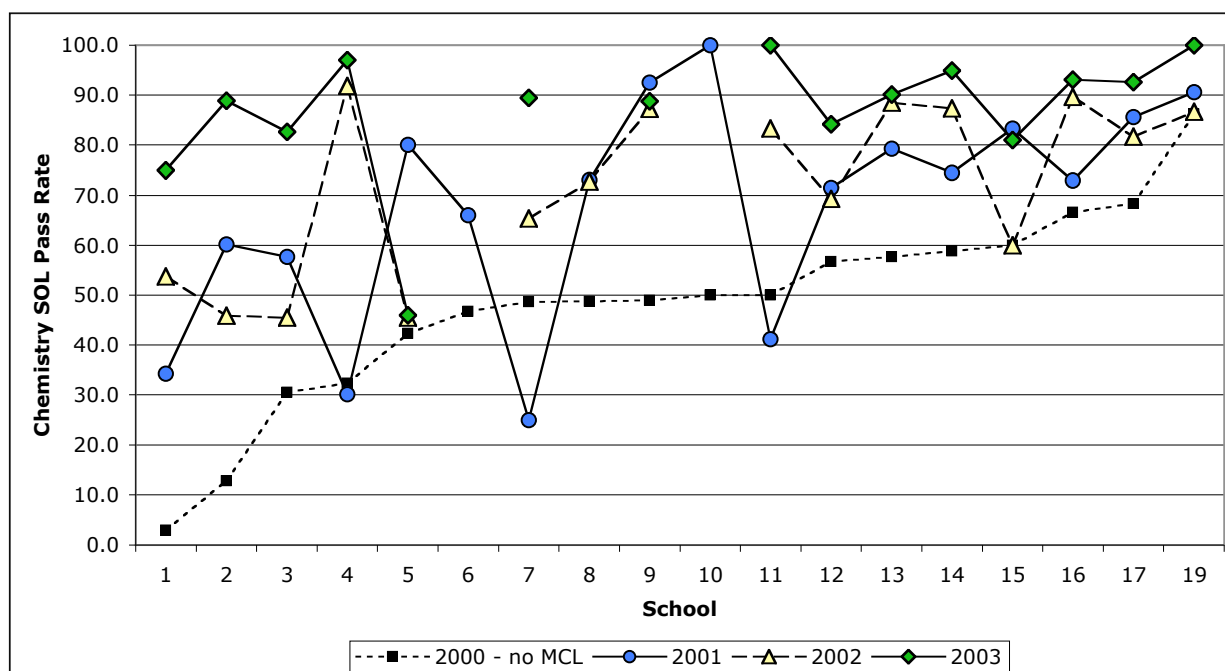


Impact of a Mobile Chemistry Laboratory on Student Learning

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The impact of the MCL on student learning can be seen in overall pass-rates on the Chemistry SOL Exam¹ for schools that participated in the Chemistry Outreach Program of Virginia Tech². Shown to the below is a plot of the pass-rates for the 19 schools that used the MCL over a 3-year period. The first year, 2000, represents the baseline data, as the MCL was not yet operational. During following three years, the MCL made scheduled visits to the schools (6 visits per year). On the average, participating schools realized a 20.0-point gain in the first year, an 8.1 point gain in the second year, and a 9.1 point gain in the third year (for a cumulative gain of 37.2 points). The state average gain was only 10.0 points for 2001, a 4.5 point gain in the second year, and a 9.1 point gain in the third year (for a cumulative average of 20.7 point).

It should be noted that the average of the 19 schools before the MCL began service was 15.6 points lower that the state average. In this past year (2003), the average of these 19 schools was 1.2 points above the state average. Additionally, the impact of the MCL on schools 1, 2 and 3 (in the above graph). Schools 1 and 2 are inner-city schools in Richmond that saw increases of 72.9 points and 76.1 points, respectively. These two schools have minority populations of 95% and higher. In a similar fashion, school 3 (located in central Virginia with a minority population higher than 80%) experienced a 52.1 point gain.



¹ Virginia Department of Education, <http://www.pen.k12.va.us/VDOE>

² <http://www.chemistry.vt.edu/mcl>