

Chapter Five: Using Financial Reports to Analyze Program Efficiency

Objectives

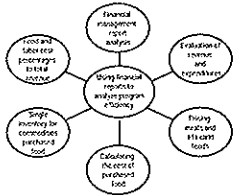
- Interpret basic financial management reports
- Analyze financial data based on performance measures
- Recognize methods to increase revenue and decrease expenditures

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Chapter Five: Discussion Topics Session 1



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Chapter Five: Discussion Topics Session 2



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Financial Management Analysis

- Analysis is important to ensure that the school district:
 - Manages expenditures within the revenues received
 - Operates without a need for transfers from the general fund
 - Has sufficient funds to reimburse the school district for costs

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Question for Discussion

- Why is analysis of financial data useful?

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Financial Management Analysis

- Financial data
 - Helps to determine the efficiency of a school food service operation
 - Provides information about program profitability
 - Promotes basic financial management decisions
 - Generates performance benchmarks
 - Identifies areas for improvement
 - Staffing decisions


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Financial Management Analysis


- Evaluating and maximizing revenue
- Evaluating and controlling costs
- Evaluating program efficiency




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Financial Management Analysis: Tools


- **Financial Reports**
 - Revenue Detail
 - Expenditure Detail
 - Financial Analysis Report
- **Performance Measures**
 - Meal Equivalents
 - Per Meal Costs
 - Percentage Ratios
 - Productivity Rates
 - Meal Participation Reports



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Evaluating Revenue

- Identify revenue sources by category
- Calculate average revenue per meal
- Identify sources for increasing revenue
- Establish appropriate prices for meals and non-reimbursable food items

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Setting Meal Prices

- Revenue from meals served to students and adults provide the bulk of revenue to the school nutrition program.
 - Paid student meal prices - program costs less federal reimbursement and value of USDA commodities (lunch only)
 - Adult meal prices - total program costs

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Questions to ask when considering a meal price change

- 1) How long has it been since lunch prices have increased in your school district?
- 2) What are some of the reasons for the increase this year?

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Questions to ask when considering a meal price change

- 3) How do school meal prices in your school district compare with other nearby school districts?
- 4) Is my child receiving the nutrient he/she needs from school meals?

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Meal Price Calculation

\$2.32	Cost of Lunch
- .21	Paid Reimbursement
- <u>.1725</u>	Value of USDA Commodities=
\$1.9375	(\$1.94 Rounded)

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Revenue Generation

- Increasing meal prices
- Determining non-reimbursable meal prices

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Responses for Discussion

- If meal prices are increased, will the benefits offset the possible decrease in participation?
- Can catering activities be added to the school nutrition program operation in lieu of raising prices?

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Responses for Discussion

- What about implementing a marketing plan to increase participation?
- If the school does not have a breakfast program, would it be feasible to start one?

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Responses for Discussion

- How about surveying the customers? Are they satisfied with the program?
- What changes would they make?

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Revenue Generation

- Determining nonreimbursable food prices or a la carte



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Influencing Factors

- Demand
- Perception of value
- Prices charged in nearby school districts
- Relationship between sales prices and volume
- Total costs to prepare item
- Nutrition value


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Establishing the Base Price

1. Determine the raw food cost of the item offered for sale.
2. Identify the desired food cost percentage for the operation.
3. Calculate a base selling price by dividing the item's raw food cost by the desired food cost percent.


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Nonreimbursable Meal Price Calculation

Raw Food Cost	\$0.52
<hr style="width: 100%;"/>	
Desired Food Cost %	0.38
= \$1.37 (Base Selling Price)	

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Evaluating Expenditures

- Identify sources for expenditures by category
- Analyze Program Costs
 - Cost of food used
 - Cost per meal/meal equivalent served

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Performance Measures

- Cost of food used
- Cost percentages to total revenue
- Total meal cost
- Meal cost per category
- Productivity ratios

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Cost of Purchased Food Used

- Determine whether costs are within guidelines.
- Ascertain if there is sufficient money to cover expenditures.
- Establish the plate cost for each meal served.
- Prevent waste and theft of food items through careful monitoring of food used.

