

SCHOOL DESIGN:

Leveraging
Talent, Time,
and Money

SECTION 5

Portfolio Management

PRACTICAL TOOLS
for District Transformation

ANALYSES AND DO-IT-YOURSELF WORKSHEETS

THE SCHOOL DESIGN WORKSHEET SERIES INCLUDES worksheets with step-by-step instructions to help you calculate and measure effective school design and portfolio management. These analyses can help identify

your largest challenges and greatest opportunities for action. Armed with this knowledge, you will be able to quantify transformational opportunities for your district. This document contains Analyses 8-11.

GET THE REMAINING WORKSHEETS AT WWW.ERSTRATEGIES.ORG.

Analyses for effective school design and portfolio management

	ANALYSIS	WORKSHEET
IMPROVING TEACHING EFFECTIVENESS	1. Collaborative planning time	1. Elementary school contracted teacher planning time
	2. Expert support	2a. Coaching and lead teacher support spending per teacher 2b. School teacher-to-coach ratio
	3. Principal span of review	3. Principal span of review
MAXIMIZING INSTRUCTIONAL TIME	4. Instructional time	4a. Total time in school 4b. Instructional time by subject
PROVIDING INDIVIDUAL ATTENTION	5. Class size	5. Average class size by course type
	6. Teacher load	6. Average teacher load
SERVING SPECIAL POPULATIONS EFFECTIVELY	7. Special education placement	7a. Special education placements as a percentage of total enrollment 7b. General education class size versus student-to-teacher ratio
PORTFOLIO MANAGEMENT	8. Student needs by school type	8. Student needs by school type
	9. School cost	9a. Distribution of schools by enrollment 9b. Per-pupil spending differential between small- and medium-size schools
	10. School capacity utilization	10. Seat vacancy by school
	11. Mix of school programs	11. Special education fill rate

Data checklist

Use this list to gather the data and files that you will need to complete the worksheets. All data files listed are for the current school year.

District budget file at the lowest level of detail available.

This file will allow you to:

- a. Identify all K–12 operating budget items.
- b. Identify budget items reported for each school and centrally.
- c. Calculate per-pupil spending per school

District K–12 enrollment file by grade and by school.

This file will allow you to:

- a. Identify total student enrollment by student type:
 - i. Identify total general education enrollment.
 - ii. Identify total enrollment of English language learners (ELL), broken out by program, so you know which students are self-contained/substantially separate and which students are integrated/mainstreamed.
 - iii. Identify total special education enrollment, broken out by program, so you know which students are self-contained/substantially separate and which students are integrated/mainstreamed.
- b. Identify total student enrollment by student demographic (e.g., poverty).
- c. Identify total student enrollment by school.

District school seating capacity file.

This file will allow you to:

- a. Identify seating capacity by school.

District K–12 course file by student, by grade, by school.

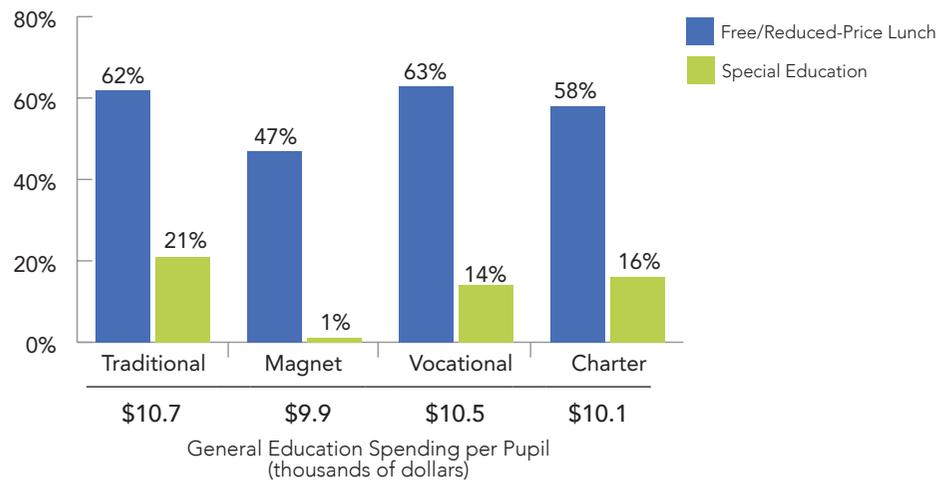
This file will allow you to:

- a. Determine average special education class sizes.

Analysis 8: Student needs by school type

Figure 8 illustrates the distribution of free and reduced-price lunch and special education students by school type in one urban district. In this case, charter high schools have fewer free and reduced-price lunch and special education students than traditional high schools in the district; magnet schools have significantly fewer populations of both types of students. It may also be useful to look at incoming student proficiency across school types to see whether certain types of schools have more students who are struggling academically than others. If the district does not intend for certain school types to serve lower-needs populations, district leaders may need to revisit assignment policies. If the difference in student needs by school type is intentional (or, in the case of charters or choice districts, out of the district’s control), it is important to reflect this difference in student needs in the amount of funding that schools receive.

