Research Brief:

The State of State Standards

Northwest Evaluation Association

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The federal No Child Left Behind act (NCLB) has required each state to set proficiency levels in mathematics and reading to categorize students as proficient or not. This legislation requires each state to set its own proficiency levels, but does not specify how these levels should be set, or what the definition of "proficiency" should be. This provides states with a great deal of autonomy, but raises questions concerning the consistency and comparability of proficiency results from different states.

This research brief discusses the findings from a set of Northwest Evaluation Association (NWEA) studies evaluating student proficiency standards that have been established by 14 states. This is not the only set of studies to examine the proficiency levels established by the states, but it goes beyond other studies by examining results from different states on a common measurement scale, so that comparisons may be made among states and within each state across grades or subject areas.

Methodology

In each state, 1000 students or more in each grade were included in the study. Each student in the sample took the mandated state test, and a second NWEA test within a month. The NWEA test was used to statistically draw the results from each state test onto a common measurement scale. The same procedural and statistical methodology was used in each state, which provides directly comparable results.

Outcome

While the detailed results vary from one study to the next, examination of the results from all studies leads us to three general conclusions:

- Proficiency standards among states differ enough to cause dramatic differences in the percentage of students categorized as proficient, even if the students have exactly the same skills
- Proficiency standards within individual states differ across grades enough that they may provide teachers with inconsistent proficiency indications for a large percentage of students
- Proficiency standards between subject areas within and across states differ enough that they may provide schools with inconsistent information when comparing proficiency of students in reading to proficiency of students in mathematics

Impact

States have set proficiency levels using different definitions of "proficiency". They have used different statistical and procedural processes for setting standards. They have set standards at vastly different times, and for somewhat different purposes. These standards are now being pressed into service as proficiency indicators under NCLB. It is not surprising that the proficiency levels differ, but the degree to which they differ, and the potential for misinterpretation is surprising.

As we move forward in evaluating the performance of our schools, we should be careful not to allow unintended differences in proficiency levels to cause students to suffer.

To give the findings of these studies context, it is useful to examine the impact of the differences in proficiency levels on the students. Selected findings include the following:

- The eighth grade math proficiency level varies from the 36th percentile in Montana, to the 89th percentile in Wyoming (based on NWEA percentiles). Therefore, in these similar, adjacent states, one could expect over twice as many students in Wyoming to be identified as being below proficient. This will occur even if the students in the two states have exactly the same achievement.
- The Arizona mathematics proficiency level is set at the 46th percentile in grade 3 and is set at the 75th percentile in grade 8. As a result, a large percentage of students will be identified as proficient in the third grade who will eventually be categorized as below proficient in the eighth grade. This will have a very direct impact on students who may need additional help to reach the grade 8 proficiency levels but don't receive it because the need is not identified by the grade 3 tests.
- The Washington fourth-grade proficiency level in reading is at the 53rd percentile, while the level in mathematics is at the 76th percentile. This will cause more students to be identified as proficient in reading than in mathematics, even if student performance is the same relative to their peers. This type of discrepancy could cause states and schools to reallocate funds to help student in mathematics without any actual need to do so. (Among the states, it was extremely common to observe mathematics proficiency levels set higher than reading proficiency levels.)

These examples are illustrative, rather than typical. Most states do not have proficiency levels that are as discrepant as in these examples, but almost all states have noticeable differences that will affect some of their students.

Discussion

The state proficiency levels are directly related to the computation of adequate yearly progress for the schools in a state. As a result, the differences in proficiency levels among states may cause large differences in the way school performance is viewed. Consider two schools with exactly the same student achievement and student growth. If these two schools are located across a state line in two different states, there is a very real chance that one school may be viewed as "at risk" while the other is not. While this study does not suggest remedies for this type of problem, it helps to identify the magnitude of the problem, and suggests a methodology that might be useful for other states that might be interested in establishing cross-state information.

The full report is available at **http://www.nwea.org/research/statestudy.html** on November 24, 2003.

The Northwest Evaluation Association is a nonprofit assessment organization providing research and consultation work to improve learning in K-12 education. In addition to district and state-level research projects, NWEA has developed a national, longitudinal growth research database that enables its researchers to study a host of questions across education settings. These include the effects of varying district characteristics and instructional programs on academic growth, and standards-related work. In addition to its research work, NWEA provides testing tools for its more than 1,100 member districts across the United States. NWEA was formally organized in 1977.

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