SCHOOL DESIGN:
Leveraging Talent, Time, and Money

PRACTICAL TOOLS
for District Transformation

ERS
Education Resource Strategies
PRACTICAL TOOLS FOR
DISTRICT TRANSFORMATION

Based on firsthand observations by Education Resource Strategies, Inc., of resource use in large urban school systems, this series is designed to help districts begin the process of identifying and addressing resource decisions that don’t support improving student performance. This guide is one of six publications specifically designed to help district leaders analyze and optimize school system resource allocation.

ResourceCheck

ResourceCheck is an easy-to-use online self-assessment tool all district leaders can use to measure current resource use relative to best practices. This tool will give you a quick sense of where you should look deeper to get a better picture of what your district is doing. Users answer questions about district resource policies and practices and use the answers to evaluate performance.

Seven Strategies for District Transformation

Targeted for superintendents, this guide presents a comprehensive vision of seven strategies presented in ResourceCheck that are integral elements of effective district transformation.

Resource Guides

Targeted for district leaders including chief operating officers, chief finance officers, and chief academic officers and their staffs, four guides offer practical guidance and action steps that can help districts successfully challenge and transform their education system. Guides focus on school funding systems, school design, the teaching job, and district strategies for turnaround schools.

All six electronic publications can be found at www.ERStrategies.org.

ABOUT ERS

Education Resource Strategies, Inc. (ERS), is a nonprofit organization that works extensively with large urban public school systems to rethink the use of district- and school-level resources and build strategies for improved instruction and performance.
DATA SOURCES

Unless otherwise noted, all data come from ERS work in urban school districts. To maintain confidentiality, we have used the labeling convention of “District A,” “District B,” etc. However, these labels do not consistently reflect the same district from figure to figure. Districts include:

• **Vary individual student time and instructional program based on student needs and performance.** High-performing schools find creative ways to provide “just in time” additional time for students who need it. This strategy can be accomplished through flexible grouping within classes or through small-group classes that meet at consistent times during the week (for example, during a schoolwide free period or during lunch), but the composition of the group varies depending on which students need extra attention in which subjects each week. Other schools provide integrated after-school opportunities for students who need to accelerate learning.

### PROVIDING INDIVIDUAL ATTENTION

Individual attention is often viewed through the lens of class size. Some districts have implemented across-the-board class size reductions in very early grades. Yet generally these reductions have been modest, reducing classes by only three to five students, while research suggests that real gains require class sizes of 16 or fewer.\(^\text{14}\) At the same time, after grade 2 or 3, most students spend their entire day in classes of the same size, regardless of the subject or their individual academic need. Most districts reserve the smallest class sizes for students classified with special learning needs — special education, ELL, gifted — or for elective subjects in higher grades when classes are small simply because fewer students choose to take them.

In contrast, high-performing schools use a variety of strategies to provide individual attention to students who need it, including reduced class size, small-group instruction, individualized computer-based instruction, reduced teacher load (the total number of students for whom a teacher is responsible), and looping (in which one teacher teaches the same group of students for two years or more).

For example, to provide more individual attention for students at University Park Campus School, the average class size for a core subject is 20 students per teacher, and the average core subject teacher load is 82 students (compared to 150 for many high school teachers). Teachers use a variety of assessments to identify where students are in their learning and how to design lessons that meet students where they are. The common denominator for all these individual attention strategies is that they vary by grade and subject based on response to specific student needs and ideally are adjusted throughout the school year as student needs change.

Analysis 5: Class size

The goals of individual attention and personalized learning can be difficult to achieve, especially in high-priority subjects at critical grade levels. In most districts, general education class size guidelines do not differentiate among subjects, levels, and grades. Uniform class sizes, student demographics, and subject requirements result in unintentional overinvestment in lower-need courses (e.g., higher grade, higher academic level, and elective) and a corresponding underinvestment in core academic courses at lower grades and levels. Figure 5 illustrates these class size trends in two metropolitan school districts.

