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Section 1: Introduction

In an era of aggressive public education reform, it is important to ask not only whether new initiatives are effective in raising student achievement, but also how they can best maximize current investments in teaching and learning. While school districts ideally should use comprehensive information systems to develop data-driven budgets that link school spending to desired educational outcomes, examples of this practice are rare. Instead, school budget models have been mostly constructed piecemeal over decades to meet the increasing demands, and conflicting priorities, of the modern education system. What is needed is a more strategic and deliberative approach to school budgeting, as well as tools and resources to help challenged districts make more efficient and effective spending decisions.

The goal of this document is to serve as a user-friendly summary of existing resources on school finance, budgeting, and reallocation. What is offered is not specific guidance on how to spend money or on which programs to fund. Evidence on most educational practices remains uncertain, particularly with regard to how resource allocation shapes outcomes, and research into school finance indicates that school budgeting may be most effective when decisions are locally determined and attentive to school and community needs. Rather, this document is intended to push school leaders to take a more deliberative approach to school budgeting that includes: setting goals; analyzing spending patterns; building consensus on an effective approach; choosing the right budget model; and tracking costs. The toolkit directs school business officials and district leaders to practical and useful information to help shape resource decisions. Each section includes an overview of each topic, summaries of the most useful documents and resources, relevant case studies (if available), and a resource list with hyperlinked documents for easy access.^a

The toolkit is organized in this way:

Section 1: Introduction: An overview of the toolkit.

The state of school budgets: What education budgets look like today.

Why local budget analysis is needed: Spending and outcomes are not linked; what local leaders can do.

Section 2: Setting goals: Creating a strategy for resource allocation in your district.

Transparency and communication about resource allocation: Tips for communication about budget decisions.

Section 3: Types of budgets: Discussion of budget models available for school districts.

Table 3.1: Notable school budgets: Table outlining education budget models, including pros and cons of using each.

Site-based budgets: Decentralized budget model at the school level.

Student-based budgets / Weighted student funding: Distributing resources based on individual student needs.

Section 4: Strategies for analyzing current spending: Research on resource reallocation.

Formulas to analyze current budget allocations: Ways to analyze current budget allocations.

Budget analysis in practice: Using budget analysis research to understand district spending.

Evidence for reallocation strategies: Discussion of reallocation strategies based on research evidence.

Research on spending in classrooms: Research findings related to spending for teachers and classrooms.

Section 5: Tools for budget analysis: Tools available for districts to analyze their own budget.

Table 5.1: Tools for budget analysis: Table outlining existing tools for budget analysis.

Section 6: Cost saving strategies: Reducing costs in your district.

Contracting services: Using outsourcing as a cost saving strategy.

Table 6.1: Examples of cost saving strategies: List of potential cost saving strategies, including related resources.

Appendix A: Methodology: A description of the methodology used in creating this document.

Appendix B: References in topic order: Complete list of references used to create this document, organized by topic.

Appendix C: References in alphabetical order: Complete list of references in alphabetical order.

Appendix D: MASBO publications: Descriptions of other notable MASBO publications.

a. Note: There are many more documents or sources in each resource list than discussed in the text; these are still relevant to the topic and may prove useful. Moreover, the selected documents and sources referenced in this publication are not endorsed by the Rennie Center. In some cases, the full text of a document or book is not available online; in these instances, hyperlinks lead to the most relevant location (such as an online retailer selling the book). Links to resources are accurate as of the date of release.

The state of school budgets

Budgeting is the process of using information to allocate finite resources to prioritize organizational needs. In school districts, budgeting requires using information about school staff, students, and facilities to meet student learning needs and goals.¹ Districts ideally should use comprehensive information systems, including financial data and student performance measures, to develop data-driven budgets that help ensure the effective use of resources to support and align effective practice across programs and educational departments.²

Unfortunately, information systems linking school spending and student performance rarely exist, if at all. Current school finance models, especially at the local level, are typically not designed to support uniformly high levels of student learning, particularly when dealing with diverse student populations. They were constructed incongruently over decades to fund enrollment, build schools, support programs, hire staff, etc. What exists today are funding arrangements so complex that it is difficult to use resources strategically or track their effects.³

For example, districts are often drawn to new ideas for improving student performance and, consequently, launch new initiatives, but leave previous initiatives in place. Without using data to analyze the impact of all activities, leaders may base decisions on “fairness” and reduce spending across the board. Furthermore, district leaders often make decisions based on political considerations rather than organizational effectiveness.⁴

The information found in this document is meant to guide districts and schools in using funds wisely and appropriately. It is not meant to make prescriptions about what works and does not work. Each district and school is different. Thus, the resources presented here offer a summary of research and information available on the topic of school district budget allocation as a starting point for districts examining their own budgeting processes.

RESOURCES

[Financial Accounting for Local and State School Systems \(Ch. 1\)](#)
National Center for Education Statistics

[Funding Student Learning: How to Align Education Resources with Student Learning Goals](#)
National Working Group on Funding Student Learning

[Investing in Improvement: Strategy and Resource Allocation in Public Schools Districts](#)
Childress

[Making Education Dollars Work: Understanding Resource Allocation](#)
Southwest Educational Development Laboratory

[Educational Opportunity is Achievable and Affordable](#)
Rebell & Wolf

BOOKS

[School Finance: A Policy Perspective, Fourth Edition \(Ch. 8\)](#)
Odden & Picus

[Schoolhouses, Courthouses and Statehouses: Solving the Funding-Achievement Puzzle in America's Public Schools](#)
Hanushek & Lindseth

[Courts & Kids: Pursuing Educational Equity Through the State Courts](#)
Rebell

Why local budget analysis is needed

Education finance researchers suggest resource effectiveness principally depends on how students and teachers use resources, not just whether they are present.⁵ Yet, at the same time, research recognizes that it is difficult to isolate the effects of spending on student performance in empirical studies. Teaching and learning are influenced by a variety of factors, many of which are external to the school and cannot be included in analyses. Ultimately, if resources had a clear and consistent effect on student performance, policy-making and budgeting would be straightforward. But it does not, and it is not.⁶

Many researchers have attempted to connect spending and outcomes; however, findings are inconsistent. One meta-analysis of over 400 research studies reveals there is no clear relationship (statistically or observed) between resources and student outcomes, concluding “the impact of resources on student achievement is unknown at this time.”⁷ This is not to suggest that money does not matter. Increasingly, districts have recognized that different student populations and needs require different funding arrangements. Other research has shown that spending levels may influence educational outcomes when the question posed is not one of general inquiry, but rather an examination of specific student sub-groups or educational programs.⁸ Ultimately, clear evidence on how much money should be spent, and on what, remains elusive. Despite this, school districts must work within their capacity to produce budgets that support the needs of their students and community. Common problems district leaders face are typically related to budgeting around the following areas: targeting achievement gaps; alignment of resources to support learning improvement agendas; managing the politics of learning-focused leadership; and, developing the human capital of the school or district.⁹ Many education finance researchers agree the following practices should guide resource allocation decisions:

- Decentralize spending authority to schools, in keeping with good managerial practice and school-based accountability for student learning;
- Calculate school budgets based on individual students and their educational needs; and
- Develop strong information systems and use them to support planning, monitoring, and evaluation of resource use.¹⁰

For more information about using resource reallocation as a tool to create change in education, district leaders should visit the resource below.

Reallocating Resources for School Improvement

This practical guide serves as a “how-to” for school leaders interested in supporting comprehensive school reform through the reallocation of district resources. Resource reallocation can be used as a tool to create broad, system-wide change by reducing categorical approaches to students. The document provides the context for reallocating resources, as well as practical tools and examples from practitioners who have experience with district reallocation.

