SCOscore: School Corporation Opportunity Score

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Introduction

The School Corporation Opportunity Score (SCOscore) is a measure of potentiality for learners in a school community. It is a composite score that combines multiple factors, particularly structural factors such as race and SES, as well as performance factors such as test scores and graduation pathway completion rates, to provide a more holistic view of school corporations.

Methods

The SCOscore of a school corporation is calculated through the following formula:

$$S_O = \frac{\left[(P_{urm} \times 1.5) + \left(P_{frl} \times 1.5\right) + S_{ac}\right]}{3}$$

where S_O is the SCOscore, P_{urm} is the proportion of underrepresented minority students, P_{frl} is the proportion of students eligible for free or reduced lunch, and S_{ac} is an academic achievement score for the corporation as a whole.

The academic achievement score accounts for 3rd grade ELA proficiency, 8th grade math proficiency, and graduation pathways completion rates. In order to account for those factors, the following equation is utilized:

$$S_{ac} = \frac{\left(S'_{a_{ela}} + S'_{a_{math}} + S'_{a_{gpc}}\right)}{3} + 1$$

where $S'_{a_{ela}}$ is the calculated 3rd grade ELA proficiency measure, $S'_{a_{math}}$ is the calculated 6th grade math proficiency measure, and $S'_{a_{gpc}}$ is the calculated graduation pathway completion measure.

The S'_a measures are determined in the following manner:

$$f(S'_a) = \begin{cases} (S_{IN} - S_a) + 1, & \text{if } S_a < S_{IN} \\ 0, & \text{otherwise} \end{cases}$$

where S_a is the school corporation average proficiency or completion rate and S_{IN} is the state-level average proficiency or completion rate.

Acknowledging Inequality *Within* School Corporations

It needs to be recognized that there is the potential for inequality *within* a single school corporation and the SCOscore is calculated based on reported *averages* across all schools in the corporation. The school corporation-level score should be considered within the local building context. A building or school-level score can be calculated using the same general equation:

$$S_O = \frac{\left[(P_{urm} \times 1.5) + \left(P_{frl} \times 1.5\right) + S_{ac}\right]}{3}$$

Rather than calculating a combined academic score, however, the specific academic measure–3rd grade ELA proficiency rates for elementary schools, 6th grade math proficiency rates for middle schools, and graduation pathways completion rates for high schools–can be used. The S'_a still needs to be calculated by comparing the measure to the Indiana statewide average as above, where it becomes 0 if it is above the statewide average or $(S_{IN} - S_a) + 1$ if it is below the statewide average.

! Charter Schools

It is also important to consider the status of charter schools when identifying schools to work with. Despite the "public school" designation by the Indiana Department of Education, charter schools are not technically public schools in important ways, particularly when it comes to accountability to the community in which they are embedded. Other problematic issues with respect to oppression by race and ability are well-documented.

SCO Scores and Critical Quantitative Methodologies

The School Corporation Opportunity Score model can be seen as *consistent* with the five tenents of Critical Quantitative (QuantCrit) methodologies (Gillborn, Warmington, and Demack 2018), or at least can be utilized in light of QuantCrit. In particular, the SCO scores model is *intended* to be utilized for social justice, recognizes the centrality of racism, pushes back on static categories, and through transparency attempts to illuminate that numbers are not neutral.

We also recognize, however, that the SCO scores model *violates* several principal values of the QuantCrit methodology (Young and Young 2022). SCO scores are based on comparative assumptions, comparing typically "successful" school corporations (predominantly white, predominantly wealthy) with those that are not. Even with an assets-based framing ("opportunity" rather than "need")–or at least a positive spin–school corporations that are predominantly white and wealthy "[hover] over Black and Latinx scores, which creates academic imagery that promotes racial achievement hierarchies and White supremacy" (Young and Young 2022, 392). Even though it is the school corporations with high Black, brown, immigrant, refugee, and poor populations that rise up, it still creates a sense of (inverted) hierarchies.

