

Appendix H – Campus Comparison Groups

Campus comparison groups are used to determine distinction designations in the following areas:

- Academic Achievement in English Language Arts/Reading
- Academic Achievement in Mathematics
- Academic Achievement in Science
- Academic Achievement in Social Studies
- Top 25 Percent: Student Progress
- Top 25 Percent: Closing Performance Gaps
- Postsecondary Readiness

Schools may also find campus comparison groups useful for comparing their own performance to peer campuses.

Each campus is assigned to a unique comparison group comprised of Texas schools that are most similar to it. To determine the campus comparison group, each campus is identified by school type (See the School Types chart in “Chapter 2 – Ratings Criteria and Index Targets” for more information.) then grouped with 40 other campuses from anywhere in Texas that are most similar in grade levels served, size, the percentage of students who are economically disadvantaged, mobility rate, the percentage of English language learners, the percentage of students served by special education, and the percentage of students enrolled in an early college high school program. Each campus has only one unique campus comparison group. There is no limit to the number of comparison groups to which a school may be a member. It is possible for a school to be a member of no comparison group other than its own or a member of a number of comparison groups.

Campus Comparison Groups: Demographic Characteristics

Demographic characteristics used to construct campus comparison groups include those defined in state statute and others that are statistically relevant to performance:

- Campus type – elementary, middle, high school, or combined elementary/secondary (based on fall Public Education Information Management System [PEIMS] enrollment)
- Grade levels served – lowest grade level and highest grade level enrollment (based on fall PEIMS enrollment)
- Campus size – total student enrollment (based on fall PEIMS enrollment)
- Percentage of students identified as economically disadvantaged (based on fall PEIMS enrollment)
- Percentage of students identified as English language learners (ELLs) (based on fall PEIMS enrollment counts of limited English proficient [LEP] students)
- Percentage of students identified as mobile (based on PEIMS prior year attendance)
- Percentage of students served by special education (based on fall PEIMS enrollment)
- Percentage of students enrolled in an early college high school program (based on fall PEIMS enrollment)

Methodology

For each campus, a unique comparison group is created by applying the following methodology:

1. Group all eligible campuses (see below) by campus type: elementary, middle, high, or elementary/secondary.
2. Determine the linear values for each of the demographic characteristics used to construct the campus comparison group.
3. Compute the linear distance (the square root of the sum of the squared differences of the campus demographic characteristics) from the target campus.
4. Select the 40 campuses with the smallest distance value from the target campus.

Eligible Campuses

Campus comparison groups are created for all campuses except for the following:

- Campuses evaluated under alternative education accountability provisions are not eligible for distinction designations and, therefore, are not assigned a campus comparison group.
- Campuses that are not rated are ineligible for distinction designations and, therefore, are not assigned a campus comparison group. There are a number of reasons a campus is not rated, such as the campus has insufficient data or it is a Juvenile Justice Alternative Education Program, Disciplinary Alternative Education Program, or a residential treatment facility.
- District-level distinction designations are based on a different methodology; therefore, districts are not grouped.

Uniform Linear Values

Campus comparison groups are determined by a distance formula that requires a consistent range of linear (or continuous) values for each demographic characteristic. The percentage of economically disadvantaged students, percentage of ELLs, percentage of students who are mobile, percentage of students served by special education, and percentage of students enrolled in an early college high school program are considered linear values within the consistent range of zero to 100. The remaining demographic values are transformed into linear values within the same range in the following ways:

- Campus size – a value is created based on the “target” campus size as a percentage of the maximum statewide campus size by campus type.
- Lowest or highest grade span – a value is created based on the “target” campus’s grade span as a percentage of a constant value. This calculation creates uniform grade percentages for each grade level by shifting the range of grade levels from 3 to 12 to values of 0 to 9 and dividing the values into 9 increments:
 - For grade levels 3 and above:

$$\text{High value} = 100 * (\text{highest grade level} - 3) / 9$$

$$\text{Low value} = 100 * (\text{lowest grade level} - 3) / 9$$
 - For grade levels EE, PK, KG, 01, 02 (PEIMS-reported values), the high and low percentage values are set to 0.

