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Value-Added Accountability A Systems Solution to the School Accreditation Problem

Those committed to the purpose of the 1995 SOL program—rigorous *learning* standards leading to higher levels of academic achievement by Virginia's students—should endorse replacing a 1997 *accreditation* standard that threatens to undermine the fundamental reform it was intended to support. David Wheat, February 2000

Executive Summary

Virginia's Standards of Accreditation (SOA) require each public school to have at least 70 percent of its students passing all four Standards of Learning (SOL) tests by 2007 in order to retain accreditation. Statewide in 1999, only 6.5 percent of the schools met the SOA requirement, up from 2.2 percent in 1998.

The public has largely lost sight of the difference between the SOLs (*learning* standards for students) and the SOAs (*accreditation* standards for schools). Public support for both sets of standards has fallen while test scores have risen (Figure A).

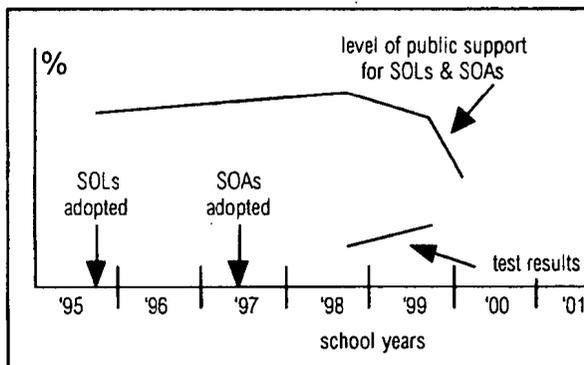


Figure A. Change in SOL test results and public support for the SOLs and SOAs. Public support trends estimated by the author.

The SOLs and the SOAs are separate issues, however, and preserving rigorous learning standards requires aggressive action to modify the accreditation goal.

The Board of Education is expected to vote on proposed SOA amendments in March, but the current proposals do not adequately address the problem associated with the 70 percent goal. Using a system dynamics approach to policy analysis, this study evaluates the accreditation policy and develops an alternative: Value-Added Accountability.

The SOA Problem. Dealing effectively with the accreditation policy problem requires identifying it explicitly, understanding how it developed, and perceiving its adverse effects on the standards of learning. All three requirements can be accomplished by contrasting the current SOL system with the one envisioned by those who developed the original program in 1995.

The original SOL system was supposed to produce annual improvements in student learning of content-rich knowledge and valuable skills. The hoped-for pattern of cause-and-effect can be summarized as follows:

- The SOLs would have a positive impact on classroom learning productivity as teachers gained experience teaching the standards and students gained capacity to learn more due to prior SOL instruction.
- Greater learning productivity would raise students' annual learning rates (i.e., the total knowledge and skills learned each year).

- Higher learning rates would be reflected in higher standardized test scores.

- Better test results would raise teacher and student motivation and boost learning productivity again, which would further enhance learning rates and test scores.

- Better test results would also raise public support for the learning standards.

- Greater support would minimize political pressures to change the standards or reduce their impact, and the SOLs would become a permanent feature in Virginia's education policy landscape.

That was how the system was *supposed* to work, and the pattern described above is diagrammed in a model of the SOL system in Figure B.

In 1997, however, the Standards of Accreditation were amended with the addition of the "70 percent goal" for schools. An unintended side-effect of that goal was a

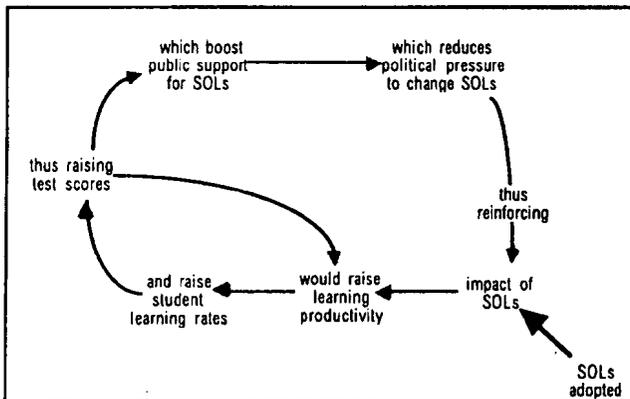


Figure B. The continuous cause-and-effect relationships intended when the SOLs were adopted in 1995.

change in the performance pattern of the SOL system; a change that has undermined rather than supported the learning standards.

The 70 percent goal raises parental expectations regarding acceptable test results each year. In effect, it creates an implicit local target for "expected test results."

Whenever expected test results exceed actual test results, a "Gap" exists.

When the Gap grows, it has a depressing effect on teacher and student motivation, thereby reducing learning productivity and causing learning rates to be lower than they otherwise would be.

A growing Gap between expected and actual test results also frustrates parents, which lowers public support and increases political pressure to dilute or rescind learning standards branded "unrealistic." That is the scenario illustrated in Figure C.