Figure 8: Student Needs by School Type



There may be opportunities to shift funding or assignment formulas to better align resources with student needs. For example, if charter schools are receiving the district average per-pupil funding amount but have a lower percentage of higher-need students (e.g., special education, ELL), perhaps their funding should be reduced or they should be encouraged to serve a larger population of higher-need students. Or schools with chronically low performance may be underfunded and require additional resources. However, these additional resources should be provided only as part of a larger effort to change the conditions at those schools that have contributed to historical performance problems. (For more information, see the ERS guide *Turnaround Schools: District Strategies for Success and Sustainability*.)

Worksheet 8: Student needs by school type

OBJECTIVE: To understand whether the distribution of different types of students across different types of schools in your district is consistent with the goals of those school types.

SUMMARY OF METRICS

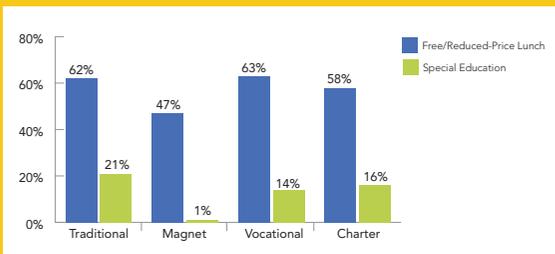
STEP 1: Calculate total student enrollment and enrollment by student type for each school.

STEP 2: Calculate average proportions by school model to develop comparison metrics for the district.

STEP 3: Graph student needs by school type.

REMINDER

Figure 8: Student Needs by School Type



Note: This guide illustrates this analysis for traditional, magnet, vocational, and charter schools in a district. Your district may have alternate types (e.g., program pilot schools, small learning communities). Please assess the school types most suitable for your district. Before you begin, you should categorize all of the schools in your district into the appropriate school types.

STEP 1: Calculate total student enrollment and enrollment by student type for each school.

1. Using your district enrollment file:

- a. Determine the total student enrollment for each school:
 - i. Be sure to look at students enrolled after a district-specified entry date to make a consistent comparison across student populations (e.g., 40 days after the first day of school).
 - ii. Identify the number of unique student IDs for each school that are enrolled at this specific cutoff date.
- b. Determine the total student enrollment by student type:
 - i. Be sure to look at students enrolled after a district-specified entry date to make a consistent comparison across student populations (e.g., 40 days after the first day of school).
 - ii. Identify student need categories in your student database: free/reduced-price lunch, special education students, and ELL. Students who are off track or struggling academically are addressed in Step 2. Note: For this analysis, we used the relatively broad categories listed here. For a more complete understanding of student needs by school, you may want to drill down further (e.g., self-contained special education students, ELL students by language, or struggling students based on several academic measures).
 - iii. Identify the number of unique student IDs for each school in each category.

STEP 2: Calculate average proportions by school model to develop comparison metrics for the district.

1. Using the figures you calculated for each school in Step 1, perform the following calculation:

$$\frac{\text{Number of unique student IDs for each student type at each school}}{\text{Total student enrollment at each school}} = \text{Percentage of student population by student type for each school}$$

2. You now have a full set of student-need metrics for each school:
 - a. Percentage free/reduced-price lunch, students with disabilities, ELL.
 - b. Percentage proficient and below proficient.
3. Identify the schools associated with each school type and aggregate by school type.

STEP 3: Graph student needs by school type, as in Figure 8.

1. Construct a bar graph with:
 - a. Y-axis: Percentage of students.
 - b. X-axis: Different student types (e.g., special education, ELL) for each school type.

QUESTIONS TO CONSIDER AND ACTION STEPS

Analysis 8: Student needs by school type

Questions to Consider

1. What different types of schools are there in your district?
2. How are students assigned to different types of schools? Does the distribution of student populations (especially higher-need students such as special education and ELL) across school types ensure that students are in an environment that best meets their needs?
3. How does your district set funding levels for different types of schools?
4. Do you monitor student populations at different school types and adjust student assignment and funding levels accordingly?
5. Do you adjust funding levels to account for different management, e.g., functions managed by schools such as charters and functions managed by the district?

Take Action!

- **Review your school portfolio.** Review your school portfolio to identify opportunities to match school offerings with student needs. You need to have a clear understanding of student needs, including student proficiency, the population of students qualifying for free and reduced-price lunch, special education and ELL students at each school, and school type—and the corresponding funding levels. Armed with this understanding, you can move to review school design offerings, and see how funding levels correlate to school type and student need.
- **Review student assignment policies.** In areas where you do have control over student assignment, examine your policies to ensure that students are assigned to the school and school type that best meets their needs. In the case of small and specialty schools (e.g., vocational schools, themed schools) that may cost more than traditional schools, ensure that the students you are serving in those schools are the ones who most need and will most benefit from the extra investment.
- **Review school funding policies.** Review your funding levels for different types of schools to ensure that funding levels match the level of student needs. For more information on funding equity, see the ERS guide *School Funding Systems: Equity, Transparency, Flexibility*.

