Differences of Reported Scores on ISAT vs. PSAE

Introduction
Frequently, there are questions about why the percent of high school students meeting or exceeding state standards decreases from the percentage of students who meet or exceed at the K-8 level. An immediate inference might be that once students enter high school, they are not learning or maintaining their academic progress at the same level as the students did when they were in elementary and middle school.

There is an explanation for this decrease. ISAT is a criterion-referenced test that is aligned with state academic standards and thus intended primarily to measure students’ performance with respect to those standards rather than to the performance of their peers nationally. Currently, the success rate on ISAT is 80% state-wide. Even though the ISAT is a criterion referenced test, we know that when a student “meets” standards on ISAT, this equates to the student scoring at the 40th percentile on a nationally normed test. ISAT results reflect a minimum of 60% of students above the mean.

At the high school level, the PSAE is administered. The PSAE includes the ACT, WorkKeys, and an ISBE science-content assessment. This is a norm-referenced test. The “meets” standard for PSAE equates to students scoring at the 50th percentile. The mean is established by comparing students’ achievement to the achievement, nationally, of students for the purposes of reporting performance. Norm-referenced results will always reflect half of the students above the mean and half of the students below the mean.

Because of these differences— one test measures against criteria and the other is a norm referenced assessment, the percentage of students meeting and exceeding is different.

Preparing students for post-secondary success through continuous learning.
Students’ eighth grade EXPLORE composite scores say a lot about the likelihood that they will reach the ACT benchmarks or better on the PSAE ACT. Virtually no students with very low scores (15 and below) on EXPLORE make it to 21 on the PSAE ACT. About 30% of students who score 16 on the eighth grade EXPLORE reached 21 on the PSAE ACT. An EXPLORE score of 17 is the “tipping point,” where students have greater than a 50 percent chance of reaching benchmarks on the PSAE ACT. Virtually all students with high EXPLORE scores (19 and above) make it to benchmarks or above on the PSAE ACT.
The graph examines the relationship between eighth grade ISAT math scale scores and PSAE ACT composite scores in eleventh grade for 40,000+ Illinois students. (The ISAT Math score was chosen because Math is a slightly stronger predictor of the ACT composite than ISAT Reading scores, but the relationship holds equally well with Reading scores.)

The ISAT is scored on a continuous scale ranging from 200 to 320 for eighth grade. Students who score low on their eighth grade ISAT have little probability of reaching an ACT benchmark. As ISAT scores go up, so does the probability of obtaining a composite score of 21 on the ACT. An ISAT Math score of about 265 results in a less than 20% chance of reaching a 21 on the ACT three years later. An ISAT score of 290 corresponds to about a 50% probability, and an ISAT score around 300 corresponds to about a 75% chance.

Most people are unfamiliar with the ISAT scale scores and are used to seeing ISAT results expressed in terms of “achievement levels.” Using well known standard setting procedures, the Illinois State Board of Education has identified cut points on the ISAT continuous score scale to differentiate one performance level from another (Koretz, 2008). The lowest performance level is called “academic warning,” then “below standards,” then “meets standards,” and finally “exceeds standards.” What is called “meets standards” in Illinois does not allow an eighth grade student to reach the ACT benchmark standard for post-academic success.

As shown in the graph, students who just meet the state standard (set at 246 or higher) have virtually no chance of reaching the benchmarks on the PSAE ACT. A student with a scale score of 250 has about a 5% chance on the PSAE ACT three years later. Only with scores above 290 do students have a 50% probability or better of scoring to standards on the PSAE ACT. For those students who just cross into the Exceeds standards category with a score of 288, the probability of reaching the benchmarks is about 50%.
Although students may indeed be meeting the performance standards in elementary and middle school in Illinois, there is a large discrepancy between those performance levels by eighth grade and scoring well on the PSAE ACT three years later. The eighth grade performance standards look back at the minimum work that students should be able to do according to the state academic learning standards. But the evidence here suggests that the eighth grade standards are not well aligned with the work that students will need to be able to do in order to succeed at the secondary and post-secondary levels. Elementary and middle school students and their families may be receiving the wrong message about the adequacy of academic preparation, especially for the vast majority of CUSD 95 students who have their eyes on post-secondary education in the future. Meeting state standards on criterion-referenced ISAT is not equivalent to the norm-measured PSAE ACT. It takes a score well into the Exceeds category of Illinois standards on the eighth grade ISAT to have an adequate opportunity at scoring well on the PSAE ACT in eleventh grade.

It seems necessary to reflect on the graph, again, showing the relationship between eighth grade ISAT Math scores and the likelihood of reaching a composite 21 or better on the PSAE ACT three years later. The strongest academic cultures and the best grades aren’t going to be sufficient for eighth grade students who are “below,” “warning,” or “meet” standards; they are simply lacking the academic skills to engage in the instruction needed for post-secondary success.

Simply raising standards for students in CUSD 95 or state-wide is not a solution, either. Our expectations for strong performance by all students need to start early in the elementary grades. We should continue to use our technical capacities to develop systems that identify students who need academic support and a nudge throughout the grade levels. This is not for predicting who will fail but for pointing out students who can succeed, just like many of their peers, if they receive the help and support that good schools and great teachers can provide.

References


For more research on the contrasting results, please review
http://evanstonroundtable.com/ftp/Zavitkovsky%20Report.pdf or
http://ccsr.uchicago.edu/news_docs/6582path20pressrelease.pdf or
http://www.degreeverify.org/highschools/pdfs/CCSR_CPSPostsecondaryStudy.pdf