RESOURCES

[Reallocating Resources for School Improvement](#)
Center for Comprehensive School Reform and Improvement

[Making Education Dollars Work: Understanding Resource Allocation](#)
Southwest Educational Development Laboratory

[Examination of Resource Allocation in Education: Connecting Spending to Student Performance](#)
Pan, Rudo, Schneider, & Smith-Hansen / Southwest Educational Development Laboratory

[Efficiency and Equity in Education](#)
Hanushek

[Aggregation and the Estimated Effects of School Resources](#)
Hanushek, Rivkin, & Taylor

[School Resources and Student Outcomes](#)
Card & Krueger

[The Use of Cost-Benefit Analysis in Guiding Investments in Human Capital in Elementary and Secondary School](#)
Belfield

[Assessing the Effects of School Resources on Student Performance: An Update](#)
Hanushek

[Allocating Resources and Creating Incentives to Improve Teaching and Learning](#)
Plecki, Alejano, Knapp & Lochmiller

[Investing in Learning: School Funding Policies to Foster High Performance](#)
Committee for Economic Development

BOOK

“Have times changed?” in [Does Money Matter?](#) (Ch. 3)
Hedges & Greenwald in Burtless

Section 2: Setting goals

Increasing efficiency in school spending begins by identifying ambitious district goals and designing a budget so all elements support those goals. Doing so allows school and district leaders to analyze the budget to identify whether resource allocations support or hinder reaching those goals, and then take steps to reallocate accordingly. However, while identifying and developing a strategy for reallocating resources around collective goals is essential and may sound logical, it is not common practice. The following are research- and practice-based steps for goal setting prior to budget analysis, followed by resources on this topic:

1. Build understanding of school's education community, including all stakeholders (staff, parents, community members, and students). Conduct self-examination to identify and clarify community beliefs, values, expectations, strengths, and priorities. Communicate with stakeholders at each step of the process.
2. Identify needs, priorities, and goals of all students by examining disaggregated data on student performance outcomes. Consider environmental and contextual circumstances of the school, district, or state. Build goals based on this data.
3. Track where money is currently allocated, assess which resources are available, and align spending with goals. Evaluate whether resources are targeted for academic performance improvement. Use results to modify current allocation strategies.
Note: A budget based on goals should detail priorities and outline strategies that will improve student performance, and serve as a blueprint for making changes.
4. Continue to evaluate progress towards goals.

Making Good Choices: Sustainable School Improvement

This document offers research-based strategies for lasting school change. Chapter 5 cautions districts that successful resource allocation requires a coordinated set of strategies, not just one or two new initiatives added on to existing practices. Advice to districts includes: assess all expenditures and how they are furthering school goals; prioritize programs accordingly; and cut those that do not further goals. This section also offers five strategies to consider, questions for reflection, and actionable suggestions and tools for each strategy.

Examination of Resource Allocation in Education: Connecting Spending to Student Performance

Based on an analysis of resource use and school performance in four states in the southwest U.S., the alignment of resources and school goals was a common theme among districts with academic gains. This document includes recommendations about resource allocation based on the research findings.

Investing in Improvement: Strategy and Resource Allocation in Public Schools Districts

An analysis of strategic education resource decisions found that districts wanted to increase the capacity of the system to produce results, but strategies were mixed and unproductive. This document offers a framework for achieving coherence between strategy and resource allocation, including developing and implementing strategies, and highlights examples from three large, urban districts.

RESOURCES

[Examination of Resource Allocation in Education: Connecting Spending to Student Performance](#)
Pan, Rudo, Schneider, & Smith-Hansen / Southwest Educational Development Laboratory

[Making Good Choices: Sustainable School Improvement](#)
Walter / Northwest Regional Educational Laboratory

[Investing in Improvement: Strategy and Resource Allocation in Public Schools Districts](#)
Childress

[Funding Student Learning: How to Align Education Resources with Student Learning Goals](#)
National Working Group on Funding Student Learning

[Noteworthy Perspectives: Comprehensive School Reform \(Ch. 8\)](#)
Mid-continent Research for Education and Learning

BOOKS

[Financing Schools for High Performance: Strategies for Improving the Use of Educational Resources](#)
Odden & Busch

[School Finance: A Policy Perspective, Fourth Edition](#)
Odden & Picus

Transparency and communication about resource allocation

Education leaders who make decisions and changes in schools and districts may encounter stakeholders (including school and community members) who are distrustful of or opposed to the changes. Making decisions about more effectively using resources is not valuable unless stakeholders clearly understand and support those decisions. Moreover, effectively articulating proposed changes is an opportunity to build consensus and demonstrate thoroughness in the process that led to recommended action. The following documents offer advice on using transparency when presenting budget changes:

Why Communication Matters

A valuable resource for district leaders, this brief article offers advice on presenting budget changes to stakeholders and community members. Advice includes techniques for using honest and transparent communication around tough budget decisions.

Toward Effective Resource Use: Assessing How Education Dollars are Spent

Research suggests that the communication of district financial matters are often poorly handled, and school business officials need tools to effectively communicate and build confidence among local education stakeholders. This document offers a framework for effective resource use, meant to offer a continuous improvement process to education leaders. The third principle of the framework, "Communicate," focuses on the implementation and communication of operational reforms. The authors urge leaders to use objective data, reports, and tools to better communicate spending priorities and cost saving opportunities.

RESOURCES

[Why Communication Matters](#)
Carr

[Toward Effective Resource Use: Assessing How Education Dollars are Spent](#)
Willis, Durante & Gazzo

[How Americans Would Slim Down Public Education](#)
Thomas B. Fordham Institute

[Help for Your Budget Woes: A School District Budget Toolkit](#)
American Association of School Administrators

Section 3: Types of Budgets

Budgeting is the process of allocating financial resources to district goals. In the public sector, such as in school districts, a variety of parties must agree about using resources towards prioritized goals. Using sound budget models and practices helps districts meet those goals. The table on the following two pages offers a summary of the most popular budgets for school districts—including some pros and cons of each—followed by more detailed summaries on site-based budgets and student-based budgets. Please note: the information provided is meant to inform about the different types of budgets most commonly used in school districts. Each budget type is not mutually exclusive, and several budgets may contain similar elements or pros and cons. This list should not be used to make budget decisions; rather, the information below is meant to provide preliminary information for districts deciding which budget type is most appropriate to explore for their purposes.

Table 3.1: Popular School Budgets

Budget	What is it?	Pros	Cons	Resources
Line-item	<ul style="list-style-type: none"> • “Historical” approach, using historical expenditure and revenue data. • Level of expenditure detail is fund, function, or object. • May be augmented with some supplemental program and performance information. 	<ul style="list-style-type: none"> • Simplicity and ease of preparation. • Budgets by organizational unit and object. Consistent with lines of authority and responsibility. • Allows for accumulation of expenditure data by organizational unit for use in trend/historical analysis. 	<ul style="list-style-type: none"> • Presents little useful information to decision-makers on functions and activities of organizational units. • Justifications for expenditures not explicit. • Invites micromanagement by administrators without performance information. 	Financial Accounting for Local and State School Systems (Ch. 3)
Percentage add-on	<ul style="list-style-type: none"> • Adding percentage to previous year’s funding level. 	<ul style="list-style-type: none"> • Simplicity for governing body and board. 	<ul style="list-style-type: none"> • May be removed from district’s real needs, e.g., school may need a greater increase than add-on budget allows. 	American Public School Finance
Zero-based	<ul style="list-style-type: none"> • Budget starts from zero each year. No reference to previous year’s budget, and each budget inclusion must be justified. • Budget prepared by dividing operations into decision units. Individual units then aggregated to decision packages on basis of program activities, goals, organizational units, etc. 	<ul style="list-style-type: none"> • Staff involved in selecting resource allocation. Fosters public confidence in budgeting process. • Elimination of outdated efforts/expenditures and concentration of resources where most effective. • Particularly useful when overall spending must be reduced. 	<ul style="list-style-type: none"> • Most districts do not have the staff/time to adequately address the level of complexity required to administer. • Requires great deal of staff time, planning, and paperwork. • Limited implementation in schools thus far. 	Financial Accounting for Local and State School Systems (Ch. 3) American Public School Finance
Program & planning	<ul style="list-style-type: none"> • Bases expenditures primarily on programs, and secondarily on objects. • Used for planning, establishing, modifying and improving goals: determines cost and alternative plan’s cost for achieving each goal. • Transitional form between traditional line-item and performance-based budgets. 	<ul style="list-style-type: none"> • Places emphasis on identifying goals of the organization and then relating expenditures to goals. • Places less emphasis on control/evaluation. • Reports summarized in broad terms and not specific line items. • Allows for long-range planning. 	<ul style="list-style-type: none"> • Can be limited by: changes in long-term goals, lack of consensus on organizational goals; lack of adequate program/cost data; and difficulty administering programs that involve several organizational units. 	Financial Accounting for Local and State School Systems (Ch. 3) American Public School Finance