But is it the *learning* standards that are unrealistic, or is it the *accreditation* standard (i.e., the 70 percent goal) that is unrealistic? That distinction is too often overlooked in the public debate, and this study provides an answer to the question.

How realistic is the SOA goal? On the next page, Figure D helps answer that question by projecting the relationship between the statewide *student* pass rate (the percentage of Virginia's students passing all four tests) with the *school* pass rate (the percentage of schools having at least 70 percent of their students pass all four tests).

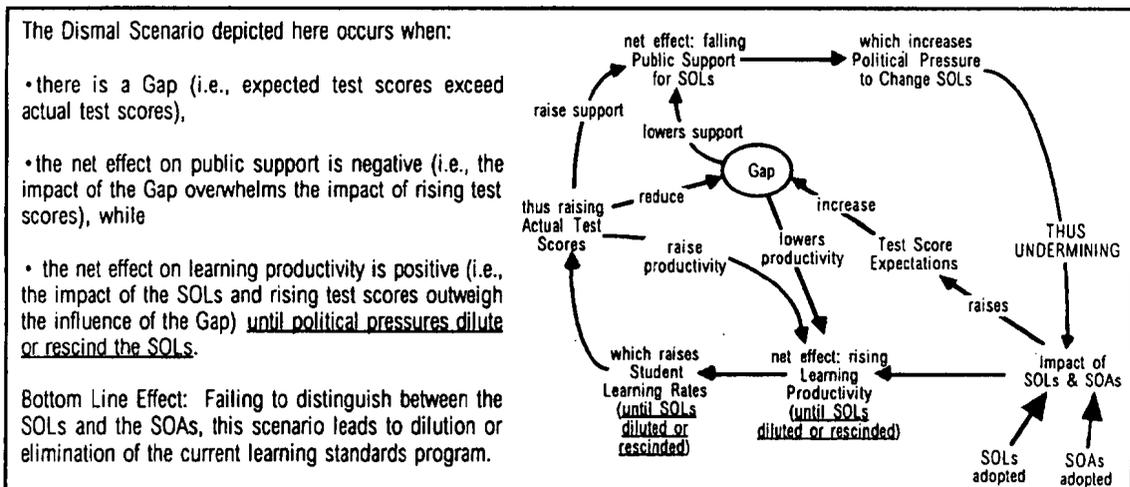


Figure C. The current SOL system showing unintended side-effects of the SOA 70 percent goal established in 1997.

The shape of the growth curve in Figure D reflects the fact that students most likely to pass all four tests are disproportionately located in a few high achievement schools. For example, 66 percent of the schools that achieved the SOA goal in both 1998 and 1999 were located in just three school divisions having 16 percent of Virginia's schools. A school in Fairfax, Henrico, or Chesterfield county was ten times more likely to achieve the 70 percent goal than a school located elsewhere.

The findings in this study suggest that about 27 and 35 percent of Virginia's *students* reached their goal of passing all four tests in 1998 and 1999, respectively. In those same years, however, just 2.2 and 6.5 percent of the *schools* across the Commonwealth reached their 70 percent goal. The results for both years are shown in Figure D.¹

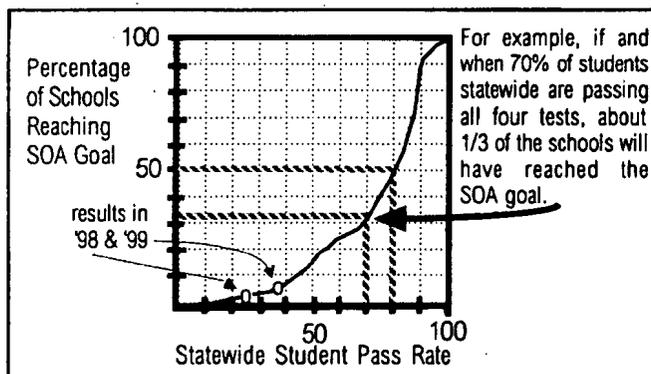


Figure D. The projected relationship between student pass rates and school pass rates. See Appendix A for details on derivation.

Figure D projects that only about one-third of the schools will reach the SOA goal even if 70 percent of the students in Virginia were to pass all four tests.

Unless the statewide student pass rate exceeded 80 percent, it is unlikely that even half of the schools in the state would reach the accreditation goal.

The SOA goal for each school--having 70 percent of its students pass all four tests--is not a realistic goal for the majority of Virginia's public schools.

¹ The irregular shape in the lower center part of the curve reflects the bulk of schools in Fairfax, Henrico, and Chesterfield achieving the SOA goal. See Appendix A for details on the computer simulation derivation of the Figure D growth curve.

