

SCHOOL DESIGN:

Leveraging
Talent, Time,
and Money

SECTION 1

Improving Teaching Effectiveness

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 1, 2, and 3.

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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 teacher contract. This will allow you to:

- a. Identify the hours contractually required of teachers, including planning time.
- b. Identify lead teacher stipend, if any.

District budget file at the lowest level of detail available.
This file will allow you to:

- a. Categorize professional development spending in aggregate and per teacher.

District human resources payroll file, including supervisor/evaluator information for teachers. This file will allow you to:

- a. Identify coaching full-time equivalents (FTEs) and average compensation per coach by school.
- b. Identify stipend for lead teachers.
- c. Determine the number of teachers each principal/assistant principal is responsible for evaluating.
- d. Identify teacher FTEs by school.

District course file (if needed). This file will allow you to:

- a. Identify release time for lead teachers.

ANALYSIS AND WORKSHEET 1

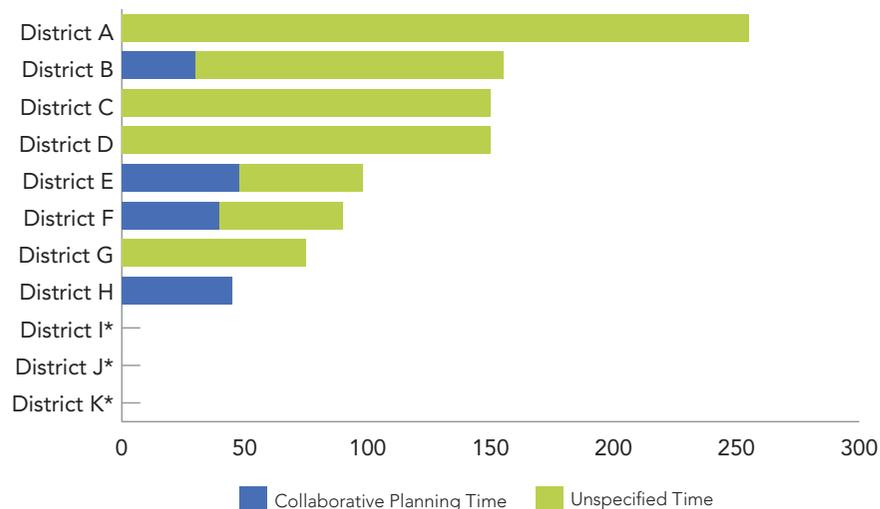
Given the expense of planning time and the potential impact on instructional quality, effective use of this time is paramount.

Analysis 1: Collaborative planning time

Most districts provide planning time for teachers—the difference among districts is how teachers use this time. While teachers need individual planning time to prepare lessons and correct student work, they have an equally critical need for time to collaborate with other teachers in grade-level or subject-matter teams. But districts and schools vary widely in the amount of collaborative planning time they provide.¹

Figure 1 illustrates the different amounts of time that selected large districts provide to teachers each week that might be used for collaborative planning. Time that is contractually specified as collaborative and time that is unspecified (we have not included individual planning time) are both represented here. There is significant variation in how much districts spend in this area—some districts provide no collaborative time, and District A provides more than 250 minutes of collaborative and unspecified time each week. But many of the districts already have 90 minutes or more a week that could potentially be used for collaborative planning and work.

Figure 1: Elementary School Contracted Teacher Planning Time (Minutes per Week)



*These districts had no unstructured or collaborative planning time stipulated in contract

Given the expense of planning time and the potential impact on instructional quality, effective use of this time is paramount. Planning time must be scheduled to coincide with the time of other team members and with teacher leaders or instructional coaches who, when armed with the right expertise, time allocation, and student and teacher performance data, can help ensure that collaborative and professional development time is used productively.

1 Miles, K., & Frank, S. (2008).

Worksheet 1: Elementary school contracted teacher planning time

OBJECTIVE: To identify relative investment in collaborative planning time, and identify opportunities to leverage and reallocate existing time for collaborative planning.