Table continues on next page

Budget	What is it?	Pros	Cons	Resources
Performance-based	<ul style="list-style-type: none"> Based on standard cost of inputs multiplied by number of units of an activity to be provided in a time period. Narrative descriptions of each program or activity included in the budget. 	<ul style="list-style-type: none"> Focuses on measuring/evaluating outcomes. Provides more useful information for consideration and evaluation by administrators. Individual schools given flexibility over budgets as long as they meet school and district goals. 	<ul style="list-style-type: none"> Most useful for routine and measurable activities (e.g., vehicle maintenance and accounts payable processing). Lack of reliable standard cost information. 	<p>Financial Accounting for Local and State School Systems (Ch. 3)</p> <p>American Public School Finance</p>
Site-based	<ul style="list-style-type: none"> Decentralizes budget authority and process. Resources allocated to individual sites, and budgetary authority granted to school's principal/staff. Allows for alignment of goals with resources. Considered most practical for schools. 	<ul style="list-style-type: none"> Those who best understand needs have the authority to make decisions. Provides greater control/reporting of school-level data and greater school-level accountability. Staff/community given a voice, generating public support. 	<ul style="list-style-type: none"> Time/skills necessary to manage process. Few school-level officials are trained to plan and administer site-based budgets. Site-based budgeting may be burdensome to some local managers and increase conflict. 	See "Site-based budgets" on page 8.
Outcome-focused	<ul style="list-style-type: none"> Linking allocation of resources to the production of outcomes. Budget resources given to those who use them most effectively. 	<ul style="list-style-type: none"> Linked to planning process. Some argue these budgets are more effective in producing desired results, more innovative, and more flexible. 	<ul style="list-style-type: none"> Goals and objectives must be identified and tied to budget allocations. Clear communication with stakeholders should be established in advance. 	<p>Financial Accounting for Local and State School Systems (Ch. 3)</p>
Student-based	<ul style="list-style-type: none"> Formula that allows the money to follow the student: school site budgets are determined by student need. School-level autonomy allows schools to provide different levels of resources and services. Also known as "weighted student funding" or "student-weighted allocation." 	<ul style="list-style-type: none"> Transparent funding, so it is known to all what resources flow to which student. Eliminates accounting and spending money in narrowly defined ways. Offers flexibility in programming decisions. 	<ul style="list-style-type: none"> Focused on inputs and can be problematic if not linked to outcome accountability. Decision makers may be unable to redirect added resources in productive ways (given restraints from contracts, state regulations, federal laws, etc.). 	See "Student-based budgets" on page 9.

Site-based budgets

Increasingly, the decentralization of district budgets through the adoption of site-based budgeting has become a popular strategy for giving school leaders and staff a voice in determining how resources are spent. For this reason, we highlight a number of resources below and in the adjacent text box. However, readers should exercise some caution with this approach. While site-based budgeting may be a highly effective strategy for addressing local needs, certain preconditions are needed to make it work effectively. Site-based budgeting requires local administrators to be well-versed in effective budgeting practices and clear communication between state and district leaders and schools to ensure individual decisions remain consistent with the demands of established standards and accountability systems. In the absence of these important factors, resource allocation is unlikely to be an effective lever for change.

Freeing School Resources for Student Learning: The “Missing Piece” in Making Accountability Meaningful

In many districts, schools have limited ability to change their use of resources. This brief argues that without this control, schools have difficulty sustaining new strategies and lack meaningful accountability. To correct this, districts can give schools more autonomy to reach school goals. The document describes attributes of a traditional district and a school-focused district and offers steps to creating more school autonomy, including: understand and document barriers to greater school-level control; allocate money, not positions; and create accountability for effective use of resources. The appendices of the document offer tools for self-assessment.

Sustaining School Improvement: Resource Allocation

This short brief stresses that schools must regularly evaluate whether financial, human, and time resources are allocated in the most appropriate ways to meet school and district goals. Research has shown that schools with authority over their budgets are better able to sustain improvement efforts. The document offers a short self-assessment of the adequacy of the resource allocation process.

Site-based budgets: Case study

A Case Study of District Decentralization and Site-Based Budgeting

This case study explains a school district’s planning and implementation process for site-based budgeting. The case includes details of the district’s steps taken to decentralize Title I dollars, the extensive planning process for site-based budgeting, and implementation challenges due to a budget shortfall. The authors also describe a framework adopted by the district to guide the development of a site-based funding formula.

RESOURCES

[Investing in Learning: School Funding Policies to Foster High Performance](#)
Committee for Economic Development

[Sustaining School Improvement: Resource Allocation](#)
Mid-continent Research for Education and Learning

[A Case Study of District Decentralization and Site-Based Budgeting](#)
Fermanich, Odden & Archibald

[Freeing School Resources for Student Learning: The “Missing Piece” in Making Accountability Meaningful](#)
Hawley Miles

BOOK

[Schoolhouses, Courthouses and Statehouses: Solving the Funding-Achievement Puzzle in America’s Public Schools \(Pages 217-262\)](#)
Hanushek & Lindseth

Student-based budgets / Weighted student funding

Student-based budgeting, also known as weighted student funding, refers to a method of allocation in which the dollars follow individual students, rather than basing schools' budgets on enrollment numbers. Proponents of student-based budgeting believe it allows for a more equitable allocation of funds among students and schools with different needs, such as those serving high-poverty populations, students enrolled in special education, or English language learners.

An underlying assumption of this approach is that some schools cost more to operate than others, and some students cost more to educate than others. Therefore, equity does not mean equal dollars; instead, equity refers to leveling the playing field and providing all students the same opportunity to learn. Often this means some schools and/or students receive more dollars than others. This supports school-level budget autonomy, allowing schools to provide different levels of resources and services based on their student population. For this reason, student-based budgets are most useful in large, diverse districts. For details about using student-based budgeting, including case studies, see the following:

First Steps to a Level Playing Field: An Introduction to Student-Based Budgeting

The authors of this primer on student-based budgeting argue that traditional budgeting is unfair. This piece describes the benefits and challenges associated with moving toward a student-based budgeting model, including political, financial, capacity, and operational challenges. The experiences of three urban districts are highlighted, followed by lessons learned and tips for addressing implementation challenges.

Weighted Student Formula: Putting Funds Where They Count in Education Reform

This paper compares a needs-oriented student-based budgeting system against a funding model used in most urban districts (enrollment ratio formula) that does not target programs to the student population in each school. The authors then give suggestions for successful implementation of student-based budgeting, including:

- Establish a public forum for making weighting decisions;
- Give schools information on expenditures;
- Make it easy for schools to purchase from outside vendors; and
- Make information on school performance public.

Site-based budgeting: Case studies

Moving Toward Equity in School Funding within Districts: A Comparison of Traditional Funding Policies and More Equitable Formulas

Using case studies of three large, urban school districts, this document makes a strong case for using student-based budgeting. Analysis found student-based budgeting is more equitable than staff-based budgeting, non-student based dollars were less equitable, some weightings were motivated by politics, and student-based formulas can be modified each year.

Funding a Better Education: Conclusions from the First Three Years of Student-based Budgeting in Hartford

This document highlights changes in district funding after implementing student-based budgeting, particularly: allocations became more equitable; principals' sense of school-level accountability increased; and there was greater transparency in the district funding process. A sample allocation of student-based funds and comparisons of funding differences between schools is provided.

RESOURCES

The Progress of Education Reform: Understanding State School Funding
Education Commission of the States

Within-District Resource Allocation and the Marginal Costs of Providing Equal Educational Opportunity
Baker

Investing in Learning: School Funding Policies to Foster High Performance
Committee for Economic Development

Weighted Student Formula: Putting Funds Where They Count in Education Reform
Cooper

Moving Toward Equity in School Funding within Districts: A Comparison
Roza & Hawley Miles

Understanding Student-Weighted Allocation as a Means to Greater School Resource Equity
Hawley Miles & Roza

First Steps to a Level Playing Field: An Introduction to Student-Based Budgeting
Ucelli, Foley & Emdon

Funding a Better Education: Conclusions from the First Three Years of Student-based Budgeting in Hartford
Public Impact

Weighted Student Funding District Summaries
Education Resource Strategies

Student-Based Budgeting: Voices in Urban Education
Annenberg Institute for School Reform

Section 4: Strategies for analyzing current spending

Analyzing current budget allocations is strongly advised to accurately determine whether a school district is adequately meeting its goals. After identifying needs and priorities of the district and individual schools, step 3 in “Setting goals” (on page 4) urges districts to track where money is currently allocated. There are several ways to do this, including: conducting a cost analysis; converting dollars into per pupil, per teacher, or other per unit terms; and analyzing equity within the district. Districts must understand how money is currently spent in order to create a realistic and needs-based budget moving forward. Additionally, district leaders should evaluate non-monetary resources in the district, such as use of time and partnerships available.