ANALYSIS AND WORKSHEET 9a

Examining the size of schools and the assignment of students to those schools can help you to determine whether any additional investments are reaching the intended students and providing the return that you desire.

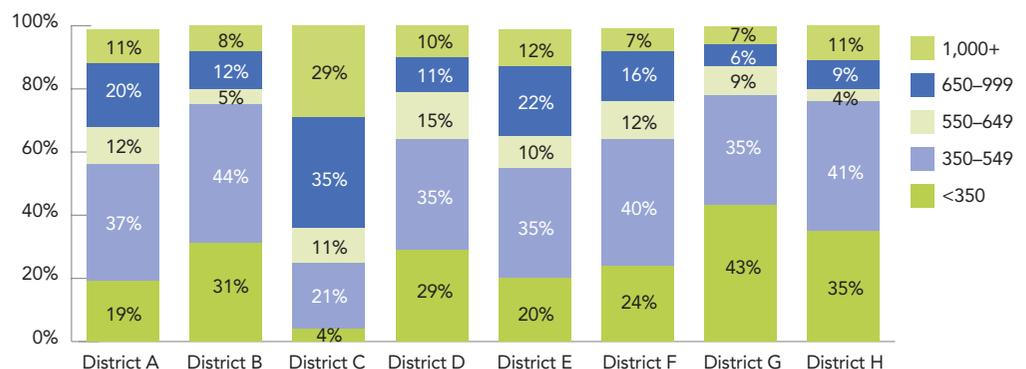
Analysis 9a: School cost

The district portfolio of schools with varying sizes should reflect a district's strategy for serving its population. A balance needs to be struck between *neighborhood access*, *cost effectiveness*, *personalization*, and *program diversity*. Typical staff-to-student allocation formulas (e.g., one teacher per 25 students) can drive unintentionally different funding levels across school sizes and types. In small schools, standard allocations of a full-time principal, assistant principal, librarian, etc., may not make sense for such small populations. In addition, typical teacher staffing ratios result in fractional staff allocations that are rounded up even when class and program size do not warrant full-time equivalent staff—and more staff are assigned to the school. In especially large schools, on the other hand, flat staffing, which designates one of each administrative position regardless of the school's size, can reduce per-pupil cost but can also increase span of control to the point where leaders can no longer support effective instruction. The result is that very small schools (fewer than 350 students) often receive more funding on a per-pupil basis, much of which is tied up in administrative positions, than do very large schools. In addition, certain specialty school types, such as arts academies and vocational schools, can cost significantly more to run effectively than traditional schools.

When thinking about school costs, you first need to understand the cost of different types of schools. Next, you should determine whether district staffing or other policies are unintentionally raising the cost of small or specialty schools, and whether changing policies and practices will allow these schools to deliver the same quality of instruction for less cost. Finally, you should evaluate whether the additional cost to operate these schools is the best investment of scarce dollars or whether you should reconsider using these dollars in other ways to serve the same students.

Consider the example of very small schools: Even in districts that have explicitly decided to invest in small schools to serve certain segments of high-need students, examining the cost of schools and the assignment of students to those schools can help you to determine whether this additional investment is targeting the intended students and providing the return that you desire. Figure 9a shows the distribution of school sizes across eight urban school systems.

Figure 9a: Distribution of Schools by Enrollment



Worksheet 9a: Distribution of schools by enrollment

OBJECTIVE: To understand the size distribution of schools within the district.

SUMMARY OF METRICS

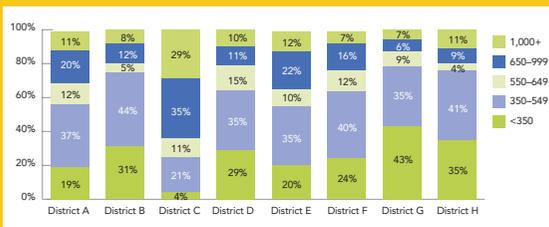
STEP 1: Calculate total student enrollment for each school.

STEP 2: Identify schools by size.

STEP 3: Graph the distribution of schools by enrollment.

REMINDER

Figure 9a: Distribution of Schools by Enrollment



STEP 1: Calculate total student enrollment for each school.

- Using your district enrollment file:
 - Determine the total student enrollment for each school:
 - Be sure to look at students enrolled after a district-specified entry date to make a consistent comparison across student populations (e.g., 40 days after the first day of school).
 - Identify the number of unique student IDs for each school that are enrolled at this specific cutoff date.

STEP 2: Identify schools by size.

- Identify the number of schools in each size category: fewer than 350 students; 350–549; 550–649; 650–999; and 1,000 or more students.

