Understanding the Budget and Financial Management of the School District

Budget 101: A Public Workshop for the Board of Education and Board of School Estimate of South Orange-Maplewood and members of the community

July 23, 2003
Presented by the Board of Education Finance & Facilities Committee
Steve Latz, Chairman
Rogers Campbell
David Frazer

Acknowledgements and References

Portions of this presentation draw heavily from:


Disclaimer

- This presentation was prepared by the Finance and Facilities Committee of the South Orange-Maplewood Board of Education, in response to a request from individual members of the Board of School Estimate at its March, 2003 meeting, and as authorized by a charge to the F&FC from the Board of Education in June 2003.

- The contents of this presentation are the responsibility of the Finance and Facilities Committee. More particularly, any specific views expressed herein are not necessarily the views of the entire Board or the Committee, but should be attributed to Mr. Latz, the direct author of this presentation. No one should impute any view contained herein to the Board of Education as a whole.

- This presentation is intended for educational purposes only and does not represent a Committee proposal to the Board of Education or a Board of Education proposal to the Board of School Estimate.

Overview of Workshop Series

- July 23:
  - Some Building Blocks of An Effective Budget Process
  - Some Accounting Basics
  - Financial Reporting
  - The Accounting Basis and Measurement Focus
  - The Chart of Accounts and Expenditure Classification System
  - The Use of Separate Accounting Funds
  - Financial Accounting and Reporting in N.J. School Districts
  - The N.J. School District Chart of Accounts
  - A Walk-Through of A Few Financial Statements for the Fiscal Year Ended June 30, 2002 (from the CAFR)
  - A High-Level View of the Budget Process
  - Generally Accepted Indicators of Financial Condition
  - Uses and Limitations of School District Financial Statements
  - Key Concepts of Cost Analysis
Overview of Workshop Series (continued)

- August 20:
  - Basics of state aid calculations
  - Explanation of the statutory growth limitation (the “cap”)
  - Analysis of district revenue and expenditure: historical/cross-sectional comparisons and trends
  - Using formulae as cost benchmarks
  - Samples of district cost analyses from prior years
  - Understanding labor markets
- To be scheduled:
  - Three-year projections
  - More ??

A Word About This Workshop Series:
Educating All Stakeholders is Key

- Everyone wants to understand district finances and have input on the budget.
- “Trust, But Verify” seems to be the common theme of many different stakeholders
- In order to verify, you have to understand
- To be able to understand, you have have to learn some tools of the trade
- Will use a series of approaches to revisit same subject matter and add depth. No single sequence of concepts and topics will work for everyone
We are speaking to a variety of audiences with many different levels of understanding

• This series to be taped and aired on CNN. All materials (including Powerpoint presentations) to be posted on district website

• Key highlights from series to be repackaged for appropriate delivery to various audiences through multiple vehicles both before and during budget process (e.g., a set of Frequently Asked Questions (FAQs), newspaper columns, bumperstickers, maybe fortune cookies and the Goodyear blimp)

• BOE outreach to stakeholders to occur throughout.

• Your feedback and suggestions are welcome!

Some Building Blocks of An Effective Budget Process
An Effective Budget Process . . .

- Decision-making must be criteria-driven

- Outlook of staff and community as a whole is important in helping set those criteria and in deciding the relative utility (desirability) of a particular choice of programs/services

- Each group of stakeholders is responsible to all others for providing a clear rationale for its decisions and for providing a clear account of the due diligence it has exercised in arriving at its recommendation/decision

- Community involvement/input is important at every public stage of Board deliberation

. . . Must Balance Many Competing Claims on Scarce Resources

- All participants must endeavor to judge budget alternatives based on what’s best for the district as a whole

- The Board/administration must consider state/federal mandates and board policy

- Alignment with long-term educational goals is critical. Budget process should be driven by the conclusions of an authentic strategic planning process.

- Resource decisions must occur on the foundation of a long-term financial plan

- Decisions on major educational priorities rest with the Board of Education in response to recommendations of the administration and input from the community

- Decision on setting the tax rate rests with the BOSE
Some Building Blocks of an Effective Budget Process . . .

Authentication Strategic Planning Process

- Trust (which rests on everything below)
- Effective Outreach and Communication
- Well-prepared Rationale(s)
- Rigorous Analysis
- A Defined and Agreed Budget Process
- Clear Long-Term Goals
- Long-Term Financial Plan
- Broad Community Consensus and Support
- Evidence of Educational Effectiveness
- Clear Decision-Making Criteria
- Evidence of Educational Effectiveness

. . . And Some Impediments to Success

- Pressure Tactics
- Strained Tax Base
- State and Federal Mandates

Authentication Strategic Planning Process
The Challenge

- We need a budget process that provides all stakeholders with appropriate information and insight -- and confidence that the resulting plans (both the near-term budget and longer-term financial plan) are optimal for achieving the agreed educational objectives.
- All stakeholders need information in a timeframe that allows them to have appropriate input in the process.
- All stakeholders need a shared understanding of district financial activity and how it is represented in district financial statements.
- Beyond the financial statements, we need a common language and analysis approach that allows us to weigh the pros and cons of different spending alternatives and understand each other’s arguments.

A Common Language and Analysis Approach Would Enable Informed Discussion of . . .

- Cost-Efficiency
- Cost-Effectiveness
- Cost-Utility
- Equity
- Effective application of resources to intended purposes
- Alignment of intended purposes with long-term educational goals

[We’ll be defining these concepts and giving examples later in this presentation or in subsequent workshops]
This Implies the Need, in Turn, for the

- Clear allocation of expenditure to specific program/service delivery
- Ability to reason about the optimal use of resources based on the impact of changes in the level of resources applied
- Ability to make trade-offs between one use of resources and another
- Ability to achieve a focused application of resources in support of one or more specific objectives
- Ability to link goals and action plans to outcomes with some indication of what impact can be expected in what timeframes (how long will it take for Program X to show results and what sort of results will they be?)

Everyone Has Lots of Questions . . .

- Why is the budget so large compared to just ten years ago?
- Why does the budget increase so quickly?
- Why does the percentage increase in local taxes always seem to be greater than the percentage increase in expenditures?
- What is unreserved fund balance, why does it change from year to year and what does that mean?
- Why is the adjusted budget different than the originally adopted budget?
- Why is it so hard to understand where all the money goes? How can you tell specifically what programs and services a given budget line pays for?
- How can you tell whether the money being spent for a specific program/service is a reasonable amount to spend?
- Is money being spent efficiently? Effectively? On what we really need?
- Why does Maplewood pay more than its fair share in school taxes?
- Why does South Orange pay more than its fair share in school taxes?
...and more questions...

