SIMILAR DISTRICTS METHOD — TECHNICAL NOTES 2019
(revised September 2019)

Similar Districts is ODE's framework to provide the field with useful comparison sets of districts that are similar in meaningful ways. Key enrollment and community attributes of any given district are used to generate a custom set of up to 20 highly comparable districts. ODE publishes many data points based on Similar District, and administrators find it a convenient construct for local benchmarking. Since the data for Similar Districts are refreshed annually, most districts have a slightly different comparison set each year.

Occasionally, the department revisits the selection of measures used in the framework. **The 2019 Similar Districts calculation represents a simplified method entailing fewer input measures (7 versus 11) with each serving as a standalone dimension regarding a district's size, setting or risk attributes.**

1) Student Enrollment—Ohio Dept. of Education, School Year 2017-2018
2) Percent Population in Urbanized Territory—U.S. Census Bureau, Decennial 2010
3) Population Density—U.S. Census Bureau, American Community Survey (2013-)2017
4) Median Adjusted Gross Income on Tax Returns—Ohio Dept. of Taxation, 2017
5) Percent Economically Disadvantaged Enrollment—Ohio Dept. of Education, School Year 2017-2018
6) Percent Adults with at least a Bachelor's Degree—U.S. Census Bureau, ACS (2013-)2017
7) Percent Minority Racial/Ethnic Enrollment—Ohio Dept. of Education, School Year 2017-2018

The percent population residing in urbanized territory—perhaps the most direct measure of "urbanicity"—is the only new input introduced in 2019, with adjustments to two other input measures:

- Land area (from Census TIGER file)—rather than overall area—serves as the denominator for population density; and
- All of the racial and ethnic categories (besides White, non-Hispanic) are included in the numerator of percent minority enrollment.

Previous input measures that are excluded in 2019 were deemed to provide insufficient additive benefit (e.g., percent population in administrative/professional occupations) or to imply comparability where more complex realities exist (e.g., non-agricultural/non-residential tax capacity). As in the past, the 2019 method does not include fiscal or policy-related variables; rather, these might be explored as factors contributing to different outcomes among similar districts.

Akin to the previous method, a district's comparison set is made up of its statistical "nearest neighbors," with distance calculated as the square root of the combined squared differences of all input dimensions.[1] For a small number of districts with exceptionally unique profiles, there are fewer than 20 comparable districts (based on a cutoff of 2.5 in the distance metric).

For questions or comments, please contact:
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[1] District-to-district comparisons—Where letters A to G represent the 7 dimensions and i represents the district of interest and j represents the comparison district, the distance between two districts is calculated as the following:
Distance = $[(A_i-A_j)^2 + (B_i-B_j)^2 + (C_i-C_j)^2 + (D_i-D_j)^2 + (E_i-E_j)^2 + (F_i-F_j)^2 + (G_i-G_j)^2]^{\frac{1}{2}}$

Prior to the calculation, dimensions were normalized, with means equal to zero and standard deviations of 1. Prior to normalization, each measure was logged (Log 10) unless skewness of the statewide distribution was less than 2.