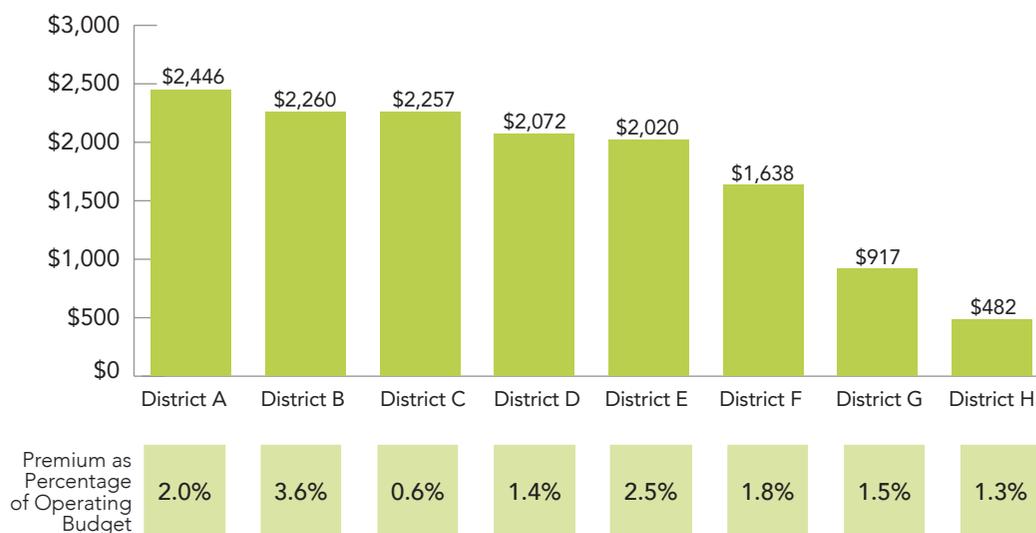
STEP 3: Graph the distribution of schools by enrollment.

- Construct a graph with:
 - Y-axis: Percentage of schools in the district.
 - X-axis: Your district relative to the other districts illustrated in this guide.

Analysis 9b: School cost

If you have a large number of very small schools or a wide variety of school sizes in your district, you may be unintentionally paying a premium for small schools. To understand how much you are investing in small schools, you need to understand the cost of small schools relative to larger schools. Figure 9b quantifies the spending differential between schools with fewer than 350 students and those with 550–650 students, and the percentage of total district budget that this differential represents.

Figure 9b: Per-pupil Spending Differential between Small- and Medium-size Schools



These districts could reduce the average per-pupil cost at small schools by adjusting funding formulas, increasing staffing flexibility, or combining students into midsize schools with enrollment of 550 to 650 students. Eliminating the cost premium of small schools could allow District E, for example, to recoup as much as 2.5% of its operating budget to be reinvested in other areas. If your district portfolio strategy deliberately includes small schools as a way to personalize learning for students, use this analysis to quantify the amount you are investing relative to the benefits you are deriving.

The ERS guide *School Funding Systems: Equity, Transparency, Flexibility* provides detail on eliminating the cost premium in very small schools.

Worksheet 9b: Per-pupil spending differential between small schools and midsize schools

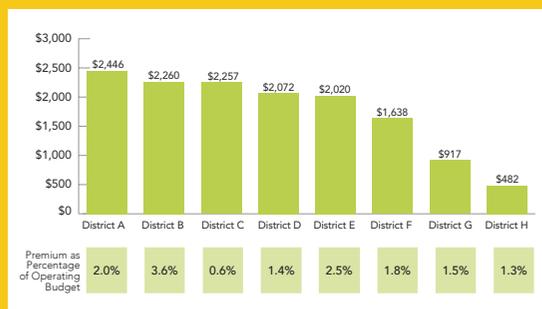
OBJECTIVE: Determine how general education per-pupil spend at small schools (defined here as schools with fewer than 350 students) compares to spend at midsize schools (550 to 650 students).

SUMMARY OF METRICS

- STEP 1: Identify school groupings: small schools and midsize schools.
- STEP 2: Calculate general education per-pupil instructional cost.
- STEP 3: Calculate per-pupil noninstructional fixed cost.
- STEP 4: Calculate general education per-pupil spend, school reported.
- STEP 5: Calculate the average general education per-pupil spend, school reported for small and midsize school groups.
- STEP 6: Calculate the small-school premium.
- STEP 7: Calculate proportion of students who attend small schools.
- STEP 8: Calculate total district spending on schools.
- STEP 9: Calculate incremental small-school premium as a percentage of total district budget.
- STEP 10: Graph the small-school premium (metric from Step 6) for each school.

REMINDER

Figure 9b: Per-pupil Spending Differential between Small- and Medium-size Schools



STEP 1: Identify school groupings: small schools and midsize schools.