What would an approach more tightly entwined with QuantCrit methodologies look like? The *single-group summary meta-analysis* proposed by Young and Young (2022) provides guidance. Academic achievement–through the measures provided by the Indiana Department of Education's GPS Dashboard (Indiana Department

of Education 2023)—can be examined over time for specific groups of interest (e.g., Black students, Latinx students, refugee students, recipients of free or reduced lunch, etc.) and an effect size can be calculated for each group independently. If the effect size for *any* particular group is less than or equal to 0.4, that school corporation becomes a high opportunity school corporation because the potential achievement of that group of students has not yet been realized. This would provide a much more textured and measured approach to understanding the experiences of under- or mis-supported student populations.

Data Sources

Data for these calculations are drawn from the following sources:

- Indiana Department of Education's Indiana Graduates Prepared to Succeed (GPS) Dashboard (Indiana Department of Education 2023).
- Urban Institute's Education Data Explorer via the educationdata R package (Ueyama 2022).

School Corporation Opportunity Scores (SCO Scores)

This section will highlight three areas for consideration: School corporation SCO scores in central Indiana; SCO score trends across the state; and, a brief examination of SCO scores by urban-centric locale categories.

There is an Indiana SCO Score Dashboard available, in which you can explore the data in more detail and depth.

Central Indiana

The primary purpose of this model is to provide insight into identifying high-opportunity school corporations for IU-Indianapolis faculty, staff, and projects. The school corporations in Central Indiana (Indianapolis–Carmel–Anderson Metropolitan Statistical Area) with SCOscores greater than 1 are as follows:

School.Corporation	Enrollment	SCO.Score
Indianapolis Public Schools	22115	1.42
MSD Warren Twp	11801	1.42
MSD Wayne Twp	16343	1.39
MSD Pike Twp	10928	1.37
Anderson Community Schools	6470	1.30
MSD Lawrence Twp	16247	1.29
MSD Washington Twp	10901	1.13
Perry Twp Schools	16603	1.11
Beech Grove City Schools	2837	1.10
MSD Decatur Twp	6681	1.07

Table 1: School corporations in the Indianapolis–Carmel–Anderson Metropolitan Statistical Area with SCO scores greater than 1.

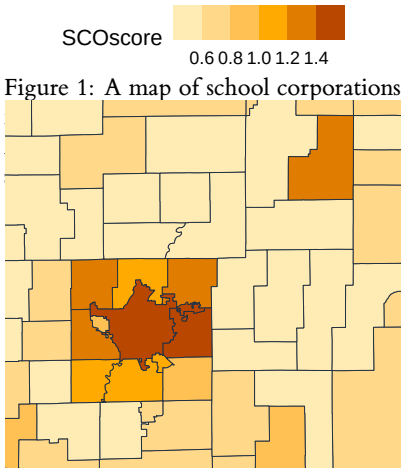

Figure 1: A map of school corporations

Most of the high opportunity schools are centered in Marion County (with the notable exception of Anderson Community Schools). Indianapolis Public schools and the Metropolitan School District (MSD) of Warren Township are the school corporations with the *highest opportunity scores* in central Indiana, with a SCO score of 1.42. The MSD of Wayne Township and the MSD of Pike Township also have high opportunity scores (1.39 and 1.37, respectively). The other school corporations listed are also high opportunity. **Please note the sections above on inequalities within school corporations and the status of charter schools when reaching out to a specific school building.**

State Trends

Overall, most of Indiana's school corporations' opportunity score fall under 1 (Figure 2). This indicates that the majority of Indiana school corporations have low levels of non-white students, low levels of students who qualify for free or reduced lunch, relatively high achievement, or some combination of the three. Many of the school corporations in Indiana fall between the 0.5 and 1 range. This doesn't mean that there *isn't* opportunity in these school corporations, particularly for those students who experience structure barriers and oppression; rather, as a matter of general priorities, the school corporations that score greater than 1 will see a higher level of potential in terms of growth.