SUMMARY OF METRICS

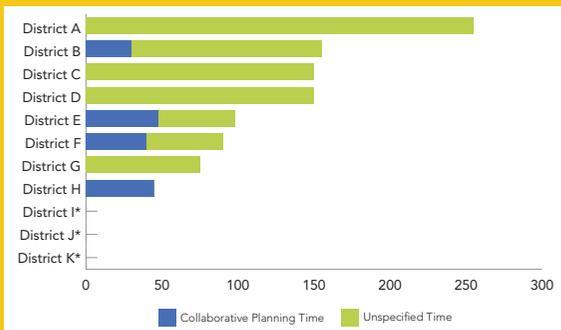
STEP 1: Identify number of minutes of collaborative planning time stipulated in teacher contract.

STEP 2: Determine the number of minutes of unspecified time.

STEP 3: Graph collaborative planning and unspecified time.

REMINDER

Figure 1: Elementary School Contracted Teacher Planning Time (Minutes per Week)



STEP 1: Identify number of minutes of collaborative planning time stipulated in teacher contract.

1. Using the district's teacher contract, identify the number of minutes allocated for collaborative planning time.
2. In doing this, you will most likely also be able to identify the number of minutes allocated for other teacher activities in a day.
 - a. Arrival and departure time
 - b. Student day
 - c. Individual planning
 - d. Lunch
 - e. Other

3. Determine the total number of minutes stipulated in the contract:

Collaborative planning time
+ Arrival/departure time
+ Student day
+ Individual planning
+ Lunch
+ Other stipulated time

Minutes stipulated in contract

STEP 2: Determine the number of minutes of unspecified time.

1. Unspecified time is generally not stipulated in the contract, and must be calculated as the difference between total teacher time and stipulated time:

Total teacher minutes
– Minutes stipulated in contract (Step 1)

Unspecified time

STEP 3: Graph collaborative planning and unspecified time.

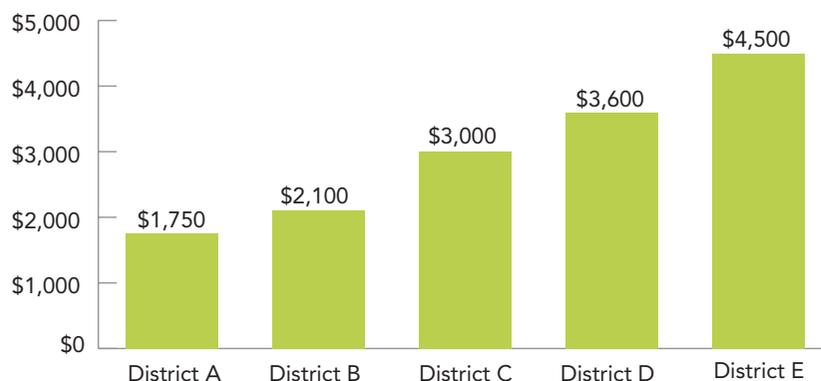
1. Graph the total minutes per week of collaborative planning and unspecified time, as in Figure 1, and compare to other districts and to the 90-minute recommended minimum collaborative planning time.

ANALYSIS AND WORKSHEET 2a

Analysis 2a: Expert support

Many districts already invest significantly in coaches (full-time instructional coaches assigned to support one or more schools) and/or teacher leaders (teachers within a school who are given release time and often additional compensation to provide coaching and support). Figure 2a shows the per-teacher investment in coaches and teacher leaders in five large urban districts.

Figure 2a: Coaching and Lead Teacher Support Spending per Teacher



While overall district investment in instructional coaches is important, once again, how coaches are used determines their effectiveness. The way that districts assign instructional coaches to schools can either enhance or limit their ability to affect instruction. Coaches need enough time with the teachers whom they are coaching to engage in a meaningful way around instructional practice and student outcomes.

To have the greatest impact with a limited number of instructional coaches, districts might choose to concentrate coaches in the areas of highest student and teacher need, rather than to dilute their effectiveness across all the schools in the system.

Worksheet 2a: Coaching and lead teacher support spending per teacher

OBJECTIVE: To understand relative level of investment in coaches and teacher leaders.

SUMMARY OF METRICS

STEP 1: Determine the number of coaching FTEs for the district.

STEP 2: Calculate investment in coaches using average coach compensation.

STEP 3: Determine the number of lead teachers used in the district.