1. From worksheet 9a or using your district K–12 enrollment file:
 - a. Identify the number of schools with fewer than 350 students and number of schools with 550 to 650 students.
 - b. Classify small-school group as schools with fewer than 350 students and midsize school group as schools with 550 to 650 students.

Note: If you have read School Funding Systems: Equity, Transparency, Flexibility, you will recognize Steps 2–4 from Worksheet 1: “General education spending per pupil by school and school level.”

General education per-pupil spend, school reported is a complicated measure to calculate but is critical because it offers a true “apples-to-apples” comparison of general education spending across schools. This metric not only helps you identify and manage inequity, but it also can be used to counter questions and objections from others who may be using less-accurate spending measures.

We define **general education per-pupil spend, school reported:**

$$\text{General education per-pupil instructional cost (Step 2)} + \text{Per-pupil noninstructional fixed cost (Step 3)}$$

STEP 2: Calculate general education per-pupil instructional cost.

1. Using your **district budget file:**
 - a. Determine the **total K–12 operating budget** for each school:
 - i. Exclude nonoperating budget line items that are budgeted at schools (e.g., debt service, property rental/lease, capital expenses).
 - ii. Exclude non-K–12 budget line items that may be budgeted at schools (e.g., adult education, prekindergarten, etc.).
 - b. Determine the total spend on **general education instructional staff** (teachers and aides) for each school:
 - i. Identify total spending on teacher and aide compensation for each school.
 - ii. Exclude any teachers and aides who do not work in a general education classroom (e.g., ELL teachers, special education teachers).

2. Using your district K–12 enrollment file:

- a. Identify the **total number of K–12 students** for each school.
- b. Identify the **total number of K–12 students in general education classrooms** for each school:
 - i. *This includes general education students and all special needs students who may be mainstreamed and sit in a general education classroom (i.e., most often all special needs students EXCEPT special education self-contained students).*
 - ii. *Specifically:*

$$\begin{array}{r} \text{K–12 total enrollment} \\ - \text{K–12 special education self-contained enrollment} \\ \hline \text{K–12 students in general education classrooms} \end{array}$$

3. Calculate general education per-pupil instructional cost:

$$\frac{\text{Total spend on general education instructional staff}}{\text{Total number of K–12 students in general education classrooms}} = \text{General education per-pupil instructional cost}$$

STEP 3: Calculate per-pupil noninstructional fixed cost.

1. Using your district budget file:

- a. Determine the total **K–12 operating budget** for each school (see Step 2.1).
- b. Determine the **total unspecified spending** at each school (i.e., exclude positions and resources used for ELL, special education, and free and reduced-price lunch).

2. Identify total number of K–12 students for each school (from Step 2.2).

3. Calculate total noninstructional schoolwide fixed costs:

$$\begin{array}{r} \text{Total unspecified spending} \\ - \text{Total spend on general education instructional staff} \\ \hline \text{Total noninstructional schoolwide fixed costs} \end{array}$$

4. Calculate per-pupil noninstructional fixed cost:

$$\frac{\text{Noninstructional schoolwide fixed costs}}{\text{Total K–12 students (includes special education and ELL)}} = \text{Per-pupil noninstructional cost}$$

STEP 4: Calculate general education per-pupil spend, school reported.

$$\begin{array}{r} \text{General education per-pupil instructional cost (Step 2)} \\ + \text{Per-pupil noninstructional fixed cost (Step 3)} \\ \hline \end{array}$$

General education per-pupil spend, school reported

STEP 5: Calculate the average general education per-pupil spend, school reported for small and midsize school groups.

1. Calculate the average per-pupil spend across all schools with fewer than 350 students and with between 550 and 650 students, weighted for enrollment.

STEP 6: Calculate the small-school premium.

- Small-school average general education per-pupil spend, school reported
- Midsize school average general education per-pupil spend, school reported
-

Small-school premium (general education)

STEP 7: Calculate proportion of students who attend small schools.

- Using the enrollment numbers you calculated in Worksheet 9a, Step 1:
 - Identify the total K–12 district enrollment.
 - Identify the total number of students who attend schools with fewer than 350 students.
 - Calculate the **percentage of students in the district who attend schools with fewer than 350 students.**

STEP 8: Calculate total district spending on schools.

- Using your district K–12 budget file:
 - Identify the **total dollar amount that the district spends on schools** (and not for central office department or district-level service).

STEP 9: Calculate incremental small-school premium as a percentage of total district budget.

- Approximate how much more the district might be spending on small schools:

Small school per-pupil premium (Step 6)
x Percentage of students in the district who attend schools with fewer than 350 students (Step 7)

Approximate incremental spending on small schools

- Calculate the percentage of total district budget.

Approximate incremental spending on small schools (Step 9.1) **= Percentage of district budget spent on small-school premium**

Total spending on schools (Step 8)

STEP 10: Graph the small-school premium (metric from Step 6) for each school.

- Construct a graph with:
 - Y-axis: Number of dollars (size of small-school premium).
 - X-axis: Your district.
- Also review how large this total premium is as a percentage of your district budget.