- Why are we always cutting the budget at the margins and going after programs like instrumental music?
- Why are the annual increases in the budget and the school portion of the property tax above the rate of inflation?
- Why doesn’t the district qualify for more state and federal aid?
- Why doesn’t the district fund more of its programs from grants?
- How do we know that money budgeted for restricted purposes is actually used only for those restricted purposes?
- What is the recommended level of debt and where does the district debt level stand relative to this recommended level?
- What is free balance and how and when is it used?
- How is the budget developed internally by the administration and what is the role of the BOE and the BOSE, if any, before it is presented to the public?
- Explain encumbrances.
- How does the administration/BOE settle upon a rate of tax increase when it recommends a budget?

...and more questions...

- What are the different funds and what purpose does each serve (e.g., Fund 10, Fund 20, etc.)?
- What are the different expenditure categories? That is, why are they designated as they are and what is contained within each one?
- How is the budget adjusted during the course of the year?
- Are transfers made during the year between different line items? If so, why are they made and what is the process for making them (including the decision on which lines to transfer from and getting BOE approval)?
- How much cash or cash equivalents does the District keep on hand and how is it kept (i.e., is it making money for us)? How does the district decide if it’s enough?
- What’s the difference between “reserved” and “unreserved” and “dedicated”?
- How does the administration/BOE make “trade offs” between various items at budget time? How does the administration decide what items are on the “chopping block”? What information does the administration and the BOE use in making the “trade off”?
- Explain the state aid formula?
- What is the “CAP” and how does it work?
. . . And Some of the Questions Get Ugly

- Why does \textit{fill in the name of some other school in the district} get more money and have a lower class size than \textit{fill in the name of your school}?
- Why do we need more than \textit{fill in your favorite low number} people to do \textit{fill in the job function you know least about}?
- Why do we have to pay so much for \textit{fill in the category of employee you like the least}?
- Why are teachers’ salaries so \textit{choose one of “high” or “low”}? 

We want to add to this list of questions!

\textit{If you don’t see your questions reflected in the preceding multi-page list, please let us know.}
Getting to the Answers Requires Some Background

• The activity of measuring efficiency, effectiveness and utility is called cost analysis.
• Providing verifiable answers to each of the preceding questions and doing cost analysis requires reference to the facts, i.e. the financial data
• The financial data is contained in the accounting system
• The official financial statements are the legally agreed way in which accounting system data is reported
• Simpler (more understandable) presentations of the financial data in forms other than the official financial statements must also be verifiable and must therefore reconcile to the financial statements
• You have to understand some accounting basics if you want to feel comfortable about the answers to these and other questions
• It won’t hurt too much and you’ll be a better person for it!

Some Accounting Basics

As background for understanding district financial statements
In this brief tutorial on accounting, we will learn about:

- The Accounting Equation
- Double-entry accounting
- The Measurement Focus and Basis of Accounting (MFBA)
- The Chart of Accounts
- The use of financial statements to understand financial position and activity
- The use of Accounting Funds to segregate different sets of activities

Financial Accounting and Reporting

- Financial accounting is the systematic measuring and recording of the financial effects of an organization’s activities
- Financial reporting is the process of summarizing an organization’s information and reporting it to the public
Understanding any organization’s finances (whether public, private or personal) requires just a few key concepts

• The **state or position** of any organization’s finances consists of:
  – **Assets**: What we own or control and what we can collect
    • Can be used to operate the organization and provide goods and services
    • Some are intangible, such as accounts receivable, leases and copyrights
    • Were created by past transactions or other events (such as receipt of tax revenue)
    • A dollar figure can be placed on each
  – **Liabilities**: What we owe
    • Most common liability is accounts payable
    • Were created by past transactions or other events (such as receipt of goods)
    • A dollar figure can be placed on each
  – **Equity (Net Assets)**: The net of what we own over what we owe

• The **events** that affect the state of its finances over time include:
  – Revenues/Receipt of Resources
  – Expenditures/Use of Services/Consumption of Assets

There are two very simple, but highly useful observations about these “objects of economic activity”

1. \( \text{Assets} = \text{Liabilities} + \text{Net Assets} \)
   The equation has several forms:
   – \( \text{Assets} = \text{Liabilities} + \text{Equity} \)
   – \( \text{Assets} = \text{Liabilities} + \text{Fund Balance} \) (for governmental funds)
   – \( \text{Assets} - \text{Liabilities} = \text{Equity} \)
   – \( \text{Assets} - \text{Liabilities} = \text{Net Assets} \)
   – \( \text{Assets} - \text{Liabilities} = \text{Fund Balance} \)

2. \( \text{Net Assets}_{(at\, Date_1)} + \text{Revenues} - \text{Expenditures} = \text{Net Assets}_{(at\, Date_2)} \)

*Note*: These are not observations about how an accounting system works, they are statements that are necessarily and always true about the actual reality of financial activity
These simple observations provide the basis for what is known as the “Accounting Equation” . . .

\[
\text{Assets} = \text{Liabilities} + \text{Net Assets}
\]

Note: Net Assets, Equity and Fund Balance are various terms that at this level, mean the same thing (the difference between Assets and Liabilities)

. . . and the design of the system of double-entry accounting

- The Accounting Equation is central to understanding the how and why of any accounting system, the objects and events it represents and the financial statements that report financial activities and position.
- Double-entry accounting describes a set of accounts or classifications
- Each account is one of the main types (assets, liabilities, net assets) or describes a class of events that affect the main types (revenues and expenditures).
- These accounts are arranged on a financial statement to reflect the fact that they are “self-balancing”, i.e. to reflect the Accounting Equation
- Financial events in the life of the organization result in the acquisition, disposition or reclassification of its financial resources
- Entries to the accounting system must be made in a way that keeps the equation true (a few examples of this a little later)
All Real Accounts belong to one of three classes:
assets, liabilities, net assets

Notes:
1. Boxes in schematic are not to scale in terms of relative dollar size
2. Only typical (not all possible) accounts represented here

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities &amp; Net Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and Cash Equiv</td>
<td>Accounts payable and Accrued Liabilities</td>
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<td>Due to other govs</td>
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<td>Interest receivable</td>
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<tr>
<td>Tax levy receivable</td>
<td>Reserve for encumbrances</td>
</tr>
<tr>
<td>Accounts receivable: State</td>
<td>Excess Surplus (if any)</td>
</tr>
<tr>
<td>Other</td>
<td>Capital Reserve</td>
</tr>
<tr>
<td>Capital Reserve</td>
<td>Unreserved</td>
</tr>
<tr>
<td>Net Unrealized Rev.</td>
<td></td>
</tr>
</tbody>
</table>

Revenues and Expenditures are the Key Economic Events That Affect Financial Position

- Any accounting system must be able to represent the state of all these things at a given point in time and clearly and precisely describe the events that occur from one point in time to the next (e.g., revenues and expenditures, among other things) that result in changing that state

\[
\text{Revenues} - \text{Expenditures} = \text{Excess/(Deficiency)}
\]

Note: The Excess/(Deficiency) is defined as the difference between Revenues and Expenditures
And remember:

\[ \text{Net Assets (at Date 1)} + \text{Revenues} - \text{Expenditures} = \text{Net Assets (at Date 2)} \]

Remember this as we look at the change in Fund Balance from June 30 at the end of one fiscal year to July 1 at the start of the new fiscal year, and from one month to the next as we proceed through the year.