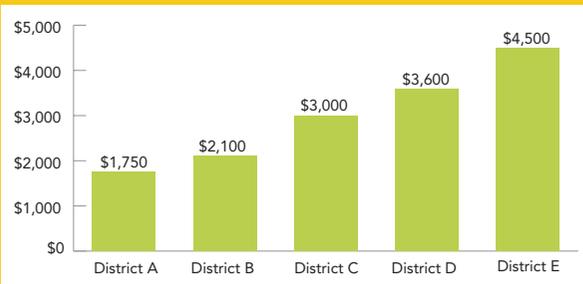
STEP 4: Determine if lead teachers are compensated in a standard way across the district or differently at each school.

STEP 5: Calculate the investment in lead teachers based on the compensation model.

STEP 6: Graph the investment in coaching for your district.

REMINDER

Figure 2a: Coaching and Lead Teacher Support Spending per Teacher



STEP 1: Determine the number of coaching FTEs for the district.

1. Using your district's current year human resources (HR) file, identify coaches by job code/title (often identified as instructional specialists) by school.
2. Where applicable, determine the number of FTE units for each coach.
3. Using the HR or payroll file, determine the average compensation for a full-time coach/instructional specialist.
4. For each school, create a list of the coaches with four columns:
 - a. Coach name/ID
 - b. FTE units
 - c. Average coach compensation
 - d. Coach investment (calculated in Step 2)

STEP 2: Calculate investment in coaches using average coach compensation.

1. Using the list you just created, calculate coach investment by:
 - a. Multiplying each coach's FTE allocation by the average compensation.
2. Sum coach investment for all coaches in all schools. This sum is the total investment in coaches for the district.

STEP 3: Determine the number of lead teachers used in the district.

Note: Depending on how your district treats the lead teacher role, lead teachers may be difficult to identify from the HR file. If you know that schools in your district have a significant number of lead teachers, you may want to ask individual schools for lead teacher information.

1. The current year district HR file will often flag a teacher as a lead teacher, either in job title or in additional roles.
2. Identify the number of lead teachers in your district.

STEP 4: Determine if lead teachers are compensated in a standard way across the district or differently at each school.

1. Refer to the teacher contract to understand whether lead teachers are compensated via stipend or are provided release periods when they perform their lead teacher duties.
2. If the contract does not indicate this information, the district payroll file may indicate whether stipends are given to lead teachers.
3. If the district payroll file does not indicate this information, you may need to discuss lead teacher practices individually with each school.

STEP 5: Calculate the investment in lead teachers based on the compensation model.

1. For each school, create a list of the lead teachers with four columns:
 - a. Lead teacher name
 - b. FTE units
 - c. Average teacher compensation
 - d. Lead teacher investment
2. If a lead teacher is compensated through an annual stipend, simply enter this amount in the lead teacher investment column.
3. If a lead teacher is provided release time, calculate the value of this time.
 - a. Use the district course file to determine the number of periods (or minutes) of release time and the total number of periods (or minutes) per day. Divide to calculate the release time percentage.
 - b. Multiply the release time percentage by the average teacher compensation, and enter this amount in the lead teacher investment column.
4. Sum the values in lead teacher investment. This sum is the total lead teacher investment.

STEP 6: Graph the investment in coaching for your district.

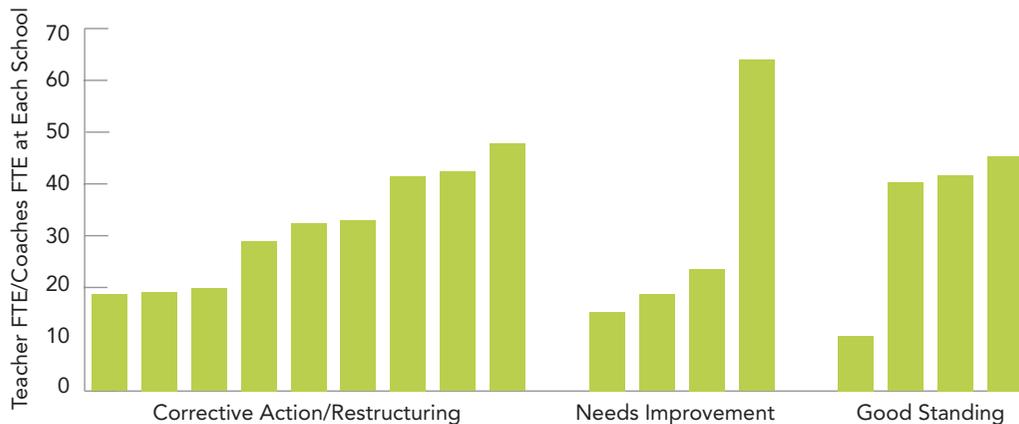
1. Construct a bar graph with:
 - a. Y-axis: Dollar investment.
 - b. X-axis: List of districts for which you want to compare coach and lead teacher investment.
 - c. Graph the level of coach and lead teacher investment for your school, and compare to other districts.