QUESTIONS TO CONSIDER AND ACTION STEPS

Analysis 9: Distribution of schools by enrollment

Questions to Consider

1. Do you have a significant number of very large, very small, or specialty schools in your district?
2. Is there a significant difference in per-pupil spending between small and larger schools?
3. Is there a significant difference in per-pupil spending between specialty and traditional schools?
4. Do you use a standard student-to-teacher ratio to allocate resources, regardless of school size, school type, or student population?
5. Do you allow fractional staff allocations and part-time assignments?
6. Are you deliberately matching school size and type with student needs?

Take Action!

- **Evaluate small and specialty school strategy and student assignment.** If you have deliberately implemented small and/or specialty schools in your districts as a way to improve instruction for high-need students, you should evaluate the incremental investment required to run these schools relative to the benefits the students are receiving and to other individualization strategies that may be less costly (see **Section 3: Providing Individual Attention**). In addition, you will want to ensure that these schools are operating at capacity and serving the students who will most benefit from an individualized instructional approach.
- **Reform staff-based formulas to reduce small-school premiums.** Districts can reduce spending in schools by replacing staff-based formulas with per-pupil formulas. Rather than using teacher-to-student ratios to allocate whole staff positions, a per-pupil formula awards dollars that follow the students and their differing needs. By specifying per-pupil dollar amounts, district leaders can specify a “small-school subsidy” of whatever size is appropriate to maintain services. Care must be taken to ensure that small schools receive sufficient staff and have flexibility to meet all legal requirements for operating schools.
- **Consider incremental or partial staff positions,** especially in small schools, to give principals more flexibility over the types and numbers of positions they can fill. For instance, allocating administrative positions as fractional full-time equivalents allows a principal to create a combined librarian/reading specialist position and have one teacher serve as a part-time assistant principal, whereas another principal might choose a full-time assistant principal but forego a librarian.
- **Consider closing schools that are significantly subscale and/or not performing.** Especially when dealing with severe budget constraints, districts should consider closing or combining very small schools in which the incremental benefit is not commensurate with the required investment. While closing schools is always a difficult decision and should be considered carefully, small schools can tie up significant resources that may be redirected toward areas that can have more impact on student outcomes.

ANALYSIS AND WORKSHEET 10

Analysis 10: School capacity utilization

Many urban districts are experiencing a decline in overall student enrollment, with the result that unused school capacity may be tying up valuable resources. Due to the fixed costs associated with every school or program, empty seats consume valuable resources that otherwise could be redirected to improve instructional quality. Districts can reduce these costs by better matching student assignment to facility capacity. Figure 10 illustrates school-by-school vacancy rates in one metropolitan school district.

Figure 10: Seat Vacancy by School



In this case, 25 of 147 schools in the district have more than 25% of their capacity unused, with three schools more than half empty. With so much unused capacity, this district should look closely at consolidating schools to reduce fixed costs. High vacancy rates can also be a symptom or a driver of student and staff morale issues, safety problems, and poor performance.

Districts can reduce fixed costs by better matching student assignment to facility capacity.

Worksheet 10: Seat vacancy by school

OBJECTIVE: Understand level of seat use across schools to identify where unused school capacity may be tying up valuable resources.

SUMMARY OF METRICS

STEP 1: Calculate total student enrollment for each school (reference Worksheet 7a).

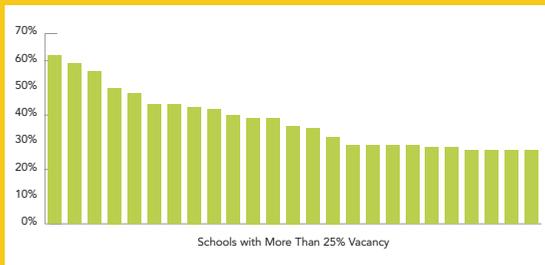
STEP 2: Determine facility capacity at each school, measured by number of students.

STEP 3: Calculate percentage of seat use and number of "empty" seats.

STEP 4: Graph percentage of seat use by school (metric from Step 3) for each school.

REMINDER

Figure 10: Seat Vacancy by School



STEP 1: Calculate total student enrollment for each school.

1. Using your district enrollment file:
 - a. Determine the total student enrollment for each school:
 - i. Be sure to look at students enrolled after a district-specified entry date to make a consistent comparison across student populations (e.g., 40 days after the first day of school).
 - ii. Identify the number of unique student IDs for each school that are enrolled at this specific cutoff date.

STEP 2: Determine facility capacity at each school, measured by number of students.

1. This report should be available in the facilities management department in the central office.

STEP 3: Calculate percentage of seat use and number of "empty" seats.

$$\frac{\text{Total student enrollment by school}}{\text{Facility capacity of each school}} = \text{Percentage of seat use for each school}$$

$$\frac{\text{Facility capacity of each school} - \text{Total student enrollment by school}}$$

Number of "empty" seats

STEP 4: Graph percentage of seat use by school (metric from Step 3) for each school.