Examples of double-entry accounting for simple transaction (Mead 2000, p E-3):

Greta mulched leaves for 10 hours for Denise at a rate of $5 per hour, but has not yet been paid. Greta provided a service to Denise and has earned her pay, even though she has not received it. Denise now owes Greta $50. From Greta’s perspective:

<table>
<thead>
<tr>
<th>accounts</th>
<th>liabilities ( \uparrow )</th>
<th>net assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>(starting balance) 70</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>+ 50 salary receivable</td>
<td>no change</td>
<td>+ 50 salary revenue</td>
</tr>
<tr>
<td>120</td>
<td>40</td>
<td>80</td>
</tr>
</tbody>
</table>

Greta did not receive cash, but she did earn a right to collect from Denise – an asset called a “receivable.” Greta’s assets and net assets both increased $50 and liabilities were unaffected, so the equation remains in balance.

From Denise’s perspective, the transaction looks like this:

<table>
<thead>
<tr>
<th>accounts</th>
<th>liabilities ( \uparrow )</th>
<th>net assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>(starting balance) 500</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>no change</td>
<td>+ 50 salaries payable</td>
<td>- 50 salaries expense</td>
</tr>
<tr>
<td>500</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

Denise’s assets have not changed because she has not paid Greta yet. However, her liabilities increased by the amount she owes Greta and her net assets decreased by the same amount to reflect that assets will have to be used to repay the new liability and are therefore no longer available to Denise. The equation remains in balance. Assume instead that Denise paid Greta half of what she earned at the time the mulching was performed.

From Denise’s perspective:

<table>
<thead>
<tr>
<th>accounts</th>
<th>liabilities ( \uparrow )</th>
<th>net assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>(starting balance) 500</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>250 salary payable</td>
<td>+ 25 salaries payable</td>
<td>- 50 salaries expense</td>
</tr>
<tr>
<td>475</td>
<td>125</td>
<td>150</td>
</tr>
</tbody>
</table>

The reduction in net assets is the same, but the remainder of the equation is different, reflecting that cash was paid for half of Greta’s earnings and the remainder is owed by Denise. The equation remains in balance.
Here’s a more complete list of the sorts of accounts you see in Assets . . .

- Assets
  - Current assets: Assets that can be liquidated this year
    - Cash
    - Short-term investments
    - Accounts (and taxes and grants) receivable
    - Inventories
  - Non-Current assets: Assets that are more permanent in nature
    - Capital assets not to be depreciated – land, facilities under construction
    - Capital assets that have depreciated; facilities; equipment
    - Long-term financial investments

... and Liabilities

- Liabilities
  - Current liabilities: will come due this year
    - Accounts payable
    - Deferred revenue
    - Short-term debt
    - Due other funds or governments
  - Non-current liabilities:
    - Long-term debt
    - Compensated absences (we expense these on a current basis)
    - Post-employment benefits
    - Due retirement systems (note that the State covers TPAF, but not PERS)
    - Judgments and claims payable
Net Assets (Fund Balance) is divided into

- Restricted (or reserved) portion
  - Reserve for encumbrances
  - Capital Reserve
  - Other reserves (specific to a particular Accounting Fund)
- Unrestricted, unreserved balance (sometimes called “free balance”) which is available for any purpose
  - N.J. statute specifies that the level of unreserved General Fund balance cannot exceed 6% of district revenues in any fiscal year; amounts in unreserved fund balance in excess of this level are deemed “excess surplus” and must be used to reduce the local tax levy for the subsequent fiscal year’s budget. Such amounts are then deemed to be “designated” or restricted for subsequent year’s expenditures

Financial Reporting
Financial reporting makes use of two basic types of statements

- The balance sheet, which reflects what an organization owns and controls, what it owes and what it owns free and clear at some point in time, typically the start or the end of a defined accounting period.

- The income statement or statement of activities -- also known as a statement of revenues, expenditures and changes in fund balance -- which describes a summary of revenues and expenditures over some period of time, typically one accounting period.

- Each type of statement may go by a different name depending on the entity for which and the context in which it is presented.

Balance Sheets

- Balance sheets describe an organization’s financial position at some point in time (see A-1 for the year ended June 30, 2002)
  - an interim balance sheet may be issued monthly or quarterly
  - some private companies issue “pro formas” although because these are unaudited, and sometimes fail to disclose material information, they are increasingly suspect
  - a final audited balance sheet, at the end of the fiscal year
  - under GASB 34, is termed a Statement of Net Assets
Statements of Revenues, Expenditures and Changes in Fund Balance

- **Statements of Revenues, Expenditures, and Changes in Fund Balance** describe the financial activities of an organization during a specific period of time (a month, a quarter, a year) (see A-2)
  - known as an *Income Statement* for private enterprise
  - in our current audit, called a *Statement of Revenues, Expenditures and Changes in Fund Balance* (see A-2 and B-2)
  - under GASB 34, when consolidating all district activities, called a *Statement of Activities*

The Statements Reflect (Precisely) the Actual Activity . . .

<table>
<thead>
<tr>
<th>Actual Activity</th>
<th>=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Assets as of Date 1 + Excess/(deficiency)</td>
<td>=</td>
</tr>
<tr>
<td>Net Assets as of Date 2</td>
<td>=</td>
</tr>
<tr>
<td>Increase to Net Assets</td>
<td>=</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Statements that Report it</th>
<th>=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Sheet as of 6/30/01 + Statement of Revenues, Expenditures and Changes in Fund Balance</td>
<td>=</td>
</tr>
<tr>
<td>Balance Sheet as of 6/30/02</td>
<td>=</td>
</tr>
<tr>
<td>Change in Fund Balance</td>
<td>=</td>
</tr>
</tbody>
</table>
Every Set of Accounts Has Both a Measurement Focus . . .