![Figure 5: Average Class Size by Course Type](image)

Here, the highest class sizes occur in 9th grade core academic classes (English language arts, math, social studies, science, foreign language), while the lowest are in 12th grade electives (excluding physical education). This pattern is just the opposite of what you would do if you deliberately set out to invest in strategies for your highest-need students. Actual class size can be difficult to calculate districtwide. However, individual schools can easily analyze class size variations to see where under- or overinvestment may be occurring and to target reductions in high-need grades or subjects. For more information, see the Do-It-Yourself section of this guide.
Analysis 6: Teacher load

While concerns about individual attention are often connected to class size, teacher load — the number of students that a teacher sees during a year — is also an important indicator of a teacher’s ability to individualize attention for students. While the average teacher load is typically 20–25 students at the elementary school level, when teachers keep the same group of students all day long, teacher loads can rise to more than 170 students per teacher in some high schools. A teacher who sees this number of students over the course of a day is less likely to know his or her students well and have the time to devote to the needs of each student. Figure 6 shows the range of average high school teacher loads in six urban school systems versus the average teacher load in high-performing leading-edge schools in the far right column.\(^\text{15}\)

In contrast to the leading-edge schools’ overall teacher load of 82, the average for the six districts is 128, with District A’s as high as 161. Teachers in these districts have less time to grade each student’s work, reflect on student performance, and prepare for lessons — all critical for improving teaching performance. And despite the importance of targeting attention in core subjects, in four of these districts the teaching load is higher in core than in noncore subjects. By calculating the average teacher loads in both core and noncore subjects, you can gauge the ability of teachers in your district to tailor instruction around the needs of individual students.

Questions to Consider

1. Does your district have uniform class size distribution regardless of student need?
2. Are you actively targeting high-need grades, subjects, and students for smaller classes and groups?
3. Are there opportunities to more actively match class and group size with student need?
4. What are the teaching loads across grades, course levels, and subjects in your district?
5. Are there opportunities to lower teacher loads by reducing the number of daily or weekly periods and introducing block or alternative schedules?
6. Does your district use other strategies for providing individual attention, including differentiated instruction and flexible grouping throughout the day?
Take Action!

• **Encourage targeted approaches to student grouping, time, and instructional practice.** The most successful programs vary time, student groupings, and instructional practice for students in direct response to student needs as identified on an ongoing basis. These approaches can be radical departures from the standard “one teacher with one class all year” model, and in some cases are still unproven, but they can have significant positive impact on student performance and save costs over the long run by reducing special education referrals. Examples include fluid grouping models in elementary schools in which groups of students move from classroom to classroom and teacher to teacher weekly or more often, based on learning progress; using computers for skills practices for part of the day and to leverage teachers in much smaller classes for the remainder; leveraging online instructional resources for individualized programming; or using large 100-plus student lectures for high school students two or three times per week paired with two or three much smaller discussion groups. Districts can encourage innovation by providing high-performing principals and/or “innovation zone” schools with additional flexibility around scheduling and staffing choices.

• **Use flexible grouping strategies to provide individual attention without reducing class size.** Since reducing class sizes can consume significant resources without necessarily providing struggling students with enough attention, flexible grouping that brings specialists and even administrators into general education classrooms for higher-need students at key junctures during the school day can increase individual attention while reducing teacher loads.

• **Strategically manage class size.** Increase class size guidelines for noncore subjects and for lower-needs students to free up the additional resources needed to reduce class size or teaching loads for critical subjects, grades, and students.

• **Strategically manage teacher load.** Changing bell schedules can help you reduce teacher load (the number of students that a teacher teaches each day) across all core subjects. But districts and schools can also focus teacher load reductions in key areas. For instance, many high-performing secondary schools target the lowest teaching loads in English language arts, either through smaller class sizes or double block scheduling, allowing those teachers to assign and review significantly more student writing. Other schools lower teacher loads for new teachers, teachers in transitional grades, or teachers of students significantly below grade level.

