Forming K-12 Peer School Groups for Benchmarking: A Dynamic Data Visualization Dashboard for Three Southeastern States Served by the Region 6 Comprehensive Support Center

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The dashboard is designed for use by education stakeholders to better understand how their schools fit in the larger educational context of the southeastern United States. To overcome the potential drawback to fixed, non-relevant, or opaque criteria for matching, the dashboard offers users the ability to adjust the criteria for comparison to factors most salient for their context to inform school improvement.

Why is Peer Benchmarking a Useful Strategy for Partnerships between Practitioners and Researchers?

- Understanding progress and adapting successful strategies from one context to another presents a challenge for stakeholders translating data and research into practice.
- Educators are asked to make decisions based on state accountability data, but the data often appear devoid of context needed to make fully-informed decisions.
- It is also not necessarily appropriate to apply causal impact findings to schools with significantly different populations and contexts (Orr et al., 2019).
- Benchmarking with peer groups can help connect researchers with practitioners in two ways: 1) contextualizing performance data to the environments in which the schools operate and 2) determining a set of schools for peer networking or for exploring the adoption of practices that have been successful in similar environments.

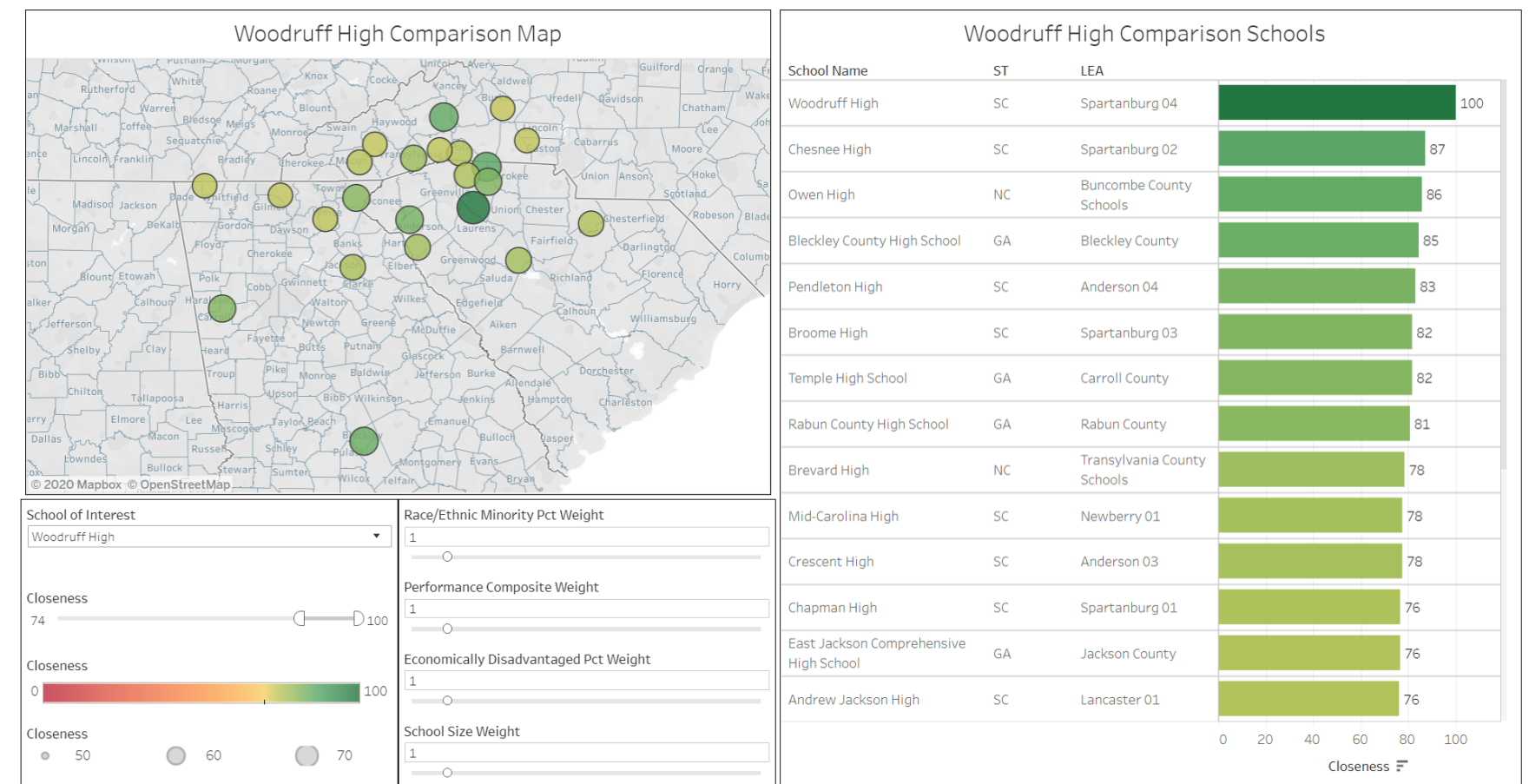## What Issues Can Peer Benchmarking Help School/District Leaders Address?

- Contextualize school performance data using factors outside the school's control, such as poverty and rurality.
- Support school improvement, with applications ranging from self-assessment to strategic planning (Dew & Nearing, 2004).
- Apply an external and internal lens, identifying the best performers in a peer group while applying a critical lens to internal practices (Chow, 2012), especially through a partnership between practitioners and researchers.
- Inform formation of communities of practice among school/district leaders with similar challenges.

What Data are Used in the System?

The peer comparison dashboard is built completely from publicly available data. The base file draws from the 2016-17 School Universe Survey in the Common Core of Data (CCD) published by NCES. CCD data sets combine with the base file to determine school characteristics including a) economic disadvantage, b) race/ethnicity, c) grade levels, d) school size, e) geographic location and urbanity/rurality, and f) special status (such as Title I or charter schools). The system also draws from data published by state agencies in North Carolina, South Carolina, and Georgia to determine a percentile of overall academic achievement which allows for comparison across states with different accountability measures.

How do Users Interact with the System?

The dashboard allows users to easily identify peer schools based on characteristics that are most relevant to the challenges they are trying to address by dynamically adjusting groups of schools based on user-provided weights. Using a back-end design with code in Python and R and display in Tableau, the dashboard calculates a "closeness" metric between a school of interest and all other schools in the region that serve the same grade levels of students (e.g., elementary, middle, and high schools). Sliders allow users to assign weights for various characteristics to signify the degree to which they want to emphasize different matching criteria.

Woodruff High Comparison Map / Woodruff High Comparison Schools

Questions for Feedback:

1) What additional applications do you suggest for this system?
2) What other contextual factors may be important to consider for inclusion?
3) What suggestions do you have for guiding adoption of this tool?

Check out the dashboard using the QR code at left or accessing http://bit.ly/rc6peer.

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