

# Determining TAP Level Based on School-wide Student Achievement

## School-wide Student Achievement

School-wide student achievement is measured by the value-added metric.

## Value-Added Metric

Each school receives a value-added score in Mathematics and a value-added score in Reading.

For more information on the value-added metric, please visit the REA website at

<http://research.cps.k12.il.us/cps/accountweb/Research/ValueAdded>.

## Computing TAP Level

The TAP level is based on a composite value-added score and is determined by the number of standard deviations this score is from the district average.

- Step 1 – Composite score requires that math and reading scores are equally weighted  
To ensure that math and reading scores are weighted equally, both scores are converted to a scale that measures the number of standard deviations each score is from average. This calculation takes into consideration the distribution of value-added scores district-wide.

| (all results weighted by N)        | Mathematics | Reading |
|------------------------------------|-------------|---------|
| <b>District Average</b>            | 0.0         | 0.0     |
| <b>District Standard Deviation</b> | 2.5         | 2.0     |

Note: N is the number of students in each school used to calculate the value-added scores

$$\text{Number of Standard Deviations from Average} = \frac{(\text{ValueAddedScore} - \text{Average})}{\text{Standard Deviation}}$$

- Step 2 – Calculate composite score  
The composite value-added is a weighted average of the re-scaled reading and math value-added scores. Scores are weighted by 'N', so that it appropriately reflects the number of students taking each test.

$$\text{Composite Value - Added} = \frac{(\text{RescaledMathScore} * \text{Math}'N' + \text{RescaledReadingScore} * \text{Reading}'N')}{(\text{Math}'N' + \text{Reading}'N')}$$

- Step 3 – Calculate number of standard deviations composite score is from average  
The district average composite value-added score is 0.0. The district composite standard deviation is 0.9. To measure the number of standard deviations each score is from average, the same formula as above is used. Plugging in the composite average and standard deviation, the formula would be:

$$\text{Number of Standard Deviations from Average} = \frac{(\text{CompositeScore} - 0.0)}{0.9}$$

- Step 4 - Determine TAP level  
TAP levels are determined by the number of standard deviations from average. The criteria are below.

| Criteria  | TAP Level |
|---|-----------|
| Two standard deviations above average                 | Level 5   |
| One standard deviation above average                  | Level 4   |
| Neither one standard deviation above or below average | Level 3   |
| One standard deviation below average                  | Level 2   |
| Two standard deviations below average                 | Level 1   |

Note: Averages and Standard Deviations reflect 2007-08 scores

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## EXAMPLE

| School A  |   |                     |
|---|---|---------------------|
|   | Reading   | Mathematics         |
| Value-Added Score   | 1.8   | 0.7                 |
| Conversion Calculation  | $(1.8 - 0.0) / 2.0$                                   | $(0.7 - 0.0) / 2.5$ |
| Rescaled Score (Standard Deviations from Average)                   | 0.9   | 0.3                 |
| Number of Students  | 329   | 331                 |
|   | Composite   |                     |
| Composite Calculation   | $[(0.9 * 329) + (0.3 * 331)] / (329 + 331)$           |                     |
| Composite Score   | 0.6   |                     |
| Calculation to Determine Number of Standard Deviations from Average | $(0.6 - 0.0) / 0.9$                                   |                     |
| Standard Deviations from Average                                    | 0.67  |                     |
| TAP Criteria  | Neither one standard deviation above or below average |                     |
| TAP Level   | Level 3   |                     |

Note: For presentation purposes, values are rounded; actual calculation uses all digits so as to maximize accuracy.