- The measurement focus defines what to record. It refers to the kinds of assets, liabilities and changes in net assets (or fund balances) resulting from inflows and outflows which a given set of accounts should include when recording transactions.
  - the Current Financial Resources focus accounts for only current assets and records only current flows of resources (those that occur within or soon after a given year)
  - the Economic Resources Measurement focus includes all the resources of a district, both capital and financial, current and long-term, and reports all financial activities (including, for example, depreciation), not just those with an impact in the current fiscal year
... and a Basis of Accounting

- The basis of accounting defines when to record the assets, liabilities, and changes in net assets (or fund balances) stipulated by the measurement focus.
  - the cash basis records only when cashflows actually occur
  - the modified accrual basis
    - records revenues only when they are measurable and available
    - records expenditures generally when they are incurred
  - the full accrual basis
    - records revenues when they are measurable and reasonably certain to be collected
    - records reduction in net assets when resources are consumed, not when they’re paid for or when the expenditure is incurred

FIGURE 10-1: COMPARISON OF THE BASES OF ACCOUNTING (from Duncombe 2002, p. 17)

<table>
<thead>
<tr>
<th></th>
<th>Accrual Basis</th>
<th>Modified Accrual Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Revenues and recorded when</td>
<td>Measurable (the amount can be determined) and Earned (the service has been provided)</td>
<td>Measurable (the amount can be determined) and Available (the revenue was collected in the current fiscal year or will be collected soon enough after the close of the fiscal year to pay liabilities of the current year)</td>
</tr>
<tr>
<td>(2) Expenses/expenditures are</td>
<td>(Expenses) Measurable (the amount can be determined) and Incurred (the liability has been created)</td>
<td>(Expenditures) Measurable (the amount can be determined) and Incurred (the liability has been created and will be paid from current resources)</td>
</tr>
<tr>
<td>(3) Fixed assets are reported as</td>
<td>Assets in the fund where the purchase is made and in the statement of net assets</td>
<td>Expenditures in the fund where the purchase is made</td>
</tr>
<tr>
<td>(4) Depreciation is reported</td>
<td>As an expense in the fund owning the fixed asset and in the statement of activities</td>
<td>Not recorded</td>
</tr>
<tr>
<td>(5) The issuance of debt is reported</td>
<td>As a liability in the fund where the debt is issued</td>
<td>As an &quot;other financing source&quot; on the operating statement.</td>
</tr>
<tr>
<td>(6) The repayment of debt is reported</td>
<td>As a reduction of the liability</td>
<td>As an operating expenditure.</td>
</tr>
<tr>
<td>(7) Measurement focus used</td>
<td>Economic resources</td>
<td>Current financial resources</td>
</tr>
</tbody>
</table>

Budget 101: South Orange Maplewood School District  
July 23, 2003
The Chart of Accounts and Expenditure Classification System

Every Accounting System Uses a Chart of Accounts To Classify Assets, Liabilities, Revenues and Expenditures

- The Chart of Accounts categorizes:
  - assets and liabilities according to their source, their disposition, their current form, etc., their tenor (short-term vs. long-term)
  - revenues according to their source
  - fund balance according to whether it’s reserved or unreserved
  - expenditures according to disposition
Having a precisely-defined classification scheme provides a standard format for recording and reporting financial transactions which in turn serves as a basis for:

- comparisons to be made with other school districts or other financial periods
- budgeting, accounting, and reporting
- administrative control
- accountability to the N.J. Department of Education and the general public
- cost accounting, and the compilation of financial statistical data on the state level
- the annual audit, which allows a high level of confidence that the financial statements accurately report, in all material respects, the financial condition and the financial activities of the school district
- Accountability, Control, Comparability, Accuracy and Completeness (ACCAC)

[We’ll spend some time a little later to understand the specific Chart of Accounts defined by the N.J. Department of Education for use by N.J. school districts]

We’ve seen the major asset and liability accounts depicted previously:

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<td>Accounts receivable: State</td>
<td>Excess Surplus (if any)</td>
</tr>
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<td>Unreserved</td>
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- Take a look at your handouts, both B-1 and the monthly interim Balance Sheet from 7/31/02. Note the categories you see are the asset and liability accounts.
- Now, look at B-2 and peruse the revenue and expenditure accounts.
The Use of Separate Accounting Funds to Segregate Different Types of Activities

In governmental accounting, GAAP specifies the use of separate Accounting Funds to

- enable clearer understanding of the state of a specific part of an organization and the impact of its activities

- distinguish sets of activities that:
  - have different ownership interests
  - have different purposes
  - have dramatically different types of activities

- allow financial managers to better analyze the liquidity and solvency of their organization and understand the impact of its characteristic set of activities
A Key Benefit of Using Separate Accounting Funds:

- Each Accounting Fund can have a specific Accounting Basis and a specific Measurement Focus
- For example, in N.J. school districts,
  - The General Fund (Fund 10) uses:
    - the current financial resources measurement focus
    - the modified accrual basis of accounting
  - The Debt Service Fund (Fund 40) uses:
    - the economic resources measurement focus
    - the full accrual basis of accounting
- We will describe shortly the full set of funds used by N.J. school districts and the purpose of each

Financial Accounting and Reporting in New Jersey School Districts
Almost all of our accounting practices are precisely defined by N.J. statute and regulation

- The New Jersey Department of Education stipulated the use of Generally Accepted Accounting Principles (GAAP) for all N.J. school districts no later than 1993:

- N.J.S.A. 18A:4-14. “Uniform system of bookkeeping for school districts. The state board shall prescribe a uniform system of double entry bookkeeping which is consistent with the generally accepted accounting principles established by the Governmental Accounting Standards Board and which is consistent with the financial accounting terminology and classifications established by the National Center for Education Statistics for use in all school districts and compel the maintenance and use of the same.”

- GAAP now used by almost all state and local government entities in U.S.

- Enforcement of these standards allows us to compare our spending to other N.J. districts and to some degree with other districts around the country

Board policy also governs what we do. Much of this policy on finance comes directly from state statute and regulations

- See the entire set of finance policies (6000 series) at http://www.somsd.k12.nj.us/se6000.pdf

- Key policies:
  - 6210 Fiscal Planning
  - 6220 Budget Preparation
  - 6230 Budget Hearing
  - 6422 Unforeseen Expenditures
  - 6810 Financial Objectives
  - 6820 Financial Reports
  - 6830 Audit
  - 6840 Debt Level/Free Balance
GAAP dictates the key features of our financial accounting and reporting system . . .

- The use of accounting funds to segregate activities by purpose
- The use of double-entry accounting
- A standard chart of accounts and stringent state-specified rules for classification of all revenues and expenditures
- Budget integrated into the financial accounting system
- For accountants and GAAP policymakers, comparability is key

. . . Including The Fiscal Year and the Accounting Cycle

<table>
<thead>
<tr>
<th>06/30/03: End of Prior Fiscal Year (covering 7/1/2002 – 6/30/2003)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Revenue/Expenditure accounts zeroed</td>
</tr>
<tr>
<td>• Any excess of revenue over expenditure remaining moved to unreserved fund balance</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>07/01/03: Beginning of Current Fiscal Year (2003-04):</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Tax and aid revenues recognized and added to assets</td>
</tr>
<tr>
<td>• Appropriations listed in Fund Balance</td>
</tr>
<tr>
<td>• Encumbrances recorded against Fund Balance for those classes of expenditure requiring it</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>07/01/03: Budget Planning begins for 2004-05 year, for Board adoption in March ’04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughout the Current Fiscal Year:</td>
</tr>
<tr>
<td>• Expenditures increase, reducing assets and correspondingly reducing Fund Balance</td>
</tr>
<tr>
<td>• Additional revenues (e.g., interest income) are recognized, increasing assets and correspondingly increasing Fund Balance</td>
</tr>
</tbody>
</table>
The Accounting Cycle (continued)

Oct. ’03: Comprehensive Annual Financial Report (CAFR, also known as the Audit) for prior fiscal year will be delivered to the Board by the Independent Auditor and subsequently accepted by the Board in a public vote.