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Cost of Purchased Food Used

Beginning Purchased Food Inventory
 + Food Purchases
 = Total Purchased Food Available
 - Ending Purchased Food Inventory
 = Cost of Purchased Food Used


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Cost of Purchased Food Used

Example	Annually	Monthly
Beginning food inventory	\$ 8,000	\$8,000
Food purchases	300,000	25,000
Food available	308,000	33,000
Less: Ending food inventory	7,000	7,000
Cost of purchased food used	\$301,000	\$26,000

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Streamlined Commodity Inventory

USDA Single Inventory Guidance

- Inventories of donated foods are no longer separate from inventories of other foods
- Most commodities are packed with commercial labels instead of USDA labels.
- Procedures differ from state to state.

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Cost Percentages: Performance Measures

Cost percentages relate expenses to revenues.

Two of the most critical percentages are:


- Food cost percentage
- Labor cost percentage

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Food Cost Percentage


Food Cost Percentage = $\frac{\text{Cost of Food}}{\text{Total Revenue}}$

$\frac{\$16,500 \text{ (Food Cost)}}{\$30,000 \text{ (Total Revenue)}} = .55 \text{ or } 55\%$

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Question for Discussion

- Can you think of examples that would result in higher food costs than normal for a given month?

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Labor Costs

- Salaries and wages
- Benefits
- Professional development
- Educational hours

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Labor Cost Percentage

Labor Cost Percentage =

$$\frac{\text{Total Labor (Salaries and Benefits)}}{\text{Total Revenue}}$$

$$\frac{\$400,000 \text{ (Total Annual Labor)}}{\$800,000 \text{ (Total Revenue)}} = .50 \text{ or } 50\%$$

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Question for Discussion

- What does the 50% labor cost percentage tell the school food service directors?


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Case Study #1: Part I


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**Chapter Five: Discussion Topics
Session 2**




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Meal Equivalents: Analysis Tool

- Meal equivalents - a statistical tool used to allocate costs based on a unit of production
- Meal Units
 - Lunch
 - Breakfast
 - Afterschool snacks
 - Nonreimbursable food sales

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Calculating Meal Equivalents

The NFSMI Financial Management Information System uses the following ratio to determine a meal equivalent.

- 3 breakfast = 2 lunches
- 3 snacks = 1 lunch
- Dollar amount in sales of nonreimbursable food
Free lunch reimbursement + Commodity Value

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Converting nonreimbursable food sales into meal equivalents formula.

Calculation

$$\frac{300}{2.24 + .1725(2.4125)} = 124 \text{ meal equivalents}$$

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Determining the Average Revenue Earned Per Meal Equivalent

- Forecast revenue from all sources.
- Total the forecasted revenue amounts.
- Determine meal equivalents.
- Divide revenue generated by total meal equivalents.

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Per Meal Cost Calculation

Example

$$\frac{\text{Costs of purchased food used}}{\text{Total lunches + meal equivalents}}$$

Per meal cost =
$$\frac{\text{Total expenditures}}{\text{Total lunches + meal equivalents}}$$

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Questions for Discussion

- Why is it important to calculate the food cost and labor cost percentages?
- Why is the cost of producing a meal a critical piece of information for school food service directors?

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Measuring Productivity

- Meals per labor hour
- Participation rates
 - Average daily participation
 - Participation rate per category of meal eligibility

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Meals Per Labor Hour


- Meals per labor hour =
$$\frac{\text{Number meals/meal equivalents}}{\text{Number of paid labor hours}}$$

$$\frac{338 \text{ meals/meal equivalents}}{24 \text{ paid labor hours}} = 14.08 \text{ or } 14 \text{ meals per labor hour}$$

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Meals Per Labor Hour:

- Staffing Guideline in Policies and Procedures
- Meals Per Labor Hour Table

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Participation


- Lunch
 - Actual (# lunches/# days)
 - Percent of attendance (ADP/Enrollment or ADA)
- Breakfast
 - Actual
 - Percent of attendance

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Participation is determined separately for breakfast and lunch.