For more information about analyzing current budget allocations, see “Formulas to analyze current budget allocations” below. The next page, “Budget analysis in practice” highlights research using budget analysis to understand district spending. Finally, “Research on spending in classrooms” uses the limited research that attempts to link teaching and learning to district budgets to provide resources on teacher issues, professional development, and class size.

Formulas to analyze current budget allocations

Making Education Dollars Work: Understanding Resource Allocation

Cost analysis can be used for exploring ways to get the greatest results from given resource levels. Researchers believe resource allocation decisions are improved when desired outcomes are articulated, and both the costs and benefits associated with reaching higher standards are understood and measured. This document offers four cost analysis methods for examining resource allocation and student achievement in a school district: educational production function, resource cost analysis, cost-effectiveness analysis, and cost-benefit analysis.

Now is a Great Time to Consider the Per Unit Cost of Everything in Education

This brief offers basic instructions and examples of breaking district dollars into per pupil, per teacher, or other per unit spending. Doing so allows districts to identify incongruent spending in the budget. Five applications of converting costs to per unit terms include:

- Converting big numbers to per unit costs to convey relative magnitude;
- Using per unit costs to consider spending trade-offs;
- Examining per student costs across schools as the basis of school budgets;
- Using per unit costs to communicate with the public; and
- Budgeting in per unit terms to stabilize the budgeting process.

Allocating Resources and Creating Incentives to Improve Teaching and Learning

This paper highlights key findings from research literature and provides strong examples of effective means for directing teaching and learning resources to and within schools. It offers a table of state, district, and school actions to bring resources (people/expertise, money, and time) allocation more closely in line with school goals or improvement agendas.

School Finance: A Policy Perspective, Fourth Edition

Chapter 3 of this textbook—“A Framework for Assessing Equity and Adequacy in School finance”—offers a discussion of three measures of analyzing equity within budgets. Pages 57-74 are most useful, offering details about three principles of children’s equity: fiscal neutrality, vertical equity, and horizontal equity.

RESOURCES

Making Education Dollars Work: Understanding Resource Allocation
Southwest Educational Development Laboratory

Now is a Great Time to Consider the Per Unit Cost of Everything in Education
Roza

District Leaders’ Guide to Reallocating Resources
Walter / Northwest Regional Educational Laboratory

Allocating resources and creating incentives to improve teaching and learning
Plecki, Alejano, Knapp & Lochmiller

School Budgets 101
Ellerson/American Association of School Administrators

BOOK

School Finance: A Policy Perspective, Fourth Edition (Ch. 3)
Odden & Picus

Budget analysis in practice

In most education settings, linking spending to outcomes is extremely difficult, if not impossible. Due to the structure of traditional school budgets—which lack data relevant to outcomes—few researchers have attempted to measure student achievement in terms of district spending. Some, as seen below, have used cost analysis models to analyze school budgets, while others have used available data to create frameworks and offer innovative suggestions for districts to analyze their own budgets. While the goal is to determine the effects of spending to the greatest extent possible, results within individual districts will vary based on available data and ability to analyze student data.

Making Education Dollars Work: Understanding Resource Allocation

This policy brief provides a broad overview of issues surrounding resource allocation in education. The piece is based on research findings showing that schools given additional funding allocate resources using the same percentages as in the past. The discussion centers around patterns in education resource allocation, limited research that connects resources and student achievement, tools used in analyzing resource allocation strategies, and the issues state policymakers face in reforming education finance in the future. The authors conclude that too many factors contribute to changes in instruction and student achievement, and identifying the impact of resource allocation on these changes is difficult.

Toward Effective Resource Use: Assessing How Education Dollars are Spent

This working paper offers examples of comparisons for non-instruction costs in school district budgets. While comparing spending with neighboring districts is useful at times, it does not provide a way to optimize existing resources. Instead, districts should consider a baseline analysis against operationally-similar peers that identifies potential savings in these areas: transportation, operations and maintenance, food service, public pension guarantees, health insurance, and fuel and energy. The document offers a framework for effective resource use, including a diagnostic roadmap and ways to achieve effective resource use in education. Districts are asked to eliminate inefficiencies—mainly in non-instructional spending—by streamlining or using cost-avoidance techniques, to allow opportunities for resource reallocation to emerge. The document also offers valuable suggestions for effectively communicating budget reforms with stakeholders.

Breaking Down School Budgets

Analysis in this study uses a “cost of services” model to inform a cost analysis of three school districts. The approach breaks down per pupil expenditures by discrete services provided, and clarifies the influence of organizational features on resource allocation. Findings reveal that per pupil spending varies by subject and course level. By isolating spending, districts can: identify the relationships between priorities, current spending, and outcomes; clarify relative spending on discrete services and organizational practices that influence how resources are allocated; and establish the current cost of providing services as a necessary precursor to identifying other services.

RESOURCES

[Financial Accounting for Local and State School Systems](#)
National Center for Education Statistics

[Making Education Dollars Work: Understanding Resource Allocation](#)
Clark, Alexander, Rudo, Pan & Boyer

[Toward Effective Resource Use: Assessing How Education Dollars are Spent](#)
Willis, Durante & Gazzo

[Breaking Down School Budgets](#)
Roza

[District Leaders' Guide to Reallocating Resources](#)
Walter / Northwest Regional Educational Laboratory

[Sustaining School Improvement: Resource Allocation](#)
Mid-continent Research for Education and Learning

[Structural influences on the internal allocation of school district resources: Evidence from New York state](#)
Monk & Hussain

[38th Annual Maintenance & Operations Cost Study for Schools](#)
American School & University

[Annotated Bibliography: District Resource Allocation Strategies](#)
American Institutes for Research

BOOK

[School Finance: A Policy Perspective, Fourth Edition \(Ch. 3\)](#)
Odden & Picus

Evidence for reallocation strategies

There is a lack of conclusive evidence about effective resource allocation. However, some education finance researchers have used their experience in the field to guide resource and budgeting decisions. The sources below offer suggestions for making resource allocation decisions:

CPRE's School Finance Research: Fifteen Years of Findings

This document offers a thorough discussion of school finance research from the Consortium for Policy Research in Education (CPRE). Findings focus around four themes: how education dollars are spent; tracking resources used for professional development; tracking resource use at the school level and by educational strategy; and reallocating dollars at the school level. In the findings, the authors suggest that the current revenues in the nation's education system can enable schools to dramatically increase student academic performance—at least in some subject areas and at some grade levels—through school restructuring and resource reallocation. Finally, the document describes general resource allocation trends in schools that improved student achievement:

- Set high goals;
- Analyzed student data to become deeply knowledgeable about the status of student performance and the nature of the achievement gap;
- Reviewed evidence on good instruction and effective curriculum and made decisions on new instructional programs—these schools threw out the old curriculum and replaced it with a more rigorous, research-based, curriculum;
- Invested heavily in teacher training;
- Provided extra help for struggling students;
- Created smaller classes in early elementary years;
- Used time more productively, such as increasing time allocations for core subjects, protecting classes from interruptions, and double class periods in subjects where students were struggling to achieve standards;
- Created “professional school communities,” with teachers working collaboratively on instructional programs and in formative assessment analyses; and
- Used programs, strategies and resource levels that can be funded with the national average expenditure per pupil.

Allocation Anatomy: How District Policies that Deploy Resources can Support (or Undermine) District Reform Strategies

Using literature from public and private sector resource allocation, this study identifies key elements of resource allocation decisions: what form the resources take and how flexible these resources are; who actually manages the distribution; what practices dictate the flow of resources (e.g., policy decisions, formulas, individual choices); what restrictions are imposed on how resources are used; and what the dollar value of the allocation is. The document also highlights different allocation practices in two districts.

What Works Clearinghouse: Find What Works

A product of the U.S. Department of Education, this website provides a searchable database of research findings about education. This site can be used to find interventions (educational programs, practices, or policies) that address school or district needs. Results include summaries of evidence of effectiveness, and users can search by positive outcomes or by academic achievement. Please note: the evidence in this site is *not linked to spending*; it is merely a summary of research findings in the field of education.

