An Interim Approach to
Small School Grant Metrics proposed by Bill Mathis
16 VSA 4015

Obstacles – While a great deal of the requirements can be easily met, there is no sound way for the state board to validly determine which small schools should be eligible to receive a grant under the criteria set forth in 16 VSA 4015. The general assembly needs to resolve the inconsistencies and provide the necessary support.

The greater problem is in defining and counting "high quality educational opportunities." There are three primary reasons why this is so:

(1) Missing data – State government has not funded the school quality evaluation system required since 1997 by law (16 VSA 165). Thus, the state board does not have the necessary data. For example, the baseline data, "Number of high quality educational opportunities that meet or exceed the Educational Quality Standards," does not exist. Unfortunately, all that is available is superintendent assurances on the SU level. This is arguably the most important data collection in accounting for a $1.6 billion annual expenditure.

(2) Contradictory rewards and sanctions – Given the massive interaction of poverty and achievement, are we measuring "good" schools or poverty? Is legislative intent to reward the affluent or adequately fund the needy? On average, Vermont small schools have higher than average poverty rates – 20 of 27 listed small schools have greater poverty indices than the state average. The small schools categorical weight and the poverty weights are, in contemporary terms, underfunded. As the Picus report notes, less wealthy towns spend less. (Figures A2.01 -2.11). (Verstegen) If the proposed weighting study included in H.897 goes forward, we should have more appropriate and consistent interpretations.

(3) The Weighting and Measurement problem – By analogy, this is the combining of 23 pounds of basketballs with 400 yards of school nurses. The metrics are different in kind. Yet they have to be combined into a single yes/no decision. This would require the arbitrary weighting of different components (e.g. – how many is a "variety" and how is it combined with staff ratios?)

Interim Recommendation – The recommended solution is an interim one to be improved over the next year. Specifically, it is necessary to direct the H. 897 weighting study to determine proper and appropriate funding weights for small schools. In the meantime, the criteria for Year One would be

The school --

(1) meets the size criteria in 16 VSA 4015 (A).
(2) driving time is not to exceed 30 minutes portal-to portal.
(3) the district has engaged in a bona fide merger study and has submitted a legitimate report without necessarily requiring a specified outcome.
(4) school report on staffing data by category.
(5) report on operational efficiency by per pupil spending.
[(x) Scores – see below

The school would have to be able to answer "yes" to the first three criteria to receive a small schools grant for year one only.

_____

A Note about Standardized Test Scores and Determining School Excellence – In recent years, standardized test scores have been misused as the predominant measure of school quality.

Since the 1966 Coleman report determined that two-thirds of test score variation is determined by outside the school measures, using test scores as the primary mechanism of school evaluation has been found to be inappropriate. Followed by literally thousands of other studies, this is "established science."

A recent and highly regarded analysis of all the school districts in the nation by Stanford professor Sean Reardon shows a weighted correlation coefficient of 0.84 between socioeconomic status and achievement test scores for all United States school districts. This astonishingly high correlation tells us that 70.6% of test score variation is attributable to outside the school factors[i]. Conversely, less than 30% of test scores are attributable to schools. Thus, we would be wrong more times than we would be right.

To be sure, there are outliers that achieve well-beyond statistical expectations. That's normal variation but it does not indicate that all schools can magically succeed outside of other strategies.

Another approach is to adjust the school score for the differences in poverty. This is better than the alternatives but it runs into the problem of doing complex statistics with a very small number of students. It still does not account for the differences in standards by grade level and subject matter. Given the rudimentary approach, grant ineligible schools would be reviewed by a panel to ascertain if exceptional conditions apply.

Such an approach should also satisfy ESSA requirements.

Technical precis – See the attached scatter-plot for the relationship between national achievement and socioeconomic status. The regression line is the best fit. All those above the regression line and those passing standards would be eligible for the small schools grant. All those below the standard or below the error band (distance of the residual off the regression line) would then be reviewed to explore the reasons they were low. In practical terms, 20 or so schools would be identified for a closer look. These schools would be targeted for an accelerated EQS review.

---

[i] Specifically median family income, parents with BA or higher, poverty, SNAP eligibility, unemployment rate, and single parent family rate)