1. Construct a graph with:
 - a. Y-axis: Percentage of seat use.
 - b. X-axis: List each school for which you wish to compare seat use.

QUESTIONS TO CONSIDER AND ACTION STEPS

Analysis 10: Seat vacancy by school

Questions to Consider

1. Are there schools in your district with significant unused capacity?
2. Are there opportunities to reassign students from overenrolled schools to fill these schools? If not, are there opportunities to free resources by closing the most underenrolled schools?

Take Action!

- **Reduce or eliminate unfilled seats.** Districts should examine and revise student assignment to move students from overpopulated schools to underpopulated schools. In systems with school choice, schools may have empty seats because students have elected not to attend them. In these cases, district leaders need to consider closing those schools or undertaking other interventions to increase school quality. For more information and strategies for school reconfigurations and closures, see the ERS guide *Turnaround Schools: District Strategies for Success and Sustainability*.

In districts where enrollment is smaller than capacity, filling seats means consolidating students and closing schools. While closing schools is always difficult, doing so can free up considerable resources. In a difficult budgetary environment, quantifying the potential cost savings of closing unfilled schools may help to convince school boards, parents, and others of the need for the change.

Students may be better served by being grouped together in a single school serving a larger number of similar students taught by those teachers most qualified to meet their needs.

Analysis 11: Mix of school programs

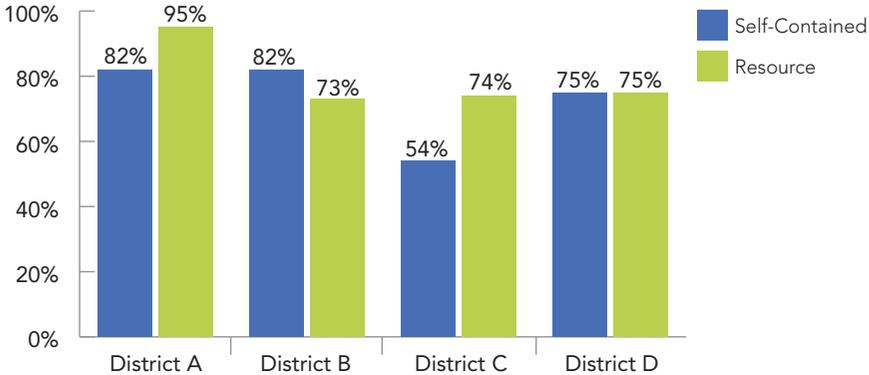
To best serve students with diverse backgrounds, needs, and competencies, district leaders must review their overall and school-by-school demographics and programs. Are programs for special education, ELL, gifted, and at-risk students situated to balance student needs cost-effectively throughout the district?

Many of these students are best served through resource models in which they are integrated with general education programs. However, a subset of student needs requires very intense or specialized services and support. Due to the regulations and high fixed costs associated with serving these students, enrolling them across many schools throughout the district rather than in selected schools can make it difficult to find enough teachers with the needed expertise. This may result in lower instructional quality, unfilled capacity, and unnecessary costs. Clustering the highest-need special education or ELL students can enhance the delivery of services without replicating the cost structure more times than necessary. The benefits of allowing special needs students to attend local schools and schools of their choice must be compared to the costs incurred, in both more expensive and potentially lower-quality instruction.

Because many districts have a hard time finding highly qualified special education and ELL teachers for these populations, high-need students may be better served by being grouped together in a single school serving a larger number of similar students taught by those teachers most qualified to meet their needs. For instance, in some districts, every school has a self-contained special education classroom to serve students who cannot be served through an inclusion model. In this case, a single special education teacher may be responsible for a classroom containing students with a wide range of physical, mental, emotional, and learning disabilities. An alternative approach is for these students to travel to a school where they can be grouped in a class with other students who share similar learning needs and with a teacher who has experience and training around their specific disability. While it is common to find gifted children traveling to a single school to provide the critical mass of students to leverage the high-quality teachers required to meet their needs, this practice is less common in other specialized areas.

Figure 11 on the next page illustrates that placements for special education students in four urban districts result in classes smaller than required and underuse of scarce specialty staff. The “fill rate” describes how many students on average are in a special education class relative to the district’s target class size for that disability category. A fill rate of 100% represents a perfect match between the number of “program seats” available for students at a given school and the number of students filling those seats. In each of these four districts, schools are offering classes to special education students that are, on average, one-third smaller than the classes required by those students’ Individual Education Plans. These smaller class sizes are not deliberate decisions based on student need but the random result of student choice and residential patterns. Altering program placement and student assignment to increase fill rates to 90% or higher could free significant resources to devote to other areas, including additional support for these students.