This spells trouble for the Standards of Learning and for all students who benefit from more challenging, rigorous learning standards. In most communities, parental expectations for their school's test results will be higher than actual test results year after year. Therefore, the resulting Gap in Figure C will be large, and will grow faster than test scores rise. Learning productivity and public support will decline, and political pressures to lower or rescind the standards will increase.

School Accountability. A new accreditation policy is needed to promote accountability while supporting the learning standards, rather than undermining them as current SOA policy does. The strategy suggested by this study is to repair the current SOL system by eliminating the unrealistic 70 percent goal and its side effects. That is, systemic surgery is needed to remove the Gap in Figure C, so that productivity and support will be affected only by changes in *actual* test results, rather than by comparisons with unrealistic *expected* test results. Such changes would restore the originally intended SOL system (Figure B).

Also, a new accreditation policy should assess the quality of *instruction* in schools rather than the quality of *students* in schools. The current policy rewards (or punishes) schools on the basis of reaching (or failing to reach) an arbitrary finish line without regard to the starting line. Instructional quality may actually be superior in a school that makes substantial progress toward the SOA goal, compared to a school reaching it with large numbers of bright, self-motivated students requiring less innovative instructional methods to succeed. Which school deserves to lose accreditation? Neither.

There is something wrong with an accreditation policy that says 66 percent of the schools in Virginia currently deserving accreditation are located in just three counties having 16 percent of the state's schools. Any accreditation standard worthy of the label should not produce outcomes leading to such a distorted conclusion.

Accreditation should not depend on the students a school has. Rather, it should depend on what a school does with the students it has.

Consistent with this principle is an accreditation policy based on *value-added accountability*, which means holding schools responsible for performance improvements in each class cohort² that rises from one level to the next in a school division.

To illustrate, consider a cohort of students who are now in the 5th grade. They will take the 5th grade SOL tests this spring. The effectiveness of their elementary school should be evaluated by comparing this year's 5th grade pass rates in each category of tests (e.g., math) with the pass rates achieved by the same cohort of students when they took the 3rd grade SOL tests in 1998. Looking ahead to 2003, the middle school should be evaluated by comparing its 8th grade SOL pass rates that year with this year's 5th grade SOL pass rates for the same cohort.

Since high school SOL tests are end-of-course tests, not all students taking tests will be in the same grade. Therefore, to measure value-added at that level, each student's performance (pass or fail) should be compared to that student's 8th grade performance. The aggregate improvement rate for the school could then be calculated.

Schools that fail to add value consistently (according to Board of Education definition) should be sanctioned, and be subject to losing accreditation.³

RECOMMENDATION 1. Amend the SOAs so that schools will be accredited on the basis of improvement in class cohort pass rates on individual SOL tests.

² A cohort consists of students at the same grade level in a particular school. In localities with high student turnover, the policy would have to operate in a way that minimized distortions resulting from mere changes in the composition of cohorts.

³ If desired, a school could still be "graded" according to annual SOL test performance, but such a report card should be interpreted primarily as an indicator of the "academic ability" of the current student body and only secondarily as an instructional quality measure (similar to the way athletic teams are perceived each year). It should *not* be a criterion for accreditation.

Student Accountability. SOA policy also requires secondary students to pass end-of-course SOL tests to earn certain graduation credits, beginning with the Class of 2004. The timetable for holding students accountable should be amended to reflect the fact that the seniors in 2007 will be the first class with twelve years of SOL instruction.

RECOMMENDATION 2. Amend the SOAs so that end-of-course SOL test requirements apply initially to students in the graduating class of 2007, and to each class thereafter.

Conclusion. When policies are not self-executing, those responsible for implementation must be accountable. An accountability process should satisfy at least two criteria. First, it should provide an unambiguous means for measuring the effectiveness of the policy. Second, an effective accountability mechanism should provide incentives for full implementation of the policy without inadvertently undermining its purpose.

A value-added approach to accountability would restore the SOL principle of cumulative learning growth. Moreover, with the focus on strengthening class cohorts, the key "expectation" would be for test score improvements. There would be none of the adverse side effects resulting from comparisons with unrealistic targets. Teachers and students could tackle the SOLs in a spirit of discovery rather than an aura of anxiety.

David Wheat, Senior Fellow at the Jefferson Institute, is president of Wheat Resources Inc. (<http://www.wheatresources.com>), a business and education consulting firm established in 1981. His education consulting work is enhanced by several years of nationally recognized classroom instruction experience in Virginia. He served on the Governor's Commission on Champion Schools, where he participated in the upgrading of the history and government Standards of Learning for Virginia's students.

He received his Master's Degree in Public Policy from Harvard University's Kennedy School of Government in 1972, and then served at the White House as Staff Assistant to the President. Later, he was an adjunct instructor in public policy at the University of Houston, where he also served as Director of Federal Relations. He is currently an adjunct faculty member at Virginia Western Community College.