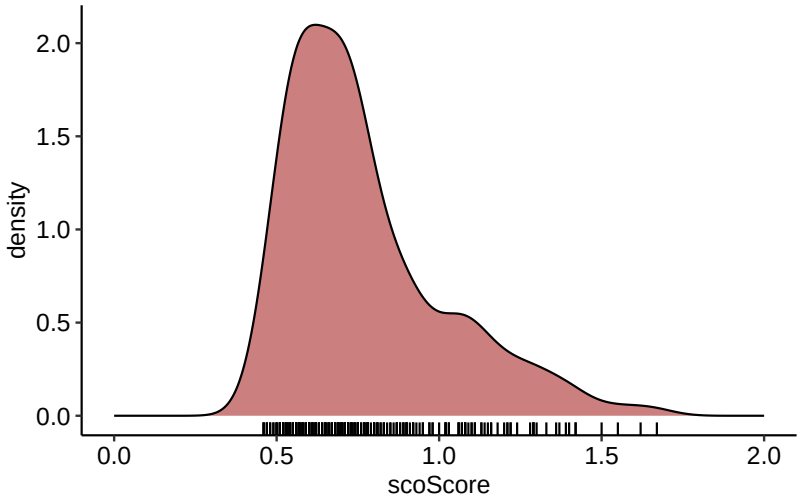

Figure 2: A density plot of SCO scores across the state of Indiana.

Over the state of Indiana as a whole (Figure 3), high opportunity school corporations are centered in Marion County (the Indianapolis area) and Lake County (the Northwest Region of Indiana). There are certainly other school corporations around the state that score above 1 in terms of opportunity, but they do not cluster in the same way as those in Marion and Lake Counties.

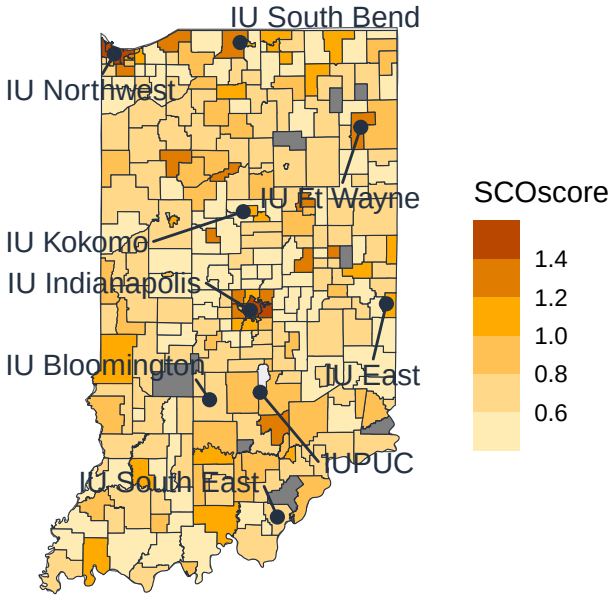

Figure 3: A map of school corporations in Indiana with SCO scores.

Urban-Centric Locale SCO Scores

The National Center for Educational Statistics utilizes the urban-centered locale classification to categorize school districts and corporations into rural, town, suburban, and urban areas. These categories are further divided into large, medium, and small for urban and suburban areas and fringe, distant, and remote for towns and rural areas.

> **Note**
>
> School corporations in Indiana span the full spectrum of these categories. While there is a higher *number of school corporations* that are rural, a much larger *number of students* attend urban and suburban schools.

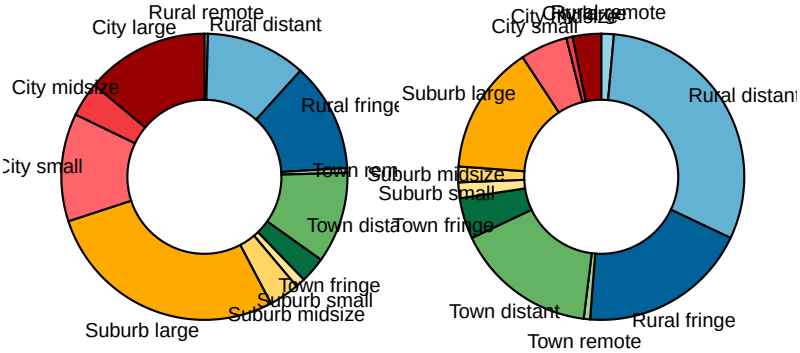

Figure 4: Total enrollment and number of school corporations by urban-centered locale classification.

Figure 5 visualizes the SCO scores by urban-centered locale classification. Each of the dots represents an individual school corporation. This plot provides insight into how the school corporation opportunity scores are distributed across the urban-centered local classifications.