Feb. ’04: Board adopts preliminary budget to send to County

Mar. ’04: County approves preliminary budget and it is “advertised”

Mar. ’04: Board adopts final budget to send to Board of School Estimate

Mar. ’04: Board of School Estimate votes to set the tax levy for Budget

06/30/04: End of 2003-04 Fiscal Year

- Revenue/Expenditure Accounts Closed Out
- Any excess of revenue over expenditure moves into unreserved portion of fund balance

GAAP stipulates the use of Funds to separate the different types of financial activities

- GASB (1995, Cod. Sec. 1100.102) describes a “fund” as an entity with a set of self-balancing accounts (meaning the double-entry method) that are segregated (meaning each fund has a separate set of accounts) “for the purpose of carrying on specific activities or attaining certain objectives with special regulations, restrictions, or limitations.”

- Each fund
  - has its own set of accounts, i.e., its own assets, liabilities and fund balance
  - its own set of financial statements
There are three categories of funds for N.J. school districts

• Governmental
  – Used to record finances of general government operations

• Proprietary
  – Used to record finances of government “business” operations
    (e.g. food service, ETTC)

• Fiduciary
  – Reports assets, liabilities and activities of funds held for others that cannot be used to support the government’s own purposes (e.g. Trust and Agency Funds, such as a Student Activity fund)

Funds include:

  – Governmental
    • Fund 10: General Fund
    • Fund 20: Special Revenue Fund
    • Fund 30: Capital Projects Fund
    • Fund 40: Debt Service Fund
  – Proprietary
    • Fund 50: Enterprise Fund (separate columns for Food Service, ETTC, ITV)
  – Fiduciary
    • Non-expendable Trust Fund
    • Student Activity Fund
    • Payroll Agency Funds
    • Expendable Trust Funds
The N.J. School District
Chart of Accounts
and
Expenditure Classification System

The State DOE defines the chart of accounts and precise rules on how to classify all items

- Classification scheme adheres closely to that recommended by the National Center for Education Statistics
- Uses Line Item Budget (LIB) approach:
  - Fund
    - Program
      - Function
        - Object
  - Example (see Exhibit B-2(a))
    - General Fund
      - Regular Program
        - Instruction
          - Salaries
See the **List of Account Classifications**

- **Program**
  - Regular (separate accounts for Preschool/K, Gr 1-5, Gr 6-8, Gr 9-12, undistributed)
  - Special (separate accounts for, e.g., mentally retarded, perceptually impaired, etc. as well as home instruction, basic skills, bilingual education)

- **Function**
  - Instruction
  - Support Services (separate accounts for, e.g., Attendance, Health, Educational Media, Operation and Maintenance of Plant Services, etc.)

---

**More Account Detail . . .**

- **Object**
  - Personal Services – Salaries (separate accounts for teachers, supervisors, principals, clerical, etc.)
  - Personal Services – Employee Benefits (separate accounts for social security, TPAF, unemployment contributions, other benefits)
  - Purchased Professional and Technical Services
  - Purchased Property Services
Some important observations

- The **budgeted amount** you’re looking at is the **final statement** contained in the CAFR, and thus **incorporates any additional appropriations and line-item transfers** approved during the year – GASB 34 indicates **need for comparison to original budget as well**

- Benefit costs for employees are entered under undistributed expenditures

- **Important**: **not every combination** of Program/Function/Object is valid (e.g., no account for Regular Program/Instruction/Legal Services)

It’s not possible to see everything one might wish to see in these statements

- You can’t tell how many people a given salary line represents, or what their actual salaries are or precisely what they do (the “instructional blob”)

- You can’t tell what the source of the variance is (enrollment variance from budget projections, change in employees assigned, absences, loss of prep, etc.)

- You can’t tell how much money goes to which specific services delivered to which specific students
  - You can infer it based on other knowledge or on calculations
  - You can examine board resolutions and see which personnel are appointed to which positions in which schools

- You should have confidence from the Audit, however, that expenditures recorded in a particular account are **complete and accurate** – that the purposes to which the money was put conform to the set of uses defined by the state
Financial Reporting in N.J. School Districts:
(from the SOMSD CAFR)

Let’s take a quick look at the following statements from the CAFR for the year ended June 30, 2002

A-1: Combined Balance Sheet – All Fund Types and Account Groups
A-2: Combined Statements of Revenues, Expenditures, and Changes in Fund Balances – All Governmental Fund Types
A-3: Combined Statements of Revenues, Expenditures, and Changes in Fund Balances – Budget and Actual – General, Special Revenues and Debt Service Funds
B-1: General Fund Comparative Balance Sheet
B-2: General Fund Comparative Statements of Revenues, Expenditures and Changes in Fund Balance – Budget and Actual
E-1: Debt Service Fund Comparative Balance Sheet
E-2: Debt Service Fund Comparative Statements of Revenues, Expenditures and Changes in Fund Balance – Budget and Actual
Turn to your handouts (on the web, click here)

- Look at Exhibit B-1, the General Fund Comparative Balance Sheet
  - Total Assets = Total Liabilities and Fund Balance
  - Fund Balance consists of a reserved and unreserved portion
  - Capital Reserve Account is detailed both under Assets and under Fund Balance
  - Is there any amount in Fund Balance that is not in Assets?
    - No. Remember that Fund Balance is Net Assets
  - Overall Fund Balance is down by $3.2 million. Does this mean there was a big overexpenditure this year?
    - No. Most of that $3.2 million consists of the $1.1 million reserve for encumbrances in 2001 and the $1.7 million in excess fund balance from 2001 that was applied to 2001-02 budget as a revenue source. There’s also a planned expenditure of $339,210 from the Capital Reserve. The meaningful amount here is the decline of $435,808 in the Unreserved Fund Balance account.