In cases where the campus has a missing mobility value, the district’s average mobility is used as a proxy. This will happen for schools in their first year of operation, since mobility is based on prior-year data.

Other Information

- Campus comparison groups are recreated each year to account for potential changes in demographics that may occur.
- The number of times a school appears as a member of other groups will vary.

Comparison Group Methodology for Computing the Linear Distance Among Campuses

Distance =

$$\sqrt{(\text{size}_A - \text{size}_B)^2 + (\text{econ}_A - \text{econ}_B)^2 + (\text{ell}_A - \text{ell}_B)^2 + (\text{mobile}_A - \text{mobile}_B)^2 + (\text{sped}_A - \text{sped}_B)^2 + (\text{echs}_A - \text{echs}_B)^2 + (\text{low}_A - \text{low}_B)^2 + (\text{high}_A - \text{high}_B)^2}$$

Where:

- size_A = 100 * (campus size for campus A / maximum campus size statewide by campus type*)
- size_B = 100 * (campus size for campus B / maximum campus size statewide by campus type*)
- econ_A = percentage of fall PEIMS enrollment that is economically disadvantaged for campus A
- econ_B = percentage of fall PEIMS enrollment that is economically disadvantaged for campus B
- ell_A = percentage of fall PEIMS enrollment that is identified as English language learners for campus A
- ell_B = percentage of fall PEIMS enrollment that is identified as English language learners for campus B
- mobile_A = percentage of students who are mobile based on prior year attendance for campus A
- mobile_B = percentage of students who are mobile based on prior year attendance for campus B
- sped_A = percentage of students who are served by special education for campus A
- sped_B = percentage of students who are served by special education for campus B
- echs_A = percentage of students enrolled in an early college high school program for campus A
- echs_B = percentage of students enrolled in an early college high school program for campus B
- low_A = 0, if campus A lowest grade is EE, PK, KG, 01, or 02; otherwise, 100 * (campus A lowest grade - 3) / 9
- low_B = 0, if campus B lowest grade is EE, PK, KG, 01, or 02; otherwise, 100 * (campus B lowest grade - 3) / 9
- high_A = 0, if campus A highest grade is EE, PK, KG, 01, or 02; otherwise, 100 * (campus A highest grade - 3) / 9
- high_B = 0, if campus B highest grade is EE, PK, KG, 01, or 02; otherwise, 100 * (campus B highest grade - 3) / 9

*** Maximum campus sizes reported for 2017:**

Elementary= 3,419 Middle school= 2,232 High school= 4,839 Elementary/Secondary = 5,931

Elementary School Example

For campuses under consideration, the linear distance (the square root of the sum of the squared differences of the campus characteristics) from the target campus is computed.

	Campus Size (Total student enrollment)	% Eco Dis	% ELL	% Mobile	% SpEd	% ECHS	Low Grade	High Grade
(Target) Campus A	237	42.2	0.4	22.0	9.3	0	PK	05
Campus B	543	42.6	4.2	15.1	8.1	0	EE	05

Distance =

$$\sqrt{\left[\left(\frac{100 \times (237/3419)}{100} - \frac{100 \times (543/3419)}{100}\right)^2 + (42.2 - 42.6)^2 + (0.4 - 4.2)^2 + (22.0 - 15.1)^2 + (9.3 - 8.1)^2 + (0 - 0)^2 + (0 - 0)^2 + \left(\frac{(2/9) \times 100}{100} - \frac{(2/9) \times 100}{100}\right)^2\right]}$$

$$\sqrt{[(-9)^2 + (-0.4)^2 + (-3.8)^2 + (6.9)^2 + (1.2)^2 + (0)^2 + (0)^2 + (0)^2]}$$

$$= \sqrt{144.65}$$

$$= 12$$