We can then look at the *relative opportunity* for the various urban-centered locale classification (Figure 6). The line in the center of the plot is the *mean relative opportunity*. As a class, school corporations in cities have higher relative opportunity than in other locales. This does not mean that there are not high opportunity school corporations in other locale classifications (there are), but rather this provides a sense of high-level priority which can then be broken down further and examined locally and in context.

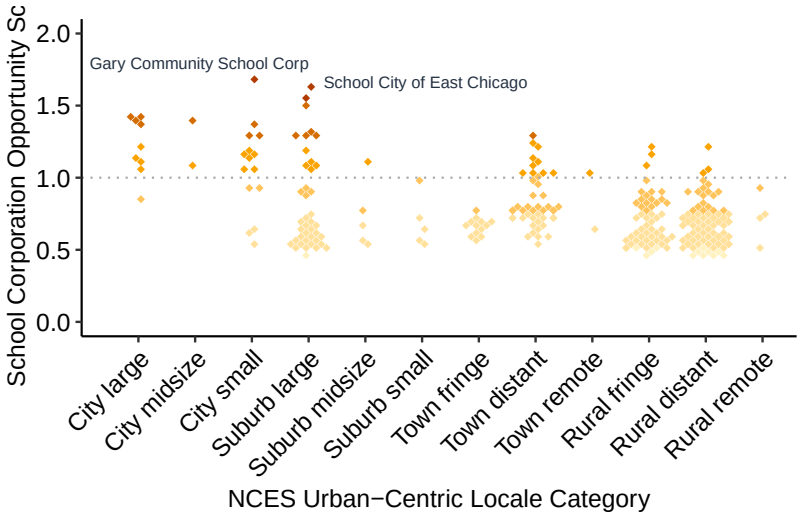

Figure 5: Plot of SCO scores by urban-centered locale classification.

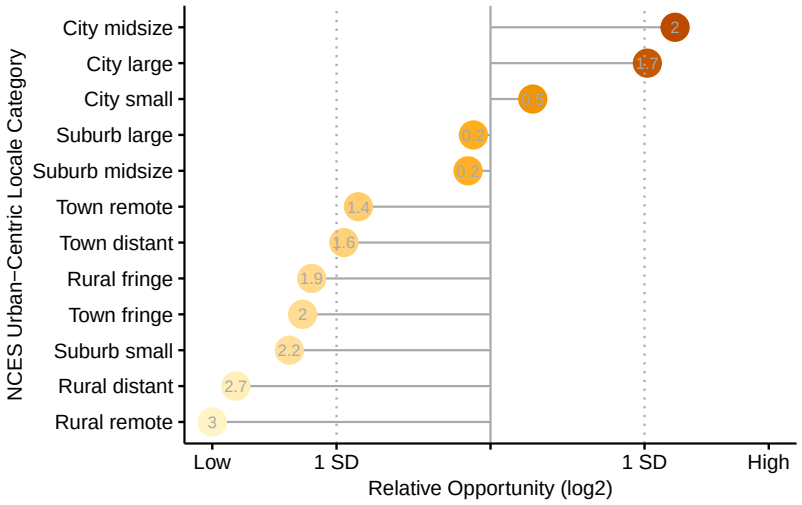

Figure 6: Plot of relative SCO scores by urban-centered locale classification.

Repositories

Repositories that connect with this project can be found in the following locations.

- OSF Repository
- Github Repository

Session Information

Session information is provided for reproducibility purposes.

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Gillborn, David, Paul Warmington, and Sean Demack. 2018. "QuantCrit: Education, Policy, 'Big Data' and Principles for a Critical Race Theory of Statistics." *Race Ethnicity and Education* 21 (2): 158–79. https://doi.org/10.1080/13613324.2017.1377417.

Indiana Department of Education. 2023. "Indiana Graduates Prepared to Succeed (GPS)." https://indianagps.doe.in.gov/.

Ueyama, Kyle. 2022. *Educationdata: Retrieve Records from the Urban Institute's Education Data Portal API*. https://CRAN.R-project.org/package=educationdata.

Young, Jamaal, and Jemimah Young. 2022. "Decoding the Data Dichotomy: Applying QuantCrit to Understand Racially Conscience Intersectional Meta-Analytic Research." *International Journal of Research & Method in Education* 45 (4): 381–96. https://doi.org/10.1080/1743727X.2022.2093847.