RESOURCES

CPRE's School Finance Research: Fifteen Years of Findings
Odden

Allocation Anatomy: How District Policies that Deploy Resources can Support (or Undermine) District Reform Strategies
Roza

What Works Clearinghouse: Find What Works
U.S. Department of Education, Institute for Education Sciences

District Leaders' Guide to Reallocating Resources
Walter / Northwest Regional Educational Laboratory

Investing in Learning: School Funding Policies to Foster High Performance
Committee for Economic Development

Return on Educational Investment: A district-by-district evaluation of US educational productivity
Boser / Center for American Progress

Research on spending in classrooms

School districts spend the vast majority of their budgets on personnel, including salaries, benefits, and professional development. Breaking down spending in staffing structure and teacher professional development allows schools to further align costs with school goals.

The Dollars and Sense of Comprehensive Professional Learning and An Analysis of Professional Development Spending in Four Districts Using a New Cost Framework

These two articles focus on a research-based framework for identifying essential elements of effective professional development and their costs. The first, based on an analysis of professional development (PD) spending, shows that effective PD is not expensive relative to overall spending. It describes key elements of PD and costs that can be identified, all of which are included in a proposed PD cost structure: teacher time, training, and coaching; materials and facilities; administration of PD; and travel. The analysis also identifies six features of effective PD: form, duration, active learning, content focus, collective participation, and coherence.

The second article builds off the first, using a clearly articulated cost framework to analyze PD expenditures in large urban districts in four regions of the country. Notable findings include that the expense of PD is spread across many departments and that PD is about 2.9% of total operating expenses.

A New Approach to the Cost of Teacher Turnover

The goal of the research in this document is to provide policymakers with concrete information on the costs of teacher turnover. The authors break down the costs per vacancy and replacing a teacher with an inexperienced new hire, which includes the following: costs (of separation, replacement, and training); net replacement pay; value of lost productivity; and total dollar costs. Based on findings, the authors suggest the following:

- Efforts to reduce turnover should aim primarily at teachers with some experience (not those at the top of the pay scale and not new teachers);
- There is room for monetary incentives to reduce turnover; and
- Efficiencies in the replacement staffing process can help reduce the cost of turnover.

Class Size: Counting Students Can Count

Changing class size is a contentious topic in education and is frequently debated in school districts. This document discusses research findings on class size and summarizes the conditions in which small class sizes have an effect. Most importantly, it reiterates that research shows smaller class sizes are not a cure-all for low academic achievement, and they may not always be the best use of scarce resources. Furthermore, reducing class sizes is not a quick fix, and negative, unintended consequences are possible.

RESOURCES

The Dollars and Sense of Comprehensive Professional Learning
Odden

An Analysis of Professional Development Spending in Four Districts Using a New Cost Framework
Hawley Miles, Odden, Fermanich, Archibald & Gallagher

A New Approach to the Cost of Teacher Turnover
Milanowski & Odden

Class Size: Counting Students Can Count
American Educational Research Association (AERA)

Teaching Teachers: Professional Development To Improve Student Achievement
American Educational Research Association (AERA)

Recruiting New Teachers to Urban School Districts: What Incentives Will Work
Milanowski, Longwell-Grice, Saffold, Jones, Odden & Schomisch

Smart Class-Size Policies for Lean Times
Southern Regional Education Board

Investing in Learning: School Funding Policies to Foster High Performance (Ch. 1)
Committee for Economic Development

Learning Science Meets School Finance
Sharp & Bransford

Section 5: Tools for budget analysis

By analyzing current spending, aligning it with defined goals, comparing it against other districts, and evaluating alternative resource allocations, school districts have the ability to make evidence-based changes in practice. The table below offers summaries of tools to compare spending against other districts—both nationally and locally—and tools to assess the impacts of manipulating budget allocations.

Table 5.1: Tools for budget analysis

Name of tool (hyperlinked)	Author	Type of data	Purpose	Comments
Tools to compare against other districts				
Education Finance Statistics Center	National Center for Education Statistics (NCES)	National	<ul style="list-style-type: none"> Provides financial information on public elementary and secondary education. 	<ul style="list-style-type: none"> For summary figures and tables, visit the “Finance Graphs” page. For specific school district finance data, comparisons with other districts, and district fiscal and non-fiscal data over time, visit the “Data Tools” page.
District Analysis, Review, & Assistance Tools website (DART)	MA Dept. of Elementary and Secondary Education (DESE)	District	<ul style="list-style-type: none"> Interactive Excel spreadsheet that can be used to make cross-district comparisons on finance and budgeting in Massachusetts. Allows users to compare own district expenditures with multiple comparison MA districts and with state averages. 	<ul style="list-style-type: none"> Includes information about school districts’ full-time employees, total per pupil expenditures, expenditures by source, and out-of-district expenditures. Foundation budget + Chapter 70 Aid trends are also displayed. View manual on this tool.
District Analysis, Review, & Assistance Tools website (DART): Staffing and Finance Tool	MA Dept. of Elementary and Secondary Education (DESE)	District	<ul style="list-style-type: none"> Interactive Excel spreadsheet with district-level spending information for all Massachusetts school districts. Users have option of examining detailed or summary data for each district. Includes statistical comparisons of per pupil expenditures. 	<ul style="list-style-type: none"> These calculations show all school operating expenditures including those outside the general fund such as grants, private donations, and revolving accounts. Shows the overall cost per pupil and provides details about how much schools spend in specific areas (e.g., teaching, maintenance, and administration).
Education Spending by District: online interactive tool	Massachusetts Budget & Policy Center	District	<ul style="list-style-type: none"> Online interactive map that displays MA school districts’ actual spending in health insurance and special education costs compared to amount that the foundation budget deems appropriate. 	<ul style="list-style-type: none"> The bar graph shows average spending across a variety of categories. Useful if districts are interested in actual vs. foundation budget allocations for certain education spending areas.

Table continues on next page

Name of tool (hyperlinked)	Author	Type of data	Purpose	Comments
Tools to assess impacts of manipulating budget allocations				
Making Good Choices	North Central Regional Education Lab	School	<ul style="list-style-type: none"> Self-assessment of how effectively a school is using and seeking out resources, and reflects on what steps the school has taken/should take to ensure the best use of resources. 	<ul style="list-style-type: none"> This document offers questions for reflection, actionable suggestions, and tools. Chapter 5 contains the tool.
Moving Toward Equity in School Funding Within Districts	Annenberg Institute	District	<ul style="list-style-type: none"> Combines and consolidates data so the district's investment pattern is clear. Allows leaders to analyze their expenditures in the context of equity. Tool relies on the conversion of dollar figures to an index that accounts for each student at the school (weighted-student funding). 	<ul style="list-style-type: none"> Three-step analytical method to show magnitude and location of funding inequities among schools in a district, including: funding levels across schools; variation; and funding levels by category. Includes case study examples.
Smarter Budgets, Smarter Schools: How to Survive and Thrive in Tight Times	Smarter Budgets	District	<ul style="list-style-type: none"> Set of interactive Excel spreadsheets: <ul style="list-style-type: none"> Calculate the impact of changing class sizes. Calculate staffing needs for elementary specialists. Elementary staffing decision tool. Sample transportation expense summary table. 	<ul style="list-style-type: none"> Spreadsheets use very simple calculations that can be easily manipulated by district or school administrators even if they do not have finance backgrounds. Useful for preliminary calculations. Note: are protected and therefore will need to be unprotected before manipulating data.
Freeing School Resources for Learning	Education Resource Strategies (ERS)	District	<ul style="list-style-type: none"> Offers steps to create more school autonomy. Document advises that districts need to give schools more autonomy to determine who and what matches goals. 	<ul style="list-style-type: none"> Describes attributes of a traditional district & a school-focused district. Tools in Appendices 1 and 2 of the document offer steps to achieve school autonomy.
School Budget Hold 'Em	Education Resource Strategies (ERS)	District (Large urban)	<ul style="list-style-type: none"> Online interactive game that helps district administrators decide what is important in making trade-offs to achieve instructional goals in context of tightening budgets. Administrators can choose from a range of options to increase investments or make cuts in different educational areas. 	<ul style="list-style-type: none"> District administrators must first identify district priorities before making changes to a hypothetical school budget using this tool. Note: Tool uses national data from urban districts. Impact on actual budgets may be difficult to assess using this tool. <ul style="list-style-type: none"> Does not help district meet its bottom line, but gives a sense of potential trade-offs for certain types of cuts.