The formula for calculating ADP:

$$\frac{\text{Number of meals served (month)}}{\text{Number of operating days (month)}}$$

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Case Study #1: Part II

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Activity Setting Meal Prices

Sunset School District establishes menu prices based on the average plate cost of a meal minus (-) current commodity value minus (-) current Section 4 reimbursement. The school district calculates the plate cost separately for secondary and elementary levels. Using the values given below, calculate base meal prices for elementary students, secondary students, and adults for both lunch and breakfast. Enter the calculations in the table. Determine a final price based on discussions in your group. Consider questions 1 - 4 below. *(There are no right or wrong answers for final prices.)*

Lunch: The plate cost for an elementary school lunch is \$2.14 and \$2.32 for a secondary student lunch. The Section 4 reimbursement rate is \$0.21 per lunch and commodity value is \$0.17

Breakfast: The plate cost for an elementary school breakfast is \$1.25 and \$1.30 for a secondary school breakfast. The Section 4 Reimbursement rate is \$0.23 per breakfast.

Meal Prices

Lunch Meal Prices					
	Plate Cost	(-) Section 4	(-) USDA commodity value	= Base Price	Final Price
Elementary					
Secondary					
*Adult					
Breakfast Meal Prices					
Elementary					
Secondary					
*Adult					

*All adult meal prices are based on plate costs for secondary level schools.

Activity
Setting Meal Prices, Cont.

Consider how the following points might impact the final meal price decision.

1. What considerations should be given to rounding in the scenario above?

2. Are there occasions when a district might consider rounding down for elementary students enrolled in the district and rounding up for secondary students (or vice versa)?

3. Would serving a high percentage of free/reduced student meals impact meal prices?

4. How would a *significant increase in student participation* (population shifts, new industry, annexation that includes several schools) impact the process of meal prices? Hint – Commodities received are based on the number of meals served the previous year.

Activity

Pricing Nonreimbursable Food Items

Pricing Method: Desired Food Cost Percent Markup Method

If the **desirable** food cost percentage for a school food service operation is 37% for the school year, what is the base selling price for each of the following a la carte/extra sale food items? Discuss considerations for pricing food items with group members and recommend a final selling price. (*There are no right or wrong answers for final selling prices.*)

Food	Raw Food Cost	Base Selling Price	Final Selling Price
Corn Dog	0.27		
Burrito	0.38		
Fresh Apple	0.12		
Individual Ice Cream Cup	0.15		
Hamburger	0.47		

Briefly summarize how you arrived at the final selling price for each food item.

1. Corn Dog

2. Burrito

3. Fresh Apple

4. Individual Ice Cream Cup

5. Hamburger

Chapter Five-Using Financial Reports to
Analyze Program Efficiency

Program Analysis Case Study

1

→Part I: Determining Costs of Operation to Total
Revenue

Part II: Determining Participation
Calculating Adult Meal Costs

INTRODUCTION

Analysis of data reported in financial statements and reports provide a more meaningful, informative, and useful way of interpreting figures. One financial report often used by school food service administrators is the *Year-End Summary* (page 5). The summary provides information to help the food service administrator determine if the school nutrition program is meeting financial goals. The following case study utilizes information found on the summary sheet to demonstrate how cost percentages, productivity ratios, and operations analysis can be used to evaluate program effectiveness.

Cost percentages and productivity ratios help administrators monitor the performance of their operations and evaluate their success in meeting financial goals. There are many costs that can be calculated as a percentage of total revenue. Two of the most critical percentages are food cost and labor cost. School food service administrators often rely on these percentages to determine whether expenditures for food and labor are reasonable and within previously set guidelines. Cost percentages are calculated using the following formula:

$$\text{Cost Percentage} = \frac{\text{Total Expenditure Amount}}{\text{Total Revenue}}$$

Example: A school food service operation has total revenue of \$30,000 in the month of April and a food cost of \$16,500 for the same month. Using the formula above, we find the operation had a 55% food cost to total revenue.

$$\text{Food Cost \%} = \frac{\text{Total Cost of Purchased Food}}{\text{Total Revenue}}$$

$$\frac{\$16,500}{\$30,000} = .55 \times 100 \text{ or } 55\% \text{ Food Cost To Total Revenue}$$

This means that \$.55 of every revenue dollar was spent to cover food costs in April.

