



## **REL Northwest Bridge Event Proceedings Interpreting Test Score Trends and Gaps**

August 12, 2010

Eugene, Oregon

The Bridge Event was convened at the Hilton Eugene and Conference Center in Eugene, Oregon, and was held in conjunction with the Focus on Assessment Institute sponsored by the Confederation of Oregon School Administrators (COSA). The presenter, Dr. Andrew Ho, gave the keynote speech that kicked off the institute. Ho also conducted two consecutive “workshop” sessions that conference participants could attend as one of several institute offerings. The participants included representatives from a variety of agencies and organizations, including: the state department of education, district administrators and staff, district superintendents, school administrators and staff, parents, policy organization staff, regional service center administrators, and college professors.

### **Expert Speaker’s Presentation**

Using the analogy of six blind men describing an elephant, Ho demonstrated how our perception of proficiency can be influenced by what part of the distribution of student data we emphasize. Just as one man might touch the elephant’s trunk and another its tail and arrive at wildly different ideas about the animal, educators examining the same data may come to different conclusions by selecting various cut scores or focal points within the distribution of scores.

The failure to see the “bigger picture” contained in the data has serious consequences for school accountability decisions and policymaking. For example, achievement gaps might be increasing at one point in the distribution (at the “basic,” “proficient,” or “advanced” cut score) but decreasing at another point; both could be “correct” views of the data, but neither by itself leads to a sound understanding of changes in achievement gaps. Instead, Ho argued that plotting averages of test scores or changes over time at certain percentiles will foster a more complete understanding of trends and gaps.

In his discussion of the problems with proficiency, Ho made several points: 1) the proficiency measure distorts most large-scale, test-driven inferences; 2) statistical summaries exist that are more likely to lead to inferences that are accurate over the entire distribution of students; 3) the score report is the cornerstone of a valid assessment system; and 4) “it’s better to be complicated than wrong.” Ho illustrated his comments with PowerPoint graphics, using normal curves to demonstrate that when using proficiency rate metrics to identify achievement trends over time, a proficiency cut point that is near the middle of the distribution will result in larger changes in

proficiency rates than a cut point that is in either tail of the distribution, given the same actual change in the overall distribution.

Building on this framework, Ho demonstrated that depending on the location of cut points, given equal progress among two groups of students, changes measured by proficiency rates will usually result in what may appear to be gains or declines in an achievement gap. However, they are actually just uniform shifts in the distribution for both groups.

Graphics of actual school data also illustrated this problem of gap trends. Ho showed how gap closures that appear to occur between high- and low-performing groups could be attributable to a low cut score, while the reverse could be shown with a high cut score. In fact, the gap as measured by distribution-wide methods stayed the same.

Participants discussed how the focus on proficiency rates could lead to greater incentives to help students who are just below the proficiency cut point, and to give relatively less attention to students who are above or far below this cut score. Such a situation may leave the neediest students behind and fail to meet the continuing needs of students who are already “proficient.” As an alternative to policies focused on proficiency rate measures, Ho suggested using the average student score, which considers the whole distribution and therefore spreads incentives for schools over the whole range of students.