Table continues on next page

Name of tool (hyperlinked)	Author	Type of data	Purpose	Comments
Tools to assess impacts of manipulating budget allocations, continued				
District Resource Allocation Modeler (DREAM)	Education Resource Strategies (ERS)	District (Large urban)	<ul style="list-style-type: none"> Allows users to see the effects of manipulating several key budget levers on a “model school district” budget. Key levers include: class size; teacher compensation; professional development; SPED; and instructional time. Based on certain principles, such as: increasing teacher quality, using teaching time effectively, and managing classroom size. 	<ul style="list-style-type: none"> Only usable for large urban school districts. Uses national data for individual (large) districts, but does not allow users to plug in other district data. For more information, click here.
ResourceCheck tool	Education Resource Strategies (ERS)	District	<ul style="list-style-type: none"> A web-based or printable tool designed to help a district understand self-reported alignment with research-based practices. 	<ul style="list-style-type: none"> After completion, offers links to resources to help a district take action. Note: focuses only on seven strategies that support schools deemed “high performing.”
Reallocating Resources for School Improvement	The Center for Comprehensive School Reform and Improvement (CSRI)	District	<ul style="list-style-type: none"> Allows administrators to analyze district’s current budget and help make decisions to reach goals. Two categories of tools: <ul style="list-style-type: none"> Analyze the current use of resources Help deciding how to best use resources to accomplish goals for school improvement. 	<ul style="list-style-type: none"> Not an electronic tool—contains printable forms to be filled out by hand. Click the links in the “Content” box for additional information. Can choose to complete all forms, or only those that are appropriate for each context.
Assessing Inequities in School Funding: Tool to Prepare for Student-Based Budgeting	Annenberg Institute	District	<ul style="list-style-type: none"> Designed for district officials interested in analyzing their district’s spending patterns. Describes a three-step process that focuses on the distribution of resources among schools and types of students. 	<ul style="list-style-type: none"> Includes step-by-step instructions for calculating weighted indices, guiding questions that facilitate analysis of the indices, and an example from a large school district. This type of budgeting is practical for large districts only. Note: Not an electronic tool—paper only.
School Finance Redesign Report – based on the School-Based Adequacy Model	Consortium for Policy Research in Education (CPRE)	School	<ul style="list-style-type: none"> Aims to provide information on the degree to which a school could finance—through resource reallocation—a school-based adequacy model. 	<ul style="list-style-type: none"> A simple, school-level online tool. Requires administrators to enter detailed information about their district into data fields. For more information about the adequacy model, click here.

Section 6: Cost saving strategies

Little of education finance research or literature focuses on cost saving strategies. The information in this section is based on the practical experience of others, found in case studies. The section below discusses the use of outsourced services to save money and provides two case studies. The table on the next two pages offers examples of strategies to reduce costs.

Contracting services

Contracting services—commonly referred to as outsourcing—refers to the practice of making agreements with outside organizations to provide services in the school district. School districts may consider outsourcing to reduce costs on non-instructional services. Districts benefit by reducing costs on essential services while providing high-quality services. While districts often partner with for-profit organizations, increasingly they are securing partnerships with community partners. Potential outsourced services include: food and nutrition; transportation; security; custodial services; buildings and maintenance; after-school activities; and tutoring. Advantages and disadvantages of outsourcing school services include:

Advantages:

- Reduced purchasing costs (contractor has ability to buy in high volumes);
- Potential for better quality service due to professional training or experience;
- Decreased labor costs; and
- Potentially better management and higher productivity within each contracted department.

Disadvantages:

- Outside employees may not have loyalty to or understanding of the district;
- Turnover of outside employees may be high if the contractor does not supply good benefits or salary;
- Perceived loss of control over some operations; and
- Contracts have the potential to be long-term and legally binding.

Contracting as a Mechanism for Managing Education Services

This policy brief outlines the steps a district should take when outsourcing services to an outside organization. Based on analysis of contracts between school districts and for-profit organizations, the brief explains the essential features of successful contracts. The document clearly outlines the steps a district can take to use outsourcing as a district management tool, as well as a discussion of possibilities and limitations of outsourcing services.

Cost saving strategies: Case studies

First person tale of cost-cutting success

Written by a former superintendent in Massachusetts, this document describes the challenges associated with district-wide budget reform. Costs saving strategies are discussed, most notably outsourcing some school services. In doing so, the district partnered with community-based organizations to provide the same services to its students while reducing costs.

Weathering the Storm: How Northwest School Districts Are Dealing With The Economic Recession

This magazine features stories about schools dealing with resource issues after the recession. Topics include a superintendent's experience with budget cuts and districts' experiences with federal stimulus funds.

RESOURCES

Help for Your Budget Woes:
A School District Budget
Toolkit

*American Association of
School Administrators*

Contracting as a Mechanism
for Managing Education
Services

Hannaway

Weigh Your Options:
Outsourcing services is just
one way to do more with less

Schweitzer

First Person Tale of Cost-
cutting Success

Levenson

Weathering the Storm: How
Northwest School Districts
Are Dealing With The
Economic Recession

Education Northwest

Cost-Effective Financing for
School Construction and
Renovation

*American Association of
School Administrators*

PowerPoint slides:
Is Online Learning Cost-
Effective?

Hollands

BOOK

School Finance: A Policy
Perspective, Fourth Edition

Odden & Picus

Examples of cost saving strategies

The table on the following two pages lists examples of cost saving strategies described by others. As previously discussed, research-based strategies for cutting costs are rare, if they exist at all, due to unsophisticated information systems that do not link spending on specific programs or strategies to outcomes (such as teacher or student performance). The strategies below have been gathered from many documents (see “Related Resources” in the right column) as examples used in other districts. A caveat: it is unlikely using one or several of these strategies in isolation will produce positive results. None of these examples should be taken lightly, and districts should consider the ramifications (political or otherwise) of using any of these strategies as part of their budgetary approach.

Table 6.1: Examples of cost saving strategies

Focus area	Strategies	Related resources (hyperlinked)
District funding strategy	<ul style="list-style-type: none"> • Conduct data analysis at school level to determine educational needs. Target interventions at school sites. • Expand school-based budgeting to include more than half of general fund revenue. • Provide schools with “lump sum” budgets and encourage them to align new budget with their educational strategy. • Implement weighted-student funding policy in the district, reallocating discretionary funding to higher needs students. • Free up resources invested in smaller school size to increase funding based on prioritized need. • Divide district into zones based on student need and residential patterns; reallocate funding based on zones. Focus funding to reach specific academic outcomes. • Close or combine schools with declining enrollment. • Reduce the number of district administrators. • Use federal money creatively: districts are allowed to combine funds from various programs to support comprehensive reform. • Decentralize Federal Title I dollars to eligible schools that agree to undertake an extensive, data-driven needs assessment. • Redirect special education spending to early intervention and targeted individual attention for all students. 	<p>Better Return on Investment: Reallocating Resources to Improve Student Achievement</p> <p>Investing in Improvement: Strategy and Resource Allocation in Public School Districts</p> <p>A Case Study of District Decentralization and Site-Based Budgeting: Cordell Place School District</p> <p>A Tale of Two Districts: A Comparative Study of Student-Based Funding and School-Based Decision Making in San Francisco and Oakland Unified School Districts</p> <p>How Americans Would Slim Down Public Education</p> <p>A Case Study of Resource Reallocation to Implement a Whole School Reform Model and Boost Student Achievement: Parnell Elementary School</p> <p>Realigning Resources for District Success: Duval County Public Schools Final Report</p> <p>Noteworthy Perspectives: Comprehensive School Reform</p> <p>Transformation or Decline? Using Tough Times to Create Higher-performing Schools</p>
Instructional roles	<ul style="list-style-type: none"> • Limit class size in particular focus areas based on core areas or school goals, while maintaining larger classes in other subjects. • Implement inclusion of special needs students into regular education classrooms. Or, redesign special education to shift resources to early and ongoing intervention in general education. • Restructure one-size-fits-all job structure to foster individual and team effectiveness and professional growth. • Share teachers across school and district lines for low enrollment classes • Eliminate support staff positions such as teaching assistants, etc. Organize teachers into “teaching teams” to save on the use of externally hired specialists. 	<p>Sustaining School Improvement: Resource Allocation</p> <p>A Case Study of Resource Reallocation to Reduce Class Size, Enhance Teacher Planning Time, and Strengthen Literacy: Clayton Elementary School</p> <p>How Americans Would Slim Down Public Education</p> <p>A Strategic Spending Review of Syracuse City School District</p> <p>Transformation or Decline? Using Tough Times to Create Higher-performing Schools</p> <p>Help for Your Budget Woes: A School District Budget Toolkit</p> <p>Better Return on Investment: Reallocating Resources to Improve Student Achievement</p>

