

Texas Honor Roll Methodology

Educational Results Partnership (ERP) uses a data-driven approach called multi-level latent class modeling to identify Texas Honor Roll schools. This statistical technique assumes that:

- a. Hidden groups (latent classes) of schools exist among a larger set of schools
- b. A set of observable criteria that represent various aspects of school performance can distinguish these hidden groups from one another
- c. Schools within the same district may be more similar to one another than typically assumed because they are affected by similar district-wide factors
- d. No single criteria are presumably better than another in distinguishing high performing schools; the pattern of results will determine which are the most distinguishing criteria

Before the model is run, schools are split into various grade categories (elementary, junior high, senior high, and other) based on their reported grade categories. Schools in these grade categories were further split into two socioeconomic levels:

- STAR Schools: schools with greater than, or equal to, 33 percent of students designated as socioeconomically disadvantaged
- Scholar Schools: schools with fewer than 33 percent of students designated as socioeconomically disadvantaged

To identify Honor Roll schools, several different models were run for each grade category and socioeconomic level. These models first estimate the characteristics (i.e., the average spread of scores on each criterion) for each hidden group. Then the model assesses the degree to which each school was similar to the characteristics of each hidden group (latent class). Finally, the model classifies schools into a specific group according to their highest probability of membership. The group (latent class) with the highest scores on most of the criteria are the Honor Roll group.

The number of Honor Roll schools in each category was not predetermined; the results of the model determined the number. Sixteen measures were derived for all schools using standardized test data:

- Achievement in Math, Reading, Writing, and Science
 - The percentage of tested students that met the advanced standard for their respective grade levels in the 2018-2019 State of Texas Assessments of Academic Readiness (STAAR)
 - Senior high schools' students did not assess students in the subject of writing
- Improvement in Math, Reading, Writing, and Science
 - In each school, the difference between the percentage of tested students that met the advanced standards in the respective grade levels and subject areas for the last two years. Positive scores indicate higher achievement rates in 2018-2019 than 2017-2018

- Equity in Socioeconomic Status in Math, Reading, Writing, and Science
 - We defined equity in socioeconomic status as the difference in achievement rates between students who were socioeconomically disadvantaged and those who were not within the same school
 - Schools did not report achievement rates for socioeconomic groups with less than five tested students in a subject area
 - This equity score provides a general indicator about the degree to which socioeconomically disadvantaged students were outperforming (more positive score), underperforming (more negative score), or similarly to (score closer to zero) peers in the same school who were not socioeconomically disadvantaged
 - Schools that did not report achievement rate for either group did not receive an equity score for the subject
- Equity among Ethnic Groups in Math, Reading, Writing, and Science
 - We defined equity among ethnic groups as the difference between achievement rates of ethnic minority students in comparison to their White American peers in the same school
 - For each school, we examined the achievement rates from five ethnic minority subgroups: African Americans, American Indian/Alaskan Natives, Asians, Hispanics, and Two or More Races. Schools did not report achievement rates for ethnic minority groups with less than five tested students in a subject area
 - Each school's equity score in their respective subjects was calculated in three steps:
 - For each ethnic minority group, derive the number of students who met the advanced standard from the number of students tested and the achievement rate
 - Sum up the number of students in each ethnic minority group that had more than five tested students in the subject
 - Divide the sum of ethnic minority students who met the advanced standard by the sum of tested ethnic minority students
 - The equity score provides a general indicator about the degree to which ethnic minority students were outperforming (more positive score), underperforming (more negative score), or similarly to (score closer to zero) their White American peers
 - Schools that did not report achievement rate for any of the significant ethnic minority or White American student groups did not receive an equity score for the subject

The models for senior high schools included four additional measures on postsecondary readiness:

- Percentage of 2019 graduates who earned college prep course credit (3 hours math or English, or 9 hours in any subject)
- Percentage of 2019 graduates who achieved college, career, or military readiness
- Percentage of 2019 graduates who completed advanced/dual credit coursework
- Percentage of 2019 graduates who had a record of enrollment in higher education

Additional Notes:

- The source of the data is from the Texas Education Agency's Texas Academic Performance Reports (TAPR)
- These models accounted for the relationships in performance between schools in the same district as well as the relationship between achievement and improvement within each school
- Missing data did not automatically disqualify a school from Honor Roll consideration. Based on the pattern of relationships among available data from all schools in the same grade segment and socioeconomic level, the models estimated each school's likely group membership using their available data. However, schools must be at or above average in each of their tested subjects within their respective school categories as well as on balance among all of their available measures in order to receive recognition
- We designate Texas districts with greater than 50% honor roll schools as Texas Honor Roll districts