Case Study questions 1-3 are designed to help you understand how to calculate cost percentages and to use the information in program analysis. For example, the total of all percentages for expenses must be equal to 100 percent in order to *breakeven*. To breakeven means that the revenue in a given period of time is exactly the same as expenses for that same time period. In a breakeven situation, there are no funds left to cover increases for food, salaries, or program improvements. When a school food service operation is at the breakeven point, the operating balance remains the same. If the total cost percentage is *less* than 100 percent, the operation has more revenue than expenditures. If the total cost percentage is *more* than 100 percent, the operation has more expenditures than revenue. The operating balance will increase or decrease accordingly.

If the total of all cost percentages is:
Less than 100 percent - operating balance increases
Equal to 100 percent - food service breaks even
More than 100 percent - operating balance decreases

Important

Although USDA has taken steps to integrate commodities with purchased food in a single *inventory*, the value of commodities received by the program remains an important part of program analysis. For this reason, the food cost percentage of entitlement commodities received and food expenditures are calculated separately in the case study. Most school districts have the ability to separate the value of commodities received from food purchases based on state agency information. Schools districts can also calculate an approximate commodity value by multiplying the annual commodity value per meal by the number of reimbursable lunches served in the preceding school year. While it is recognized that these calculations may vary, nevertheless they are useful as an analysis tool.

Case Study: Part I Oaks School District

1. Using the attached *Year-End Summary* (page 5), complete the following by: (1) entering the amount of expenditures in each category, and (2) calculating the percentage of expenditure to total revenue in each category. The dollars spent for annual Salaries/Wages and Capital Equipment (See Expenditures on the *Year-End Summary*) have been recorded to help you get started.

NOTE– Calculate each percentage four decimal places. If the 5th decimal place is 5 or higher, round UP; if 4 or less, round DOWN.

Total Revenue for Year Ending June 30	\$2,468,317	
Expense Category	Expenditure Amount	% of Revenue
a. Salaries and Wages	699,319	.2833
b. Employee Benefits		
c. Purchased Food		
d. Commodity Value		
e. Supplies		
f. Capital Equipment	48,521	.0197
g. Indirect Costs		
h. Overhead Costs		
i. Total		

2. Total the percentages for all categories. What does the answer tell you about the operation?
3. a. When you combine food and labor costs, what is the percent to total revenue? Is this within generally accepted guidelines?
 - b. What happens if there is a 3% increase in the cost of labor and a 5% increase in food products?

Oaks School District – Year-End Summary Exhibit A

Meal Category	Free	Reduced	Paid	Total	% Free	% Reduced	% Paid	# Days	Enrollment	ADP	ADP Enroll.
Student Break.	233,365	24,750	57,535	315,650	.739	.079	.182	180	7,710	1754	
Student Lunch	430,861	70,298	391,417	892,576	.483	.079	.438	180	7,710	4959	
Adult Break.			930	930				180			
Adult Lunch			36,311	36,311				180			
Aftersch snacks	51,285			51,285				180			

Meal Equivalents

Full Time Employees	75	Lunch Equivalents	928,887 (Includes students and paying adults)
Part Time	12	Breakfast Equivalents	208,943 (Total students and adults x .66)
Hours Pd. Labor	103,140	Afterschool snacks	17,095 (Total ÷ 3)
		Other Food	30,395 (Other Food Sales ÷ 2.19 + 0.1575)
		Total	1,185,320

Expenditures for year ending June 30

Salaries	\$ 699,318.50
Benefits	297,528.00
Food Purchased	909,400.00
Commodity Value	140,580.72
Supplies	363,905.45
Equipment, Cap.	48,520.72
Indirect Cost Pd.	60,650.90
Overhead	90,976.00
Total	2,610,880.29

Meal Costs

	0.5900
	0.2510
	0.7672
	0.1186
	0.3070
	0.0409
	0.0512
	0.0768
Total	2.2027

Revenue for year ending June 30

Student Meal Sales	\$665,820.95	<u>Meal Revenue</u>	0.5617
Adult Meal Sales	73,505.50		0.0620
¹ Federal Reimbursement	1,497,358.28		1.2633
² State Funds	17,850.00		0.0150
Interest	1,850.00		0.0016
Other Food Sales	71,352.00		0.0602
³ Commodity Value	140,580.72		0.1186
Total	\$2,468,317.45		2.0824

