Appendix H – Campus Comparison Groups

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

- Academic Achievement in Reading/English Language Arts
- 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 gauging their performance relative to their peer campuses.

Each campus is assigned to a unique comparison group that consists of schools from anywhere in the state that closely match the "target" school by school type. Schools that do not match a typical grade span are assigned to a comparison group that most closely matches its school type. Schools are then divided into groups of 40 schools that are comparable in size and demographic characteristics.

Campus Comparison Groups: Demographic Characteristics
Demographic characteristics used to construct campus comparison groups include those defined in state statute and others found to be 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 span – lowest grade level and highest grade level enrollment (based on fall PEIMS enrollment)
- Campus size – total student enrollment (based on fall PEIMS enrollment)
- Percent of students economically disadvantaged (based on fall PEIMS enrollment)
- Percent of students identified as English language learners (ELLs) (based on fall PEIMS enrollment counts of limited English proficient (LEP) students)
- Percent of students identified as mobile (based on PEIMS prior year attendance)

Methodology
For each campus (the "target" campus), a unique comparison group is created by applying the following methodology:

- Group all eligible campuses (see below) by campus type: elementary, middle, high school, or elementary/secondary
- Determine the linear values for each of the demographic characteristics used to construct the campus comparison group
- Compute the linear distance (the square root of the sum of the squared differences of the campus demographic characteristics) from the target campus
- 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 insufficient data or the campus is a Juvenile Justice Alternative Education Program (JJAEP), Disciplinary Alternative Education Program (DAEP), or a residential treatment facility (RTF).
- 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 percent economically disadvantaged, percent ELL, and percent of students who are mobile 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 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:

    High value = 100 * (highest grade level - 3) / 9

    Low value = 100 * (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.
- Note on the percent of students who are mobile:

  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 changes in demographics that may occur.
- With this methodology, 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 =

$$\sqrt{(size_A - size_B)^2 + (econ_A - econ_B)^2 + (ell_A - ell_B)^2 + (mobile_A - mobile_B)^2 + (low_A - low_B)^2 + (high_A - high_B)^2}$$

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*)

$econ_A$ = percent of fall PEIMS enrollment that is economically disadvantaged for campus A

$econ_B$ = percent of fall PEIMS enrollment that is economically disadvantaged for campus B

ell_A = percent of fall PEIMS enrollment that is identified as English language learners for campus A

ell_B = percent of fall PEIMS enrollment that is identified as English language learners for campus B

$mobile_A$ = percent of students who are mobile based on prior year attendance for campus A

$mobile_B$ = percent of students who are mobile based on prior year attendance 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

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* Maximum campus sizes reported for 2015:
Elementary= 1,840   Middle school= 2,228   High school= 4,774   Elementary/Secondary = 6,477

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)	% Economically Disadvantaged	% ELL	% Mobile	Low Grade	High Grade
(Target) Campus A	237	42.2	0.4	22.0	PK	05
Campus B	406	42.6	4.2	15.1	EE	05

Distance =

$$\sqrt{((100 \times (237/1840)) - (100 \times (406/1840)))^2 + (42.2 - 42.6)^2 + (0.4 - 4.2)^2 + (22.0 - 15.1)^2 + (0-0)^2 + (((2/9) \times 100) - ((2/9) \times 100))^2}$$

$$= \sqrt{(-9.2)^2 + (-0.4)^2 + (-3.8)^2 + (6.9)^2 + (0)^2 + (0)^2} \quad = \sqrt{146.85}$$

$$= 12.1$$

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