Let’s look at the Combined Balance Sheet (Exhibit A-1)

- All funds are displayed, one per column
- The General Fund column matches what you just looked at in B-1
- All the Asset, Liability and Equity Accounts are listed down the left-hand side
- Not every account is meaningful for every Fund
- Combined, not Consolidated (basis and measurement focus still different for different funds; totals are memorandum only)
- On second page, the Net Assets component of the Balance Sheet is not called Fund Balance here but Equity and Other Credits
- Provides the financial state of the district at a glance:
  - level of Capital Reserve
  - level of unreserved General Fund Balance (see Unreserved/undesignated)
  - amount of debt
    - Temporary notes under Capital Projects column
    - Bonds payable under General Long-Term Debt Account Group
Let’s look at the Combined Statements of Revenues, Expenditures and Changes in Fund Balance for All Governmental Fund Types (Exhibit A-2)

- Provides a high-level view of district activities for the year
- Depicts the total local tax levy across General and Debt Service Funds
- Depicts all interest revenue earned across all funds
- Why is there Capital Outlay across the General, Special Revenue and Capital Project Funds?
  - a class of expenditure which can occur in any of these three funds (purchase of any equipment costing more than $2,000)

General Fund Comparative Statements of Revenues, Expenditures and Changes in Fund Balance – Budget and Actual for the Fiscal Years Ended June 30, 2002 and 2001 (Exhibit B-2)

- What is source of favorable variance of $2,529,680 in state revenues? (was our lobbying campaign that successful?!!!)
  - State makes TPAF contribution for us of $2,530,680
  - Note offsetting unfavorable variance under expenditures (p.B-2(g))
  - This “flow-through” happened, and was expected, but since it’s always a wash, is not supposed to be mentioned in the budget
What about the actual variance of $1,819,960? (p. B-2(i))

- Source of the favorable variance of $1,819,960 in the "Excess/(Deficiency) of revenues Over (under) expenditures on p. B-2(i)?
  - Budgeted deficiency consisted of:
    - $310,329 change in Capital Reserve
    - $1,194,503 reserve for encumbrances
    - 1,706,005 designation of prior year’s excess surplus as a revenue source
    - 1,864,081 additional appropriation from unreserved fund balance Res. 1455C, 12/17/01
    - (151,500) Energy portion of above appropriation reversed by Res. 1489B, 4/1/02
    - $4,923,418
  - Actual deficiency consisted of:
    - $339,210 change in Capital Reserve
    - $1,194,503 reserve for encumbrances
    - 1,569,745 actual use of budgeted fund balance
    - $3,103,458 actual deficiency of revenues under expenditures
  - After appropriation from Unreserved Fund Balance on 12/17/01, district imposed freeze that resulted in favorable variances in a range of expenditure accounts

See the monthly interim Balance Sheet as of 7/31/02 (Res. 1564A, 8/12/02)

- This is an interim Balance Sheet
- Its format is slightly different, but you’ll still see
  - Assets = Liabilities + Fund Balance
- Compare to the Balance Sheet of 6/30/02, where total assets = $4,761,060
  - Added to assets:
    - $61,170,356.61 Tax levy receivable
    - $4,585,880.17 State aid receivable
  - Added to Fund Balance:
    - $47,065,519.75 Reserve for current year encumbrances
    - $1,998,259.16 Actual expenditures already incurred
  - It looks like we have a positive variance in Fund Balance of $19,549,517, but this simply reflects mostly budgeted expenditures which have not occurred and which we do not encumber
Major Changes Expected This Year With Implementation of GASB Statement No. 34

- Instead of the use of a “combined” presentation of Government Funds, there will be more individual focus on major Government Funds, together with a consolidated (not just combined) set of government-wide statements prepared on a full accrual basis.

- In budget-to-actual presentations, the inclusion of the original budgeted amount -- not just the adjusted budget -- is now mandated.

- Required presentation of a Management’s Discussion and Analysis (MD&A) document.

Generally Accepted Indicators of Financial Condition
William Duncombe proposes a model for assessing the financial health of a school district

For high-level analysis of a district’s financial condition, Mead* recommends the use of several sets of indicators

- Common size ratios
  - percentage change
  - percentage distribution
- Liquidity Ratios
- Solvency Ratios
- Leverage Ratios
- Coverage Ratios
- Ability-To-Pay Ratios (also called Fiscal Capacity Ratios)

**Common Size Ratios: Percentage Change**

- **Purpose**: Allow for comparison from one year to the next and from one school district to another
- **Percentage change** shows the magnitude of change in a particular item (e.g. % increase in insurance costs)

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Can be applied to all sorts of financial statement information</td>
<td></td>
</tr>
<tr>
<td>• Provides a high-level indicator that helps analysts know where to drill down</td>
<td>• To the extent that the comparator spending is not reasonable, will mask problematic trends</td>
</tr>
<tr>
<td>• Only a general indicator; can’t infer a problem from a large percentage</td>
<td></td>
</tr>
</tbody>
</table>

**Common Size Ratios: Percentage Distribution**

- **Purpose**: Allow for comparison from one year to the next and from one school district to another
- **Percentage Distribution** shows the portion of the total represented by individual elements (e.g. percentage of budget devoted to Special Education costs)

<table>
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Other ratios important but of less concern to us right now

- Liquidity, Solvency and Leverage are not currently problems for SOMSD, but we should probably regularly present these ratios so they become part of our standard Financial Management practices.

- Ability to Pay is of definite interest but represents an entire discussion in itself of fiscal capacity, the property tax system, etc.
  - We intend to treat this topic in a future discussion
  - Looking at fiscal capacity is a necessary element of long-term financial planning


One more approach

- Another useful high-level approach to ascertaining the reasonableness of a proposed budget involves *comparison against a theoretical benchmark*.

- A theoretical benchmark is obtained by proposing what resources might be used in the most efficient case.

- An example for high school scheduling:

  Number of class sections required = Number of students * Sections per student
  maxmum class size

  Number of teachers required = Number of sections required
  sections per teacher (contractual workload)

*Note: This is NOT how we calculate how many teachers to staff; it does not take account of all the complexities of the schedule, different subject skills needed, special education and remedial classes, etc. Because of the constraints in the schedule, you always need more staff – this represents only a limit that allows you to judge reasonableness of staffing.*
Uses and Limitations of School District Financial Statements

So what does all this have to do with the budget?

• In our resource-constrained environment, we are increasingly forced to make hard choices each year about what we can afford and what we have to cut

• The logic goes something like this:
  – Our budget this year is $x
  – To provide all the same programs and services next year that we provided this year, we project it will cost $x + $x_1, an increase of $x_1 over last year’s budget
  – Funding a budget of that amount would require an increase in local taxes of $n
  – We can really only afford a tax increase of $n - $n_1, which means we need to cut $n_1 from the projected spending
Looking for potential savings and/or cuts . . .

- Up to this point, we’re only talking and thinking in dollars. Once we have a dollar target to cut, however, we have to ask:
  - What programs and services should we cut, or
  - What set of programs and services can we cut that will yield a savings equal to the target $n_1$?
- So, we now have to think in terms of programs and services, and translate back to dollars as we go

Thinking in terms of services requires

- the concept of a Service Delivery Unit or a Service Delivery View
- identifying all the “ingredients” that go into delivering the service
- identifying the unit costs and quantities of the services that go into delivering one unit of service
- understanding whether those costs are fixed or variable, whether there is a minimum threshold of service, whether you can vary units of service delivery in small increments or only in big increments
- understanding whether elimination of the service will result in (1) the total cost saved or (2) the net cost savings from elimination of the service will be less, because the need for other services is triggered by its elimination
So what’s the big deal? Where’s the problem?

