

METHODOLOGY AND DATA COMPANION

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A Percentile-Based Financial Health Index for Jewish Day School Benchmarking

Methodology and data companion to the working paper

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A full white paper, with the complete introduction, related literature, data and design, results, discussion, limitations, conclusion, and references, is available on request.

© 2026 Heshbon and the author. This companion explains how the working paper was built and how to read its results. It can be shared and cited with attribution.

At a glance

Research question	How can a school or a researcher see where named peer institutions actually stand on financial health, when benchmarking bodies release the most diagnostic figures only in aggregate?
Data	A merged NAIS DASL and Prizmah benchmarking export (2022-23 through 2025-26, 895 schools, of which 86 Jewish day schools are used), plus IRS Form 990 compensation filings for leadership tenure, plus a documented open-web verification pass.
Unit of analysis	The individual Jewish day school, scored relative to a user-selected peer pool (all 86, the non-Orthodox subset, or the Orthodox subset).
Statistical method	A percentile-rank composite index: six weighted pillars converted to within-pool percentiles, averaged, and banded into norm-referenced letter grades.
Headline finding	This is a construction rather than a hypothesis test; it reconstructs three suppressed measures from reported totals and scores each school on six pillars into one comparable, source-linked grade.
What it shows	A transparent, citable way to compare a peer group a school can actually name, in a sector where the standard benchmarking infrastructure withholds school-level detail by design.

The question behind the paper

Schools that participate in benchmarking receive their own figures and an aggregate profile of their peer group, but not the ability to see where any named peer individually stands. The figures most diagnostic of financial strain, balance sheet composition, the reported operating surplus or deficit, and the breakdown of tuition discounting, are released only in aggregate or to the single school that commissioned the export. This index was built to close that gap using data already reported at the individual-school level, so a reader can move past comparing to an average and ask which specific peers are strong, which are under strain, and by what measure.

Where the data come from

The benchmarking export. The quantitative core is a merged NAIS DASL and Prizmah export spanning four reporting years, 2022-23 through 2025-26, covering 895 schools. Two Prizmah cohorts, a non-Orthodox K-8 pool and an Orthodox K-8 pool, were layered onto the broader NAIS all-PK-8 pool. The 86 Jewish day schools used throughout (71 non-Orthodox and 15 Orthodox) were isolated with a classification developed earlier in the research program.

IRS Form 990 compensation filings. A separate dataset of Form 990 filings from 2017 through 2024, covering head-of-school compensation and biographical fields across roughly 170 schools, supplies the leadership-tenure pillar. Matching combined token-overlap and string-similarity scoring to propose

candidates, but every candidate was reviewed by hand. Of ninety-seven candidate records, twenty-nine survived as high-confidence matches, and plausible-looking matches that shared only a city name or the word Hebrew were rejected because the institutions were, on inspection, different schools.

A supplementary open-web pass. Because an export lags real events, an open-web research pass covered all 86 schools across four categories: current enrollment, current head of school and tenure, fundraising activity, and notable news. Only material corroborated by an identifiable news organization, an official school communication, or a primary filing was recorded as fact, and every recorded finding is paired with a citation a reader can follow.

The statistical method, named and explained

This paper does not run a hypothesis test; it constructs a percentile-rank composite index, so the method to explain is the construction itself. Each school is scored on six pillars (operating margin, tuition discount rate, endowment per pupil, fundraising per pupil, enrollment trend, and head-of-school tenure), and each pillar is

converted to a percentile rank from zero to one hundred within whichever comparison pool the reader has selected. The pillar percentiles are then combined as a weighted average, with the weights normalized automatically and renormalized over whatever pillars a school actually reports, so missing data reduces the evidence base rather than penalizing the school; a minimum of two contributing pillars is required before any grade is assigned. The resulting composite percentile is translated into a letter grade using cut points calibrated to the observed distribution, a norm-referenced scheme (roughly 75 and above for an A down through under 28 for an F) chosen because the average of several percentile ranks clusters tightly and a naive decile scheme would produce almost no A grades. Two of the pillars, operating margin and tuition discount rate, are reconstructed from reported income, expense, and tuition totals because the audited figures themselves are suppressed, and several safeguards protect the ranking: ratios are clipped to plausible bounds, a literal zero in a revenue or donation field is treated as a non-submission, four records with apparent decimal-place errors were corrected, and the two account-holder schools were excluded from the leaderboard.

Key results from the paper

Table 1. The six pillars and how each is scored.

Pillar	Definition and direction
Operating margin	(Income minus expense) as a percentage of income, averaged over up to three years. Higher is better.
Tuition discount rate	(Gross tuition minus net tuition) as a percentage of gross tuition. Lower is scored as healthier, though context-dependent.
Endowment per pupil	Total endowment divided by enrollment. Higher is better.
Fundraising per pupil	Annual philanthropic donations divided by enrollment. Higher is better.
Enrollment trend	Percentage change in total enrollment from the earliest to the latest reported year. Higher is better.
Head-of-school tenure	Years the current head has held the role, per IRS filings. Higher is better; available for 29 of 86 schools.

Note. Operating margin and tuition discount rate are reconstructed from reported totals rather than pulled from a single suppressed field.

Table 2. What the supplementary open-web pass surfaced across the 86 schools.

Finding	Schools
Leadership corrections (recorded head had since left the role)	11
Confirmed school closure	1
Documented cases of financial strain (one current, one historical)	2
Rebranding under a less	3

**denominationally specific name,
opening to non-Jewish students**

Note. Two of the eleven leadership corrections involved a school's name having been mismatched to a similarly named institution. The confirmed closure paired an enrollment decline from several hundred students to roughly twenty.

How to read the results

Table 1 is the engine of the tool: a school's grade is the weighted average of its standing on these six pillars, expressed as percentiles inside a peer pool the reader chooses, so the same school can grade differently against the full set than against the Orthodox subset alone. Table 2 shows why the quantitative index alone is not enough, since a benchmarking export can be a year or more out of date on exactly the events that matter most. Two contextual measures, deficit-year frequency and philanthropy reliance, are displayed but deliberately left out of the composite, because a high discount rate paired with strong fundraising can reflect a sustainable access strategy rather than distress, and the tool leaves that judgment to the reader.

What the numbers do not claim

The composite is a relative rank, not an absolute verdict, and it will change by design if the comparison pool or the weights change. The reconstructed operating-margin and discount figures are estimates built from reported totals and should track the audited numbers closely without being identical to them, so a school's own statements are authoritative wherever the two disagree. The tenure pillar has confirmed data for only 29 of 86 schools, its absence reflects a gap in the match rather than a finding, and the index draws no conclusion about causation, since a low score can reflect a deliberate strategic choice as readily as genuine strain.

Reproducing the analysis

The index is built to be rebuilt. The quantitative inputs come from the NAIS DASL and Prizmah benchmarking collections, the leadership data from public Form 990 filings retrievable through nonprofit filing repositories, and the qualitative layer from named news organizations and official school communications cited at the point of use. Because operating margin and tuition discount rate are derived from reported income, expense, and tuition totals rather than from a withheld field, any analyst with the same export can recompute the pillars, the percentile ranks, and the grade bands.