¹includes lunch, breakfast, and snack reimbursements

²based on 0.02 per student lunch

³based on .1575 entitlement per student lunch

Chapter Five-Using Financial Reports to
Analyze Program Efficiency

Meal Equivalency Worksheet

In school food service programs, the production of meals is the unit of measurement used to gauge the effectiveness and efficiency of a school food service program. To determine meal cost or meals per labor hour, customer transactions for a la carte/extra food sales and other revenue-producing services must be converted to a meal equivalent. The meal equivalent is a statistical tool that is used to allocate costs based on a unit of production; in this case, the reimbursable student lunch. It is not a unit of production but a calculation that allows the operator to equate all meals to a standard, the student lunch. Counting meals other than lunches is not as clear-cut as counting lunches served to students. Thus, a method for converting operational data for other food services must be used to determine an equivalent measure.

Examples of meal equivalent conversion formulas and calculation for different types of meals are presented below.

Lunch: All reimbursable lunches served to children and full paid adult lunches are considered to be one meal equivalent. Second lunches are considered to be extra food sales.

Breakfast: Determining the total number of meal equivalents served in any given day may require several calculations. The method used in this training initiative for determining breakfast meal equivalents specifies that three breakfasts are the equivalent of two lunches. In 2004, this breakfast equivalency was updated from a ratio in which two breakfasts were considered the equivalent of one lunch. The new ratio is based on recommendations from participants in a national task force convened in March 2004 to update the Financial Management Information System model. Task force members indicated a three to two ratio is more representative of the effort and cost required to produce and serve the average breakfast in 2004.

The breakfast meal equivalents can be calculated as follows:

Meal Equivalent = Number of Breakfasts Served x Conversion Factor
($2/3 = .66$)

Calculate: *A school food service program served 300 student reimbursable breakfasts and 58 adult breakfasts one morning. Using the formula that three breakfasts are equivalent to two lunches, what are the breakfast meal equivalents?*

Afterschool Snacks: National School Lunch Program snacks are served to children and youth in afterschool care programs that are eligible for USDA reimbursement. While there are no current research studies to support the meal equivalency ratio, a survey of selected state agencies indicated most states use a 3/1 ratio of snacks to lunch. Using this equivalency snacks can be converted to meal equivalents as follows:

$$\text{Meal Equivalent} = \frac{\text{Number of Snacks Served}}{3}$$

Calculate: *An elementary school served 450 students reimbursable afterschool snacks. Using the formula that three snacks are equivalent to one meal, what are the snack meal equivalents?*

Other Food Service Sales: Meal equivalent calculations for all other food services are based on the annual federal reimbursement rate for students eligible for free lunch plus the entitlement commodity value. The sales from nonreimbursable food sales during meal services can be converted to meal equivalents as follows:

$$\text{Meal Equivalent} = \frac{\text{A la carte Sales or Extra Food}}{\text{Free Lunch Reimbursement} + \text{Commodity Value Per Meal}}$$

Calculate: *A food service operation allows nonreimbursable food sales (including second student meals) at lunch. During one lunch period, nonreimbursable food sales totaled \$234.00. Using the formula above, what are the nonreimbursable food sales meal equivalents?*

The same formula would apply for other food service events such as catered meals or special school functions.

$$\text{Meal Equivalent} = \frac{\text{Catered Meal Sales}}{\text{Free Lunch Reimbursement} + \text{Commodity Value Per Meal}}$$

Calculate: *A school food service operation offers catering services to departments within the school system for specified fees. During one month, the food service department catered three events with resulting sales of \$935.70. To determine the meal equivalents for catered sales, the school food service administrator divided the catering sales total by the value of the federal reimbursement for students eligible for free meals plus the commodity value of the lunch. Using this calculation, what are the catering sales meal equivalents for that month?*

Projected Revenue Per Meal Equivalent Worksheet

Calculating the projected average *revenue* earned per meal equivalent is very important in the management of school nutrition programs. Complete the following activity to determine the projected revenue for each meal equivalent served. For purposes of this activity, projected revenues for each category and projected meal counts were obtained from a school district spreadsheet.