- Remember that the budget is just a projected Statement of Revenues and Expenditures and statutorily must be recorded with the same chart of accounts as our underlying accounting system. Remember that this is a key principle of GAAP.
- Answers to these questions are not obtainable from our financial statement expenditure detail, even at its most detailed, line-item level.
- Cannot easily or automatically trace from the dollar view of the budget organized by program/function/object to a service-delivery view.
- Thus, not necessarily immediately apparent, especially to policymakers, or even to central office administrators, the costs associated with any service delivery unit or what portions of a service delivery unit can be eliminated with what effect.

Getting the level of information to enable decision-making requires extra aggregation/disaggregation and analysis

- Administrators familiar with a service in question must do a cost analysis, to describe its costs.
- There are two reasons for this:
  - The line-item budget is too coarse-grained (not fine enough detail).
  - Our chart of accounts is crafted along the wrong dimensions; it is what accountants call a “line-item” (also called “object of expenditure) and not a “cost-centered” budget.
- Establishing that different view of the data requires creation of what some accountants call a “crosswalk.”
Which results in the obvious questions . . .

• Why do we have a line-item budget when it’s not useful for understanding the detailed and complete costs associated with delivery of each program or service?
  – Because it’s mandated by law, which in turn is based on GAAP standards which have evolved over the last 70 years from the best thinking of accountants

• So why did accountants specify line-item budgeting as part of their standards?
  – Because, “… the greatest strength of LIB [line-item budgets] is that they easily allow for the control of expenditures with little or no computer support. On the other hand they say little or nothing about what services the budget supports.” (Kelley 2002, Chapter IV, p. 1)

• Can’t we supplement our line-item budget with additional information that addresses these shortcomings?
  – Yes, but it’s more complicated that you think

Why is supplementing accounting information with cost analyses so hard to do?

• Even at its most detailed level, an “object of expenditure” budget creates what education finance experts call an “instructional blob” and an “administrative blob”

• There is no defined, well-established, systematic way to trace the allocation of employee time spent in the delivery of the hundreds of programs/services which students receive

• Nor is there an accepted, well-established way to measure and allocate all of the “indirect” costs (administration, heat, sanitation, administration, health, etc.) that are essential to the delivery of a service, nor a clear picture of which of those indirect costs are fixed or variable [Note: we’re cheating here a little by introducing a number of cost concepts before defining them. We promise to get to precise definitions soon]

• Once you define a different view of the data -- a Resource-Cost View, if you will -- you need to keep it RECONCILED with the accounting data

• Our accounting software doesn’t currently provide us any automated way to do this
Examples of cost analyses done annually or periodically in the district in previous years

- All-in annual cost per seat to support computer workstations (1999)
- Cost per student mile of alternative bus routing/scheduling approaches (2001-02 budget planning)
- Cost for district-run routes versus contracted routes (2001-02)
- Comparative program costs per pupil
- Level of scheduling efficiency in use of secondary staff
- 5-year energy audit by Mark Smith (April 1999)
- Insurance risk management
- Elementary school class size analysis

Isn’t there a better way? What do other districts do?

Site-based budgeting
Doesn’t solve the problem of traceability between line-item budget and resource costs. Doesn’t provide systematic approach to resource/cost identification. Simply pushes problem down a level. In fact, the advent of site-based budgeting has driven the need for the FAM and RCM approaches described below

Activity-based budgeting
A budget approach which documents costs of service delivery units in “cost centers”. Activity-based costing in its most extreme form is a cost analysis spread across the entire budget. Extremely expensive. (Kelley 2002)

Zero-based budgeting
An approach which may also use activity-based costing. Used to question all existing expenditure. Useful when applied to discretionary services or to envision better alternatives for delivering mandatory services. Typically not employed across all budget categories
Is there a way to do this using existing accounting data?

A variety of “proposed solutions” out there, some more useful than others, some more feasible than others. See the article “Schools Become the Focal Point of Finance” by Chris Pipho at http://www.ecs.org/clearinghouse/13/92/1392.htm

Finance Analysis Model  Designed by Coopers & Lybrand, now available as InSite software, used by Rhode Island, South Carolina and Hawaii. Provides only “downward” extension of the line-item view. Does not elucidate resources/ingredients used to deliver a service, but does create 287 detail reports!

Other ongoing efforts

Resource Cost Model  Work done by Jay Chambers and others. Intended to elucidate all resources used in delivering a service. Model study done with Ohio state data that aggregated finance data, staffing data and enrollment data.

Two RCM approaches. One uses school-level view of resources; the other is attempting to use student-level view of resources. Picus (UCLA) and Steifel (NYU)

Standard & Poors SES  The School Evaluation Services is an S&P program designed to be implemented at the state level. Using test score data, it attempts to provide an index of educational outcomes and do district to district comparisons of cost-effectiveness. Used by State of Michigan
Key Concepts of Cost Analysis

What is cost analysis?

- Cost analysis is the combined process of
  - defining a service
  - establishing the volume of the service
  - settling on the relevant cost concept to address the perceived problem, and
  - determining the cost of some alternative to the existing service delivery pattern

- “Indeed, the principal operational problem in cost analysis is to take cost data as they are maintained in government records and to reassemble them into a form that facilitates decision making.” (Kelley 2002, Chapter V, p. 2)
In cost analysis, the categories into which one details the costs of a program/service depend upon the questions one is trying to answer (Levin 2001)

- Unlike the accounting system, whose chart of accounts is purposely fixed, a detailed cost analysis allows one the flexibility to look at other attributes of costs for the purpose of understanding:
  - How much it would cost to increase the quantity or quality of a program/service
  - How much could be saved by the elimination of a program/service
  - Which of two programs is the most cost-effective for increasing academic achievement in a particular subject

- The concept of service delivery unit is useful for describing the set of activities and resources (and related supporting resources) necessary to achieving some specific educational purpose (Levin 2001 and Chambers 1999.)

In cost analysis, the distinction between outputs and outcomes is critical (Levin 2001)

**Output**
A service or activity consumes some set of inputs and produces some set of outputs. Outputs are the direct or immediately tangible result measurable in dollars or some other (typically) physical unit. There is typically a clear chain of causation between the service and the outputs it produces. Example: widgets produced, student miles bused, meals served, days absent. Can be measured with traditional production function.

**Outcome**
Indirect, less tangible result of some service delivered. Learning is an outcome. Example: Grades, tests, performance assessments are indirect measures of the outcome of learning. It is more difficult to establish clear and sole causation for learning because the set of individual services are delivered as a whole, not isolated from one another. Does not easily succomb to production function analysis. See Eric Digest 119 at http://eric.uoregon.edu/pdf/digests/digest119.pdf
What are the different types of cost analysis?