Figure 11: Special Education Fill Rate*



**Estimated based on number of special education staff, students, and actual special education teachers in district, and class size guidelines for various disabilities and levels*

Worksheet 11: Special education fill rate

OBJECTIVE: Determine approximate special education fill rates.

SUMMARY OF METRICS

STEP 1: Identify the number of special education students by program type. (At a minimum, split out resource room and self-contained.)

STEP 2: Identify the actual number of special education teacher FTEs by program type.

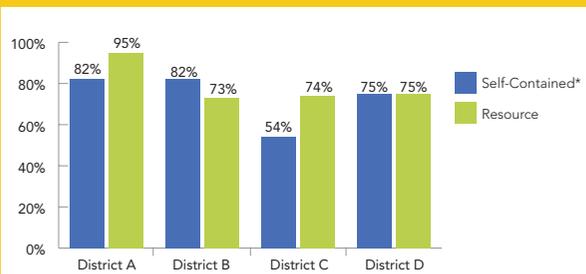
STEP 3: Identify the district's special education staffing ratios or program design.

STEP 4: Calculate the number of special education teachers needed based on program design.

STEP 5: Calculate the approximate special education fill rate.

REMINDER

Figure 11: Special Education Fill Rate



STEP 1: Identify the number of special education students by program type.

1. Using your district enrollment file:

- a. Determine the total number of special education students by program type.
 - i. You can do this based on the district's program type (i.e., resource room, consultant, integrated special class, self-contained 12:1, self-contained 8:1, self-contained 6:1, etc.).
 - ii. At a minimum, do this for resource room versus self-contained. For example:

	Number of special education students
Resource	636
Self-contained	1,417

STEP 2: Identify the actual number of special education teacher FTEs by program type.

1. Using your district budget or human resources file:

- a. Determine the total number of special education teacher FTEs by program type. For example:

	Actual number of special education teacher FTEs
Resource	58.2
Self-contained	1,153.0

STEP 3: Identify the district's special education staffing ratios or program design.

For example:

	Program design/staffing ratio
Resource	20:1 staffing ratio
Self-contained	12:1 staffing ratio

STEP 4: Calculate the number of special education teachers needed based on program design.

1. Divide the number of special education students by the district’s special education program design/staffing ratio.
2. Apply a 90% adjustment factor for student placement/assignment issues.

For example:

	Number of students divided by staffing ratio	Apply 90% adjustment	Number of special education teachers needed based on program design
Resource	$\frac{636 \text{ students}}{20:1 \text{ staffing ratio}}$	$\frac{32 \text{ teachers}}{90\% \text{ adjustment}}$	= 36 teachers
Self-contained	$\frac{1,417 \text{ students}}{12:1 \text{ staffing ratio}}$	$\frac{118 \text{ teachers}}{90\% \text{ adjustment}}$	= 131 teachers

STEP 5: Calculate the approximate special education fill rate.

1. Divide the number of special education teachers needed based on program design by the actual number of special education teachers by program type.

For example:

	Number of special education teachers needed based on program design	Actual number of special education teachers	Approximate special education fill rate
Resource	36	58.2	61%
Self-contained	131	153.0	85%

QUESTIONS TO CONSIDER AND ACTION STEPS

Analysis 11: Special education fill rate

Questions to Consider

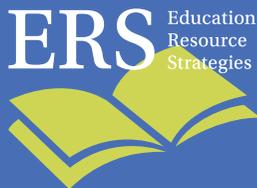
1. What percentage of your district's schools serve student populations with highly specialized needs?
2. How much redundancy exists across schools in the services provided?
3. How close to capacity are your current programs for special education, ELL, at-risk, and gifted students?
4. Do you have strategies for managing program assignment and enrollment to ensure high-quality, cost-effective delivery?
5. To what extent can you concentrate highly specialized programs at a focused number of locations rather than dispersing those programs throughout the district?

Take Action!

- **Make student placement more strategic for students with highly specialized program needs.** Tough economic times provide an important context for reviewing the number and size of these programs to ensure all students get the specialized support they need but in a cost-effective way that maximizes the use of scarce specialized staff and does not divert necessary resources from the shrinking core program. This approach may require changes in student assignment and add transportation costs to concentrate students in schools, but it can ensure that these students get the highest teaching expertise and best facilities, even if they may not always get their first choice of schools.
- **Examine student assignment policies for students in all specialized programs.** Shifts of even a few students from one school to another can have a large impact on fill rates in small, special program classes—potentially freeing up resources to use to provide broader support or additional support for the same special program students. Even districts offering choice should examine whether they might be able to manage special populations by school to more closely match populations with target class sizes.
- **Rethink the service delivery model for schools with unavoidably small programs.** It might be possible to find high-quality, cost-effective ways to serve smaller numbers of students. The use of part-time expert staff, teachers with multiple certifications, and outside contractors can sometimes be combined to create even more effective models.

ABOUT ERS

ERS is a non-profit organization dedicated to helping urban school systems organize people, time, and money to create great schools at scale.



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