

DMT COMPANION

Insight 39 · 2025 · for district leaders and instructional coaches



INVESTING IN CURRICULUM OR TEACHERS?

Examining district spending and mathematics professional learning

Examining District Investment Priorities

Districts invest substantial resources in curriculum purchases, implementation training, and professional development. This Companion helps district leaders and instructional coaches examine those expenditures and consider whether enough resources go toward developing teachers' mathematical knowledge.

Key Idea • Before adopting another mathematics curriculum, examine what the district has invested in teacher learning.

Where the Budget Goes

Most of a district's budget pays for people. In 2020–21, salaries and employee benefits accounted for 79 percent of current expenditures in U.S. public elementary and secondary schools (NCES). The remaining current expenditures cover purchased services, supplies, instructional materials, and other operating costs. Capital expenditures are accounted for separately.

Consider an illustrative district with \$100 million in annual current expenditures and about 5,400 students. Apply the 79 percent benchmark to salaries and benefits, and assume that curriculum and professional development across all subjects account for 4.5 percent, or \$4.5 million. The percentages other than 79 percent are assumptions for the example, not national averages.

An illustrative district: \$100 million in annual current expenditures



Curriculum and professional development, all subjects: \$4.5 million (4.5%, assumed)

79% is the national benchmark for salaries and benefits (NCES, 2020–21). The other amounts are assumptions.

Reallocation scenarios within the same current expenditures

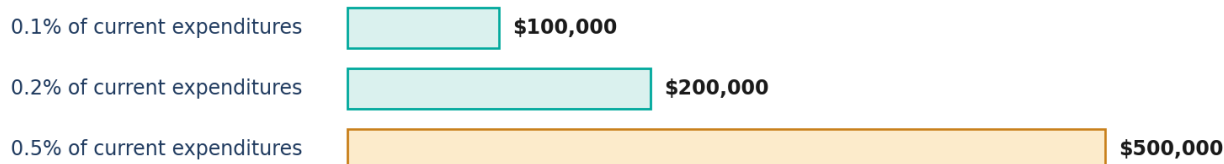


Figure 1. An illustrative district with \$100 million in annual current expenditures and three reallocation scenarios.

Examining Mathematics Spending

Districts report curriculum and professional development expenditures in different ways. The following categories show the kinds of spending comparisons district leaders should examine. Only the 79 percent salary-and-benefits benchmark is a documented national figure; the other amounts in this Companion are illustrative assumptions, not national spending patterns.

Spending category	What districts should examine?
Curriculum purchases	Initial costs, replacement materials, licenses
Implementation training	Publisher sessions, staff time, substitutes
General professional development	Districtwide sessions, coaching, release time
Mathematics professional development	Content-focused learning, student-work analysis, coaching
Total investment	Annual and five-year expenditures

Curriculum purchases and professional development are often recorded across different periods and categories. For a fair comparison, use the same district, the same years, and consistent spending categories.

Curriculum, Implementation, and Mathematics Professional Learning

District records often combine costs that serve different purposes. Separate them into four categories:

- **Curriculum purchases:** materials, licenses, and replacements.
- **Publisher implementation training:** orientation to the materials, pacing, and routines.
- **General professional development:** sessions, coaching, and release time across subjects.
- **Sustained mathematics professional learning:** teachers study mathematical content, examine student work, and connect the mathematics to instructional decisions.

These expenditures serve different purposes. District leaders need to know not only how much they spend in each category, but also what teachers learn from that investment.

Reallocating Resources Toward Mathematics Professional Learning

Consider an illustrative district professional development budget of \$1,000,000 a year, of which \$100,000 currently supports mathematics content-focused professional learning.

Illustrative annual professional development budget	Amount
Total district professional development	\$1,000,000
Current mathematics content professional development	\$100,000
Option A: Reallocate \$100,000 from other professional development categories	+\$100,000
New mathematics professional development allocation	\$200,000
Option B: Reallocate \$200,000 from other professional development categories	+\$200,000
Alternative mathematics professional development allocation	\$300,000

These are illustrative assumptions, not reported district expenditures. The two options are alternatives within the same \$1,000,000 budget, not cumulative additions.