Table continues on next page

Focus area	Strategies	Related resources (hyperlinked)
Teaching & learning time	<ul style="list-style-type: none"> • Restructure schedules to harness time as a resource. Schedule teacher planning periods in conjunction with non-instructional time, or institute early-release days. • Allow teachers to teach an additional period instead of using it as non-instructional time if they wish. • Alter student schedules to provide time for teacher learning: designate certain times of the day for students to volunteer in the community, take college courses, or attend study hall. • Offer low-enrollment courses once every 3 years, or combine upper level classes (e.g., Spanish 4 and 5, AP and Honors History). • Decrease physical education classes based on student participation in sports. • Implement/expand volunteer programs to help replace funding cuts to tutoring, mentoring, and extracurricular programs. • Integrate online learning through the use of online courses, tutoring, or e-textbooks. 	<p>Sustaining School Improvement: Resource Allocation</p> <p>A Strategic Spending Review of Syracuse City School District</p> <p>Is Online Learning Cost-Effective?</p>
Operations	<ul style="list-style-type: none"> • Maximize use of buildings and land. • Leverage outside partners and technology to maintain or improve quality at lower cost. • Make cuts at the district level (e.g., office, programs). • Share services with other districts. • Perform a health care dependent audit. 	<p>Transformation or Decline? Using Tough Times to Create Higher-performing Schools</p> <p>Better Return on Investment: Reallocating Resources to Improve Student Achievement</p> <p>Help for Your Budget Woes: A School District Budget Toolkit</p> <p>Uncovering Savings Through an Audit</p>

Appendix A: Methodology

This document is based on a review of recent literature and research regarding the context for school district budget reallocation, options for change, tools for reallocation, and examples and case studies from districts. An initial search was conducted using online databases and internet sources. After the initial search yielded few accessible results, a search was conducted of resources from organizations that focus on school finance, as well as consulting experts in the field. Additional resources and relevant articles and toolkits were then reviewed. Finally, documents were analyzed for dominant themes, and this toolkit was developed based on those themes.

Appendix B: References in topic order

Section 1: Introduction

The state of school budgets

Financial Accounting for Local and State School Systems (Ch. 1)

National Center for Education Statistics

Funding Student Learning: How to Align Education Resources with Student Learning Goals

National Working Group on Funding Student Learning

Investing in Improvement: Strategy and Resource Allocation in Public Schools Districts

Childress

Making Education Dollars Work: Understanding Resource Allocation

Southwest Educational Development Laboratory

BOOKS:

School Finance: A Policy Perspective, Fourth Edition (Ch. 8)

Odden & Picus

Schoolhouses, Courthouses and Statehouses: Solving the Funding-Achievement Puzzle in America's Public Schools

Hanushek & Lindseth

Courts & Kids: Pursuing Educational Equity Through the State Courts

Rebell

Educational Opportunity is Achievable and Affordable

Rebell & Wolf

Why local budget analysis is needed

Reallocating Resources for School Improvement

Center for Comprehensive School Reform and Improvement

Making Education Dollars Work: Understanding Resource Allocation

Southwest Educational Development Laboratory

Examination of Resource Allocation in Education: Connecting Spending to Student Performance

Pan, Rudo, Schneider, & Smith-Hansen / Southwest Educational Development Laboratory

Efficiency and Equity in Education

Hanushek

Aggregation and the Estimated Effects of School Resources

Hanushek, Rivkin, & Taylor

School Resources and Student Outcomes: An Overview of the Literature and New Evidence from North and South Carolina

Card & Krueger

The Use of Cost-Benefit Analysis in Guiding Investments in Human Capital in Elementary and Secondary School

Belfield

Assessing the Effects of School Resources on Student Performance: An Update

Hanushek

Allocating resources and creating incentives to improve teaching and learning

Plecki, Alejano, Knapp & Lochmiller

Investing in Learning: School Funding Policies to Foster High Performance

Committee for Economic Development

Educational Opportunity is Achievable and Affordable

Rebell & Wolf

BOOKS:

"Have Times Changed? The Relation Between School Resources and Student Performance" in *Does Money Matter?*

Hedges & Greenwald in Burtless

Section 2: Setting goals

Examination of Resource Allocation in Education: Connecting Spending to Student Performance

Pan, Rudo, Schneider, & Smith-Hansen / Southwest Educational Development Laboratory

Making Good Choices: Sustainable School Improvement

Walter / Northwest Regional Educational Laboratory

Investing in Improvement: Strategy and Resource Allocation in Public Schools Districts

Childress

Funding Student Learning: How to Align Education Resources with Student Learning Goals

National Working Group on Funding Student Learning

Noteworthy Perspectives: Comprehensive School Reform (Ch. 8)

Mid-continent Research for Education and Learning

BOOKS:

Financing Schools for High Performance: Strategies for Improving the Use of Educational Resources

Odden & Busch

School Finance: A Policy Perspective, Fourth Edition

Odden & Picus

Transparency and communication about resource allocation

Why Communication Matters

Carr

Toward Effective Resource Use: Assessing How Education Dollars are Spent

Willis, Durante & Gazzo

How Americans Would Slim Down Public Education

Thomas B. Fordham Institute

Help for Your Budget Woes: A School District Budget Toolkit

American Association of School Administrators

Section 3: Types of Budgets

Table 3.1: Popular School Budgets

Financial Accounting for Local and State School Systems (Ch. 3)

American Public School Finance

Incentive-Based Financing of Schools

Site-based budgets

Investing in Learning: School Funding Policies to Foster High Performance

Committee for Economic Development

Sustaining School Improvement: Resource Allocation

Mid-continent Research for Education and Learning

A Case Study of District Decentralization and Site-Based Budgeting

Fermanich, Odden & Archibald

Freeing School Resources for Student Learning: The "Missing Piece" in Making Accountability Meaningful

Hawley Miles

BOOKS:

Schoolhouses, Courthouses and Statehouses: Solving the Funding-Achievement Puzzle in America's Public Schools

Hanushek & Lindseth

Student-based budgets / Weighted student funding

Understanding State School Funding: The First Step Toward Quality Reforms"

Education Commission of the States

Within-District Resource Allocation and the Marginal Costs of Providing Equal Educational Opportunity

Baker

Investing in Learning: School Funding Policies to Foster High Performance

Committee for Economic Development

Weighted Student Formula: Putting Funds Where They Count in Education Reform

Cooper

Moving Toward Equity in School Funding within Districts: A Comparison

Roza & Hawley Miles

Understanding Student-Weighted Allocation as a Means to Greater School Resource Equity

Hawley Miles & Roza

First Steps to a Level Playing Field: An Introduction to Student-Based Budgeting

Ucelli, Foley & Emdon

Funding a Better Education: Conclusions from the First Three Years of Student-based Budgeting in Hartford

Public Impact

Weighted Student Funding District Summaries

Education Resource Strategies

Student-Based Budgeting: Voices in Urban Education

Annenberg Institute for School Reform

Section 4: Strategies for analyzing current spending

Formulas to analyze current budget allocations

District Leaders' Guide to Reallocating Resources

Walter / Northwest Regional Educational Laboratory

Now is a Great Time to Consider the Per Unit Cost of Everything in Education

Roza

Allocating Resources and Creating Incentives to Improve Teaching and Learning

Plecki, Alejano, Knapp & Lochmiller

Making Education Dollars Work: Understanding Resource Allocation

Southwest Educational Development Laboratory

School Budgets 101

Ellerson/American Association of School Administrators

BOOKS:

School Finance: A Policy Perspective, Fourth Edition (Ch. 3)

Odden & Picus

Budget analysis in practice

Financial Accounting for Local and State School Systems

National Center for Education Statistics

Making Education Dollars Work: Understanding Resource Allocation

Clark, Alexander, Rudo, Pan & Boyer

Toward Effective Resource Use: Assessing How Education Dollars are Spent

Willis, Durante & Gazzero

Breaking Down School Budgets

Roza

District Leaders' Guide to Reallocating Resources

Walter / Northwest Regional Educational Laboratory

Sustaining School Improvement: Resource Allocation

Mid-continent Research for Education and Learning

Structural Influences on the Internal Allocation of School District Resources: Evidence from New York State