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Cost-efficiency</td>
<td>Which alternative produces the desired output for the lowest cost (or the most output for a given cost)? Measured in dollars or units produced.</td>
</tr>
<tr>
<td>Cost-effectiveness</td>
<td>Which alternative yields a given level of effectiveness for the lowest cost (or the highest level of effectiveness for a given cost)? Measured in units of effectiveness. Can only compare alternatives which produce similar sorts of effects.</td>
</tr>
<tr>
<td>Cost-benefit</td>
<td>Which alternative yields a given level of benefits for the lowest cost (or the highest level of benefits for a given cost)? Only useful where benefits can be measured in dollars or some common unit. Can provide comparison across disparate programs where a common measure of benefit is available.</td>
</tr>
<tr>
<td>Cost-utility</td>
<td>Which alternative yields a given level of utility at the lowest cost (or the highest level of utility at a given cost)? (from Levin 2001)</td>
</tr>
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</table>

When studying the impact of adding, eliminating, increasing or decreasing a service, one must distinguish the following:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross cost/savings</td>
<td>Total costs associated with the change under consideration</td>
</tr>
<tr>
<td>Net cost/savings</td>
<td>Total costs as defined above, less any offsetting costs resulting from change in levels of other service that will be triggered by the change under consideration</td>
</tr>
<tr>
<td>Marginal cost</td>
<td>The increase in total cost associated with an increase in the amount of service provided (e.g., the marginal instructional cost of a new student is small, if the new student is assigned to an existing class – no teachers must be hired)</td>
</tr>
</tbody>
</table>
For any of these, a clear set of cost concepts is important (all of the following concepts from Kelley 2002)

**Direct costs**
Those that can be specifically assigned to the service being examined; for example, wages and benefits of employees who deliver the service, the cost of a vehicle used exclusively to deliver the service, and the cost of services and supplies consumed while providing the service.

**Indirect costs**
Those that are necessary for the function of the organization but are not uniquely or easily assignable to a specific service; for example, depreciation on a building used to support several services, the cost of departmental leadership and the costs of administering the government treasury (*indirect costs* are commonly called overhead costs)

**Total costs**
The sum of direct and indirect costs

To determine the level of *indirect costs* attributable to a service delivery unit, those costs must be *allocated* using an agreed allocation approach:

**Actual cost**
Actual cost of the specific resource employed in this instance, e.g., the actual salaries and benefits of the specific district employees or other resources assigned to the specific service delivery

**Average cost**
Average cost of the resource across the district, e.g., the district average salary/benefits of the category of employee assigned to the specific service delivery

**Allocated cost**
Some theoretical cost which takes into account both average cost or actual cost and other factors unique to the capabilities of the specific resource assigned to the service delivery unit
Allocation must be done according to a set of principles

- Indirect service costs should be allocated to programs and cost centers in proportion to the amount of service or benefit received.
  - Proportional allocation requires use of an allocation base; examples include:
    - Costs of a phone system might be allocated based on the number of handsets used.
    - Costs of janitorial service might be allocated based on the number of hours worked, or on the number of square feet cleaned.
    - Costs of computer equipment might be allocated based on desktop units assigned, amount of disk space consumed, amount of bandwidth consumed, number of solitaire games played, etc.
- The total allocations of an indirect service cost to all programs and cost centers should equal 100% of the indirect services cost -- not more, not less.
- In general, ease of application and understandability should be the major considerations in the choice of an allocation base.
- A rational allocation procedure should have the following characteristics:
  - Should advance management objectives (e.g., cost set to encourage/discourage use).
  - Is accepted as reasonable by affected parties.
  - Is relevant to the intended purposes of the users of the resultant information.

More concepts . . .

<table>
<thead>
<tr>
<th>Fixed Cost</th>
<th>Does not change with increases or decreases in the amount of service provided (e.g., buildings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable Cost</td>
<td>Varies in direct proportion to the amount of service provided (e.g., salaries of instructional personnel)</td>
</tr>
<tr>
<td>Sunk Cost</td>
<td>A cost that has already been paid for in a prior period but the use of which is now a tangible part of the cost of the service currently being analyzed</td>
</tr>
</tbody>
</table>
The most important cost concept

Relevant cost
The appropriate cost concept for the particular problem at hand (e.g., when eliminating a program, total cost or gross cost overstates the savings, while net cost provides a more realistic estimate).

Which gets us back to the question: why are the same programs and services always on the chopping block?

Mandatory expenditures
Deemed necessary by some statute or regulation, either directly or indirectly
- Programs mandated by core curriculum content standards
- Services mandated by state or federal law
  - Special education
  - English as a second language
  - School health services
- Business and administrative services in support of programs and in compliance with all management, monitoring and reporting requirements
- Operations and maintenance services in support of program

Discretionary expenditures
Those which the district could forego without violating any law or regulation
For many (not all) of the mandatory services which we deliver, there are alternative approaches to their delivery

- Each approach has different costs and different effects
- Clear cost analysis would benefit the discussion process and strengthen the rationale for the service approach recommended. What forms of cost analysis are appropriate here?
- What are some examples of alternative approaches to delivery of mandatory services?
  - Gifted and talented
  - Elementary world language
  - Physical education
  - Remedial services
  - Others

Difficulties and limitations of cost analysis

- Many costs must be disentangled by hand
- All costs must reconcile to the budget system and the chart of accounts
- Changes in the underlying data can lead to painful recalculation
- Always the danger that cost analysis done for one purpose will be mal-adapted to another use (e.g., looking at the Total Cost of a program does not tell you what the net savings would be from its elimination!)
More considerations

- There is a lot of outcome data in the literature, but very little where a measurable set of outcomes is associated with a clearly defined and well-isolated set of inputs. *There are very few cost-effectiveness studies in education* (Levin 2001)

- Significant debate among education finance experts on whether it’s possible to develop meaningful production functions that correlate specific educational interventions with measurable outcomes (see Hadderman, Margaret, "School Productivity"). [Eric Digest 119](http://eric.uoregon.edu/pdf/digests/digest119.pdf)

Our prospective use of cost analysis

- We can’t expect to fully achieve in a single school district what is still a struggle for the leading practitioners in the education finance field

- We should be ambitious in our goals but modest in our expectations of what we’ll achieve in terms of depicting budget “trade-offs”

- We need to be careful to avoid the “fascination with numbers” syndrome where you have *“lots of precision but not much accuracy”*

- We want to understand not just what we’re doing poorly but also what we’re doing well, and why
Conclusions

• It is possible for the average person to read and understand district financial statements

• Financial Statements reflect all the money and all the activity – there are no other funds used on other purposes

• Balance sheets need to be annotated with notes to explain the underlying events

• Statements of expenditures need to be supplemented with narrative that better describes the services delivered

• Well-targeted cost analyses can help strengthen confidence that money is well-spent and provide us with better understanding of the rationale and trade-offs contained in the Administration’s budget proposal

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