• **Provide teacher support and development.** Provide training and guidance for teachers on differentiated instruction to best meet the specific learning needs of individual students.

See page 32 for more detail on using bell schedules to change teacher load.

SERVING SPECIAL POPULATIONS EFFECTIVELY

Most districts have few strategies for assisting low-achieving students other than placement in special education, a liability that results in the “Cycle of Specialization” summarized in the chart below.

Cycle of Specialization

Initially, students who struggle academically are placed in large classes with general education teachers who receive no additional support to meet their higher needs. When teachers, not surprisingly, have insufficient time or expert support to accommodate the learning challenges of these students, the students are removed from the general population. They are placed in special education classrooms where they are often taught by specialists who are not certified or proficient in academic content areas. What’s more, this cycle takes resources away from general education and core academics, further reducing a school’s ability to accommodate high-need students who are not classified as special education — and providing incentives to diagnose more students into special education.

Rather than siphoning off resources for more restrictive and expensive special education programs, district and school leaders can take a proactive approach to high-need students.

Analysis 7: Special education placement

Figure 7a illustrates the percentage of students in special education across six urban districts. The total percentage varies from a low of 10.2% to a high of 18.3%, while the percentage of students served by self-contained classes or home instruction varies from a low of 2.5% to a high of 9.6%. It is unlikely that the variation is driven completely by differences in underlying incidence rates in the different districts. Instead, diagnostic and placement practices in each district may drive very different results.

Figure 7a: K–12 Special Education Placements as Percentage of Total Enrollment

*Self-contained is typically defined as 60% or more time in a special education setting

Rather than siphoning off resources for more restrictive and expensive special education programs, district and school leaders can take a proactive approach to high-need students. For instance, early intervention (e.g., Response to Intervention models), support within the general education program, and the use of flexible staffing for small-group instruction at key junctures during the school day can help reduce the number of special education referrals. To estimate your district’s current specialist positions that otherwise might be allocated to support general education, you can compare general education class size to your overall student-to-teacher ratio.

In Figure 7b, there are significant differences between general education class size and overall student-to-teacher ratios in four of the districts. In District A, for example, the difference of 12 students per teacher indicates there may be room to reallocate specialist teachers to support core academics, if the district is able to address the needs of struggling students through alternative staffing and grouping strategies, rather than through special education referrals.

Figure 7b: General Education Class Size versus Student-to-Teacher Ratio
Questions to Consider

1. How do your special education placement rates compare to the other districts in Figure 7a?
2. What percentage of your teaching staff are core classroom instructors versus specialty staff/instructors?
3. Are you investing in early interventions (other than special education) for struggling learners?
4. Are there opportunities to use more teaching full-time equivalents for core instruction through inclusion and flexible grouping strategies?

Take Action!

• **Invest in early intervention/Response to Intervention programs that provide the right intervention just in time.** Explore and develop interventions other than special education for struggling learners, beginning in kindergarten and 1st grade (and before), based on ongoing assessments to measure learning. Many districts are having success in using these strategies to reduce special education referrals.

• **Ensure all students are being served in the least restrictive environments.** Seek first to serve struggling students in general education programs to prevent placement in special education. Integrate special education resources (such as resource teachers) with the general education program by using push-in programs and ensuring that teachers who share special education students also share collaborative planning time and instructional materials and approaches.

• **Use flexible grouping strategies to provide individual attention without reducing class size.** Reducing class sizes can consume significant resources and still not provide struggling students with enough attention. Flexible grouping that brings specialists and others into general education classrooms for high-need students at key junctures during the school day can increase individual attention while reducing teacher loads. In St. Paul, elementary ELL teachers moved from classroom to classroom throughout the day, allowing blocks of 8:1 English language arts instruction for all students rather than just reduced ratios for ELL in self-contained classes.