A hypothetical \$1 million professional development budget

Current allocation (hypothetical)

\$500,000	\$250,000	\$150,000	\$100,000
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- ☐ Instructional coaching, all subjects
- ☐ Curriculum orientation and publisher training
- ☐ General professional development
- ☒ Mathematics content

Shift \$100,000: mathematics content doubles to \$200,000

\$450,000	\$200,000	\$150,000	\$200,000
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Shift \$200,000: mathematics content triples to \$300,000

\$400,000	\$150,000	\$150,000	\$300,000
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All amounts are hypothetical. They are not estimates of what districts spend or predictions of achievement gains.

Figure 2. A hypothetical \$1 million professional development budget and two reallocation scenarios.

In a district with \$100 million in annual current expenditures, 0.5 percent equals \$500,000. That amount could support a substantial mathematics professional-learning initiative. A district would still need to identify a feasible funding source.

Comparing Spending Across an Adoption Cycle

Comparing a one-time curriculum purchase with one year of professional development is misleading. Total each category across the adoption cycle, using your district’s figures. Use the same five-year period for curriculum purchases, implementation training, and mathematics professional learning. Include teacher time, substitutes, coaching, and other costs when you can identify them.

Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Curriculum purchases and licenses						
Publisher implementation training						
General professional development						
Mathematics content-focused professional learning.						

What Are We Investing In?

Quality mathematics professional learning should help teachers understand the mathematical structure underlying the content they teach. Teachers need to recognize the unit, understand how quantities are composed and decomposed, examine how units are partitioned and iterated, and connect representations to mathematical relationships and procedures. They also need to examine student thinking and decide which mathematical ideas to develop next.

Example · a student adds one-third and one-fourth

A student writes $\frac{1}{3} + \frac{1}{4} = \frac{2}{7}$. What does a teacher need to know to respond?

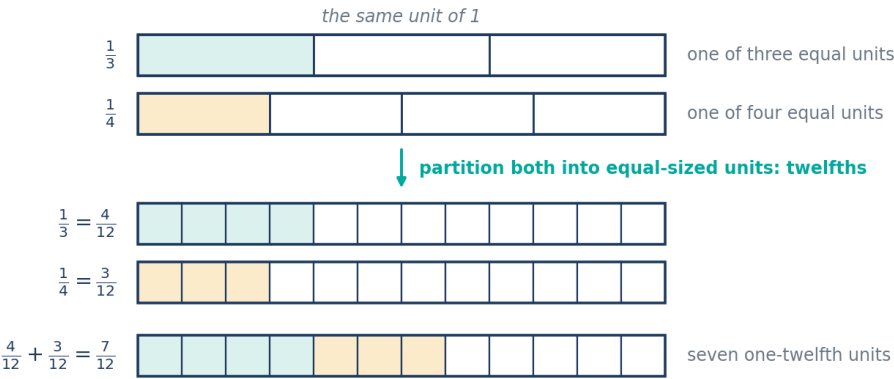


Figure 3. Partitioning the same unit of 1 into twelfths expresses both quantities in equal-sized units.

Questions for district leaders and coaches:

- “What does the student’s response tell us about how they are reasoning?”
- “What is the unit in each fraction?”
- “Why must the units be the same size before we combine the quantities?”
- “What model would help the student see the relationship?”

“What question would you ask the student next?”

A District Investment Audit

Use these questions to examine both what the district spends and what teachers learn.

Question	Evidence district leaders should examine
What are we spending on curriculum?	Purchases, licenses, replacements, materials
What are we spending on implementation?	Publisher training, release time, support
What are we spending on mathematics professional development?	Content-focused sessions, coaching, collaboration
What are teachers learning?	Mathematical explanations, models, student-work analysis, instructional decisions
What is changing in instruction?	Teacher questions, representations, responses to misconceptions, student reasoning

Before the Next Adoption

Before adopting another mathematics curriculum, district leaders should examine whether teachers have had sufficient opportunities to learn the mathematics, examine student thinking, and develop the instructional practices needed to use the materials effectively.

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