ANALYSIS AND WORKSHEET 2b

Analysis 2b: Expert support

One way to evaluate the effectiveness of expert support in a district is to look at the number of teachers that each instructional coach or teacher leader is expected to support. Figure 2b shows the teacher-to-coach ratio for high schools, sorted by Adequate Yearly Progress status, in one urban district. In this district, there is a wide range in the number of teachers that a single coach is expected to support, from as few as 10 teachers to more than 60, and the district is making no distinction among schools by need: The coaching ratio is about the same for schools in good standing as for schools requiring corrective action. Limited coaching resources will be more effective if they are focused on the highest-need schools, teachers, and subjects, and if they support a reasonable number of teachers.

Figure 2b: High School Teacher-to-Coach Ratio



Worksheet 2b: School teacher-to-coach ratio

OBJECTIVE: To determine the number of teachers that each instructional coach or teacher leader is expected to support, and identify whether there are opportunities to better match coaching support to school and teacher need.

SUMMARY OF METRICS

STEP 1: Determine the number of coaches deployed at each school and total FTE allocation.

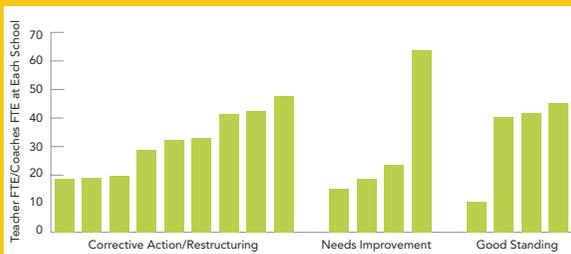
STEP 2: Determine the number of teachers at each school and total FTE allocation.

STEP 3: Calculate teacher-to-coach ratio at each school.

STEP 4: Graph comparison metrics by school.

REMINDER

Figure 2b: High School Teacher-to-Coach Ratio



STEP 1: Determine the number of coaches deployed at each school and total FTE allocation.

1. Using your district's current year human resources file, identify coaches by job code/title (often identified as instructional specialists).
2. Determine whether each coach is assigned to one school or multiple schools. The HR file will list the schools this coach is assigned to in the current year.
3. Where applicable, determine the number of FTE units for each coach at each school; e.g., a coach who is assigned to one school full time will have FTE = 1. A coach who works only 50% and splits his or her time at two schools will have FTE = 0.25 at each school.
4. For each school, create a list of the coaches with two additional columns:
 - a. Coach name/ID
 - b. School
 - c. FTE coach units
5. Using the list you just created, calculate total coach FTE units at each school:
 - a. Total the "FTE units" for each school coach

STEP 2: Determine the number of teachers at each school and total FTE allocation.

1. Using your district's current year HR file, identify teachers by job code/title.
2. Where applicable, determine the number of FTE units for each teacher at each school.
3. For each school, create a list of the teachers with two additional columns:
 - a. Teacher name/ID
 - b. School
 - c. FTE teacher units
4. Using the list you just created, calculate total teacher FTE units at each school:
 - a. Total the "FTE teacher units" for each school

STEP 3: Calculate teacher-to-coach ratio at each school.

$$\frac{\text{FTE teacher units}}{\text{FTE coach units}} = \text{Teacher-to-coach ratio at each school}$$

STEP 4: Graph comparison metrics by school.