Step 1: Total the projected revenue.

Account	Amount
Student Meal Sales	\$250,544
Adult Meal Sales	26,751
Other Nonreimbursable Food Sales	391,780
Interest	1,197
Miscellaneous	287
State Revenue	15,493
Federal Revenue	436,210
Fund Transfer-In	0
Revenue Sub-Total	
Commodity Value (286,940 x .1725)*	
Total Projected Revenue	

* The *projected* entitlement commodity value is determined by multiplying the number of projected student lunches (see table below) by the commodity value per meal for entitlement commodities (.1725). The *actual* value of commodities received (entitlement and bonus) will be reflected in the year-end analysis.

Step 2: Determine meal equivalents from meal count categories using the following factors. Round to nearest whole number.

Lunches: 1 lunch = 1 lunch

Breakfast: 3 breakfast = 2 lunch

Snacks: 3 snacks = 1 lunch

Nonreimbursable food sales: Dollar amount in sales divided by free reimbursement (2.24) + commodity value (.1725) = 2.4125

Account	Projected Meal Count and Nonreimbursable Food Sales	Meal Equivalents
Student Lunches	286,940	
Adult Lunches	9,727	
Breakfast	65,228	
Snacks	17,400	
Non-reimbursable food sales	\$391,780	
Total Meal Equivalents		

Step 3: Divide total projected revenue by total projected meal equivalents to find the revenue earned per meal equivalent served.

Chapter Five-Using Financial Reports to
Analyze Program Efficiency

Per Meal Cost Calculation Worksheet

Analyze this situation:

School food service staff members concerned about the plate costs in their school decided to analyze per meal costs on a daily basis. On this particular day, the school food service operation served 200 student lunches, 23 adult lunches, 96 breakfasts, 54 snacks in the afterschool care program, and had \$110.00 in a la carte and extra milk sales. There was \$619.55 in expenditures for the day. Using the following steps, calculate the per meal cost based on the number of meal equivalents served.

Step 1—Expenditures

Food Costs	\$ 252.50
USDA Commodities Used*	49.00
Labor Costs	179.50
Benefits Costs	60.50
General Supplies/Paper Supplies	36.60
Other Costs	
Small and Large Equipment	4.00
Repairs, Maintenance	4.55
Professional Development (travel, conferences, training, etc.)	2.60
Overhead (utilities, telephones, postage, waste management, etc.)	29.60
Indirect (charges from the district)	.70
Total Costs for the Day	\$619.55

*USDA Commodity cost is the value of the commodities used for the specified meal or period of time. Processing costs associated with the commodity are included in the *food costs*.

Step 2—Calculate all meals and meal equivalents

Refer to the meal conversion formulas reviewed on the Meal Equivalency Worksheet and calculate all meals and meal equivalents

Breakfast Meal Equivalents =
Snack Meal Equivalents =
A la Carte Meal Equivalents** =
Student Lunches + Adult Lunches =

**Free lunch reimbursement is \$2.24 and commodity value is \$.1725.

Step 3—Add all meal equivalents and lunches together

When the number of meal equivalents or lunches for each type of service has been determined, add them together to get the total meal equivalents served for the period being analyzed.

_____ Breakfast equivalents
_____ Snack equivalents
_____ A la carte equivalents
_____ Lunch meal equivalents
= _____ Total meal/lunch equivalents

Step 4—Calculate the per plate meal cost

Divide the total expenditures for the period by the total meal equivalents. This tells the school food service director the cost of producing a meal on a per plate basis for the period of time being analyzed.

Meal Cost = $\frac{\text{Total Expenditures}}{\text{Total Meals/Lunch Equivalents}}$ = \$

The meal cost of \$1.77 for the day may be compared to other meal costs for this school food service program. The previous week's daily plate or meal costs were as follows:

Monday	\$1.68
Tuesday	1.65
Wednesday	1.62
Thursday	1.67
Friday	1.69

Is the meal cost just analyzed for the day higher or lower than the previous week's meals?

If it is higher, it may be a red flag for the school food service director to investigate the reason for the increase or the need to balance high cost with low cost meals in line with established cost guidelines. This data may be used for future menu planning.