Monk & Hussain

38th Annual Maintenance & Operations Cost Study for Schools

American School & University

Annotated Bibliography: District Resource Allocation Strategies

American Institutes for Research

BOOKS:

School Finance: A Policy Perspective, Fourth Edition (Ch. 3)

Odden & Picus

Evidence for reallocation strategies

CPRE's School Finance Research: Fifteen Years of Findings

Odden

Allocation Anatomy: How District Policies that Deploy Resources can Support (or Undermine) District Reform Strategies

Roza

What Works Clearinghouse: Find What Works

U.S. Department of Education, Institute for Education Sciences

District leaders' guide to reallocating resources
Walter / Northwest Regional Educational Laboratory

Investing in Learning: School Funding Policies to Foster High Performance
Committee for Economic Development

Return on Educational Investment: A District-by-District Evaluation of US Educational Productivity
Boser / Center for American Progress

Research on spending in classrooms

The Dollars and Sense of Comprehensive Professional Learning
Odden

Analysis of Professional Development Spending in Four Districts Using a New Cost Framework
Hawley Miles, Odden, Fermanich, Archibald & Gallagher

A New Approach to the Cost of Teacher Turnover
Milanowski & Odden

Class Size: Counting Students Can Count
American Educational Research Association (AERA)

Teaching Teachers: Professional Development To Improve Student Achievement
American Educational Research Association (AERA)

Recruiting New Teachers to Urban School Districts: What Incentives Will Work
Milanowski, Longwell-Grice, Saffold, Jones, Odden & Schomisch

Smart Class-Size Policies for Lean Times
Southern Regional Education Board

Investing in Learning: School Funding Policies to Foster High Performance (Ch. 1)
Committee for Economic Development

Learning Science Meets School Finance
Sharp & Bransford

Section 5: Tools for budget analysis

Table 5.1: Tools for budget analysis

Education Finance Statistics Center

District Analysis, Review, & Assistance Tools website (DART)

DART Manual

District Analysis, Review, & Assistance Tools website (DART): Staffing and Finance Tool

Education Spending by District: Online Interactive Tool

Making Good Choices

Moving Toward Equity in School Funding Within Districts: A Comparison

Smarter Budgets, Smarter Schools: How to Survive and Thrive in Tight Times

Freeing School Resources for Student Learning

School Budget Hold 'Em

District Resource Allocation Modeler (DREAM)

ResourceCheck tool

Reallocating Resources for School Improvement

Assessing Inequities in School Funding: Tool to Prepare for Student-Based Budgeting

School Finance Redesign Report—based on the School-Based Adequacy Model

Additional information about the School-Based Adequacy Model

Section 6: Cost saving strategies (includes Contracting services)

Help for Your Budget Woes: A School District Budget Toolkit
American Association of School Administrators

Contracting as a Mechanism for Managing Education Services
Hannaway

Weigh Your Options: Outsourcing Services is Just One Way To Do More with Less
Schweitzer

First Person Tale of Cost-cutting Success
Levenson

Weathering the Storm: How Northwest School Districts Are Dealing With The Economic Recession
Education Northwest

Cost-Effective Financing for School Construction and Renovation
American Association of School Administrators

POWERPOINT SLIDES:

Is Online Learning Cost-Effective?
Hollands

BOOKS:

School Finance: A Policy Perspective, Fourth Edition
Odden & Picus

Table 6.1: Examples of cost saving strategies

Better Return on Investment: Reallocating Resources to Improve Student Achievement

Investing in Improvement: Strategy and Resource Allocation in Public School Districts

A Case Study of District Decentralization and Site-Based Budgeting: Cordell Place School District

A Tale of Two Districts: A Comparative Study of Student-Based Funding and School-Based Decision Making in San Francisco and Oakland Unified School Districts

A Case Study of Resource Reallocation to Implement a Whole School Reform Model and Boost Student Achievement: Parnell Elementary School

How Americans Would Slim Down Public Education

Realigning Resources for District Success: Duval County Public Schools Final Report

Noteworthy Perspectives: Comprehensive School Reform

Transformation or Decline? Using Tough Times to Create Higher-performing Schools

Sustaining School Improvement: Resource Allocation

A Strategic Spending Review of Syracuse City School District

Help for Your Budget Woes: A School District Budget Toolkit (available to members only)

Is Online Learning Cost-Effective?

Uncovering Savings Through an Audit

Appendix C: References in alphabetical order

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Appendix D: MASBO publications

The Massachusetts Association of School Business Officials (MASBO) has sponsored a number of key research studies regarding strategic resource allocation over the past several years, including this publication. Several of these studies address areas relevant to this resource guide and are included on this page. Other documents that can assist districts in strategic planning, budget planning, reporting, and identifying operational efficiencies can be accessed through the MASBO website at www.masbo.org.

Meeting The Challenge: Fiscal Implications of Dropout Prevention

This policy brief, also a Rennie Center publication, explores the approaches, costs, and potential financial implications of implementing dropout reduction strategies. It highlights a diverse group of five Massachusetts districts that have substantially reduced their dropout rates over the past three years, and identifies district-wide policies and school-based strategies that superintendents and principals indicate have contributed to reducing the number of students dropping out of school. The brief also presents two scenarios that illustrate how, for some districts, per pupil funding obtained from increased enrollment due to successful dropout prevention strategies can be allocated to serve at-risk students.

Cutting Class: Underfunding the Foundation Budget's Core Education Program

This document focuses on the adequacy of the state's foundation budget. By comparing actual spending to the foundation budget for Massachusetts school districts in Fiscal Year (FY) 2010, the study finds that the real value of the original foundation budget has eroded significantly over time, due in large part to rapid cost growth for health care and special education. Since the foundation budget's original design did not foresee this rapid cost growth, spending reductions have been forced in other key areas, especially Regular Education Teachers. The study also finds that due to implementation issues with inflation adjustments, the real value of the foundation budget lags behind the original dollar amounts written into state law in FY 1993. Cutting Class highlights misalignments in the foundation budget and provides evidence of the need for a full adequacy study to determine if state funding is sufficient to provide a high quality education to all students in the Commonwealth of Massachusetts.

The Promising Practices Guide

This document helps districts in identifying research-based best practices needed to maintain strong district systems. Districts can use the guide to determine next best steps following a district's own self-assessment, a district's identification of a need, or a district review. The Promising Practices Guide describes the actions that a district may take to ensure that its district systems meet the Department of Elementary and Secondary Education's standards used by review teams from the Center for District and School Accountability. In it, MASBO identifies best practices in the area of financial and asset management, including: a strong district engages in a participative, well-documented, and transparent budget process that uses student achievement as a factor in the overall budget; a district acquires and uses financial, physical, and competitive capital resources to provide for and sustain the advancement of achievement for all students enrolled in the district; and, a district regularly assesses the effectiveness and efficiency of its financial and capital assets and has the ability to meet reasonable changes and unanticipated events.

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About MASBO

The Massachusetts Association of School Business Officials (MASBO) is a non-profit professional organization of school administrators whose general responsibilities include the business affairs of public and non-public schools. MASBO has been actively engaged in the promotion of the establishment of the highest standards of school business administrators since 1957. The organization's general mission is to provide for the betterment of education throughout the Commonwealth. MASBO's purposes are: to promulgate and establish the highest standards of ethics and efficiency in business methods and practices for schools, and to make them available to its members and the interested public; to conduct, sponsor, or join with others in conducting or sponsoring research and services concerning school business management and administration of schools; and to cooperate with various educational associations and with governmental organizations in developing and improving school business management and educational administration.

About the Rennie Center

The Rennie Center's mission is to develop a public agenda that informs and promotes significant improvement of public education in Massachusetts. Our work is motivated by a vision of an education system that creates the opportunity to educate every child to be successful in life, citizenship, employment and life-long learning. Applying nonpartisan, independent research, journalism and civic engagement, the Rennie Center is creating a civil space to foster thoughtful public discourse to inform and shape effective policy. For more information, please visit www.renniecenter.org.

For more information about this toolkit, please contact Nina Zockoff, Research Associate, at nzockoff@renniecenter.org.

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