1. Construct a bar graph with:

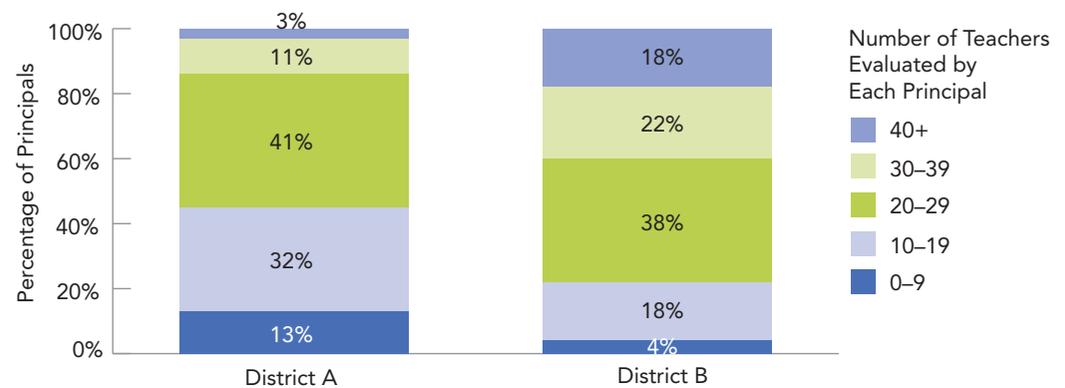
- a. Y-axis: Teacher-to-coach ratio (i.e., number of FTE teachers per each FTE coach).
- b. X-axis: List of schools for which you want to compare teacher-to-coach ratio. It may be helpful to sort schools by whatever measure of school performance you use in your district. Lower-performing schools are likely to have higher needs for coaching resources, and therefore, they should ideally have lower teacher-to-coach ratios.

ANALYSIS AND WORKSHEET 3

Analysis 3: Principal span of review

Figure 3 illustrates the number of teachers that principals are responsible for evaluating in two urban districts. More than 80% of the principals in District A and over half of the principals in District B are responsible for evaluating at least 20 teachers. Almost 15% of principals in District A and 40% in District B must review 30 teachers or more. With these loads, it is unlikely that principals have adequate time to effectively evaluate teachers.

Figure 3: Principal Span of Review*



*Span of review is defined as the number of teachers for whom a principal performed end-of-year evaluations

Even in schools that have high-functioning teams of teachers who work collaboratively to improve their practice, teachers must be regularly observed and evaluated by administrators or other designated personnel who can identify strengths and weaknesses, make adjustments in assignments, and provide additional support or professional development opportunities as necessary. In many schools, this evaluation is the responsibility of a principal (and sometimes assistant principal) who must find time to evaluate 20 to 30 teachers. It's important to analyze the principal's span of review.

Worksheet 3: Principal Span of Review

OBJECTIVE: To understand how many teachers each principal (or school leader) is expected to support and develop in a school year.

SUMMARY OF METRICS

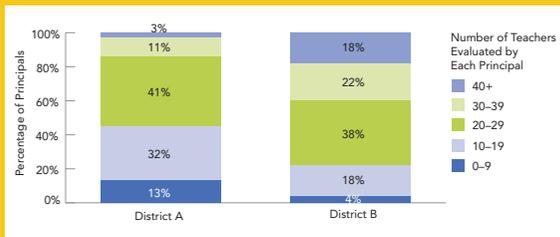
STEP 1: Identify school evaluation practices.

STEP 2: Calculate the number of teachers evaluated by the principal (or other evaluators).

STEP 3: Graph comparison metrics by school.

REMINDER

Figure 3: Principal Span of Review



STEP 1: Identify school evaluation practices.

1. Determine how teacher evaluation data are collected. This will either be done at the central office in the district human resources file or in a report of all teacher evaluations with the appropriate evaluator noted. Or this will be reported at each individual school.
 - a. Within this report, ensure there is a field "evaluator role" or some other text to signify the position of the evaluator (e.g., principal, assistant principal).
2. Determine whether principal, assistant principal, or another individual is responsible for teacher evaluation. This will be crucial to determine span of review for principals and other evaluators.

STEP 2: Calculate the number of teachers evaluated by the principal (or other evaluators).

1. Using the teacher evaluation data collected either centrally or by school, determine evaluator span of review. By school, simply count the number of teachers a principal (or other evaluator) evaluated in a given school year. For a more robust analysis, use multiple years of evaluation data for each school and average the number of teachers assigned to a single principal (or other evaluator).

STEP 3: Graph comparison metrics by school.

1. Construct a bar graph like Figure 3, in which:
 - a. Each stack in the bar represents the percentage of principals (or evaluators) for each span of review range.
 - b. Each bar represents 100% of the principals (or evaluators) at each school.