Meals Per Labor Hour Worksheet

The essential services provided by school food service programs are measured in number of reimbursable student lunches and/or meals equivalent to the reimbursable lunch. They are the prime unit of productivity of school food service programs and are essential elements in formulating budgets and determining productivity.

Meals Per Paid Labor Hour: To monitor the effectiveness of the operation many school food service administrators use the productivity index of meals per labor hour to determine appropriate staffing. This is an important piece of information that indicates to administrators whether they are using their resources efficiently and productively. It can help in determining how many employees are needed in a single production unit or throughout the district. Many factors affect meals per labor hour. They should be considered when comparing meals per labor hour of kitchen or production units.

These factors include:

- Type of service provided
- Production system
- Amount of convenience foods used
- Skill level of employees
- Complexity of the menu

Paid labor hours are calculated on time actually paid for by the school food service program. For example, if break times for employees are paid for by the program, then the break time should be included; if breaks are unpaid, the break time would not be included when calculating paid labor hours. The formula for determining meals per labor hour is to divide the number of meals or meal equivalents by the number of paid labor hours.

$$\text{Meals per Labor Hour} = \frac{\text{Number of Meals or Meal Equivalents}}{\text{Number of Paid Labor Hours}}$$

Calculate: An elementary school food service program served 338 meals/ or meal equivalents and had 24 hours of paid labor for the day. Using the formula above, help the school food service administrator determined the school's productivity rate.

Sample Staffing Guidelines for On-Site Production

Meal Equiv.	Meals per labor hour (MPLH) Total hours			
	Conventional System		Convenience System	
	MPLH	Total Hours	MPLH	Total Hours
10-100	12	8	16	6
101-150	12	8-12	16	6-9
151-200	12	12-16	16	9-12
201-250	14	14-17	17	12-14
251-300	14	17-21	18	14-16
301-400	15	20-26	18	17-21
401-500	16	25-31	19	21-25
501-600	17	29-35	20	25-30
601-700	18	33-37	22	27-31

- Retrieved August 2, 2004 from
<http://www.ode.state.or.us/services/nutrition/nsfp/finance/>

Program Analysis Case Study # 1

Part I: Determining Costs of Operation to Total Revenue

➔Part II: Determining Participation
Calculating Adult Meal Costs

Case Study: Part II Determining Participation Calculating Adult Meal Costs

Knowing the average daily participation over a period of time can assist the school food service administrator in making better financial management decisions that will affect productivity such as staffing and food production. Case Study question #4 provides an example of calculating average daily participation percentages.

Case Study question #5 is designed to help you check your understanding of conducting program analysis. For example, assume the food service administrator wants to know whether or not the meal price charged to adults was sufficient to cover adult meal costs for the year. By using the *Year-End Summary* (Case Study: Part I, page 5) and following the steps below, the food service administrator can calculate the cost of meals for adults in any given year and determine whether there was a net gain or loss.

- Step 1. Determine Adult Meal Equivalents [Lunch + (Breakfast x .66)]
* Hint – Lunch/breakfast counts are shown in the *Year-End Summary*.
- Step 2. Multiply adult meal equivalents by the meal cost.
*Hint – Total meal cost is shown in the column next to expenditures on the *Year-End Summary*.
- Step 3. Compare the results from step 2 to the revenue recorded for adult meal sales for financial gain or loss in adult meals.*Hint – The total for adult meal sales is shown under revenue.

Case Study: Part II Oaks School District

4. What is the percent of daily participation to total enrollment for breakfast? For lunch? The necessary information to calculate the percents can be found on the *Year-End Summary* (Hint – Divide the ADP for breakfast or ADP for lunch by the enrollment).

5. The amount of revenue received from the sale of adult meals should cover the total cost of producing a meal. Complete the following calculations to help you analyze adult meal costs (Refer to the three steps on page 9).
 - a. What are the total adult meal equivalents for the current year? (Remember: breakfasts served are converted to lunch equivalents using the ratio three breakfasts equals two lunches.)

 - b. Using the meals equivalents calculated in 5a and costs for producing each meal provided on the *Year-End Summary* sheet, calculate the total costs of adult meals in the current year.

 - c. What was the total dollar amount of the adult meal gain (or loss) for the current year?