QUESTIONS TO CONSIDER AND ACTION STEPS

Questions to Consider

1. Is your district investing significantly in coaches and collaborative planning time?
2. Are your coaches focused in areas of highest need or fragmented across too many schools and teachers to be effective?
3. Are there opportunities to improve the return on your coaching investment by redeploying coaches and implementing best practices around school-based teacher support?
4. Do your coaches and teachers have access to regular formative assessments to prioritize areas for instructional improvement, collaboration, and professional development?
5. Do school leaders and other teacher evaluators have enough time to effectively evaluate and develop the teachers for whom they are responsible?

Take Action!

- **Invest in collaborative planning time.** All teachers in your district, but especially those teaching struggling students, should have at least 90 minutes of collaborative planning time each week.² This time must be dedicated to improving instruction based on what students need to raise achievement. Teachers need to work together, using student work and information from ongoing assessments, to adjust practices, and they may need expert support. Although the required release time can be difficult to fund, districts can find additional resources by using strategies such as: improving the management of school programs, sizes, and capacity; increasing class sizes in non-core subjects; and using part-time staff and less-expensive staff to cover release time.
- **Invest in formative assessments.** Regular student assessment data are critical to high-quality professional development and collaborative planning time. Ongoing formative assessment data allow teachers to closely track the performance of their students to evaluate the effectiveness of specific practices and interventions. Districts can invest to develop or purchase assessment tools to augment school- and teacher-developed assessments.
- **Tailor teacher support to individual teacher needs.** Every school has a mix of teachers with different developmental needs. Support principals in implementing different strategies for different types of teachers:
 - **Immediate intervention for subpar teachers:** Struggling teachers should immediately be placed on performance plans. These plans should include clear goals, time frames, and support. School leaders should consider co-teaching or other options to provide coaching support and to ensure students assigned to these teachers do not fall behind in achieving learning goals.
 - **Induction support for new teachers:** Strong induction and mentoring programs can provide extra support for new teachers, while leveraging the expertise of existing staff members and giving them additional ways to grow as professionals. Novice teachers may benefit from other support as well, such as reduced class sizes or course loads, or serving as a co-teacher for part of the day or week.

2 Rowan, B., Chiang, F-S., Miller, R.J. (1997). "Using Research on Employees' Performance to Study the Effects of Teachers on Students' Achievement." *Sociology of Education*, 70, pp. 256–284.

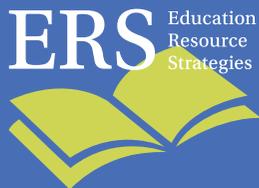
- **Individual development for satisfactory teachers:** “Average” teachers who may have leveled off in their development, or who may be strong in some areas while struggling in others, need individualized development plans to take them from good to great.
- **Leadership opportunities for excellent teachers:** School leaders should leverage their strongest teachers to help coach and mentor other teachers, develop curriculum, and improve schoolwide practices. Districts can help by creating leadership positions and other opportunities for more responsibility and more compensation.

For more information on supporting individual teacher growth, see the ERS guide *The Teaching Job: Restructuring for Effectiveness*.

- **Ensure that your investment in coaching/teacher leaders is leveraged.** Adding instructional coaches or teacher leaders is costly, so it is important to ensure that you invest these dollars well. Clearly define the job responsibilities, and then recruit and hire carefully. Instructional coaches should demonstrate not only outstanding teaching skills but also skills that make them effective at improving the practice of others, including leadership, team building, and organizational skills. Be explicit about performance expectations and accountability, including the relationships among the coaches, teachers, and principals. Provide training for coaches and teacher leaders as well, steeping them in research about the best way to teach adults, how to use student data on an ongoing basis, and how to convey emerging research about the most effective teaching practices for struggling students. Make sure that coaches’ or teacher leaders’ spans of control are concentrated enough to allow sufficient time with each teacher. Coaches need time to observe, model, and provide feedback and support regularly. Avoid diminishing their impact by spreading them too thinly across too many teachers.
- **Move toward building expert support *within* teacher teams.** In districts or schools with low overall teaching capacity, it may make the most sense to hire and deploy full-time instructional coaches. However, in schools that have teacher capacity and in all schools over time, using teacher leaders within schools and on teacher teams can be both more effective and less costly. This approach allows outstanding teachers to remain in the classroom for part of their time, while leveraging their expertise to support their peers. It also gives teachers and school leaders more flexibility to draw on teachers’ different skill sets—different teachers “coach” in different areas based on their expertise. A teacher leader strategy also provides more stability, as teachers work in teams with their peers over time, rather than working with a coach who might be assigned to their school one year and a different school the next.

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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