CHAPTER LEARNING OBJECTIVES:
MAJOR:
- Be able to define and explain each term or concept in this chapter.
- Be able to prepare a Cost of Goods Manufactured statement.
- Understand the flow of costs through the accounting system.
MINOR:
- Conceptually correct recording of fringe benefit costs - Appendix 2A.
- Cost of quality - Appendix 2B.
NOT IMPORTANT:
- Quality cost report - Appendix 2B.

MANUFACTURING requires the use of DIRECT MATERIALS (DM), DIRECT LABOR (DL) and FACTORY OVERHEAD (FOH) to produce goods.

DM is not difficult, inconvenient or expensive to trace to products but IDM is. DM would include most of the raw materials necessary to construct the finished product. Materiality will sometimes be a factor in classifying a cost as Direct versus Indirect.

DL is not difficult, inconvenient or expensive to trace to products but IDL is. DL would include most, if not all, the labor costs related to those who actually transform the materials or assemble the product. This would usually include those who operate the machines that transform the product. IDL would include all others who work in the factory and don’t actually transform the materials or assemble the product.

FOH includes all the costs incurred in the factory except for DM and DL. Every FOH item would be considered an Indirect Cost. DM and DL are Direct Costs. Therefore, DIRECT COSTS are not difficult, inconvenient or expensive to trace to a cost object, whereas, INDIRECT COSTS usually are. Remember, materiality will sometimes be a factor in determining how a cost is classified in this sense.

Marketing (selling) costs are not part of FOH, nor are Administrative (ADM) costs. Both of these are also Period costs, whereas DM, DL and FOH are Product costs.

PRIME costs are the combination of DM and DL.

CONVERSION costs are the combination of DL and FOH.

PRODUCT costs are the combination of DM, DL and FOH. They are also known as Inventory costs. These costs are not expensed (classified as cost of goods sold on the income statement) until the related products are sold. They are classified as inventory, usually a current asset, until the point in time that they are sold.

PERIOD costs are the combination of Marketing and Administrative costs. These costs are expensed (show up on the income statement) in the period they are incurred.

INVENTORIES of a manufacturing company consist of RAW MATERIALS (RM), WORK IN PROCESS (WIP) and FINISHED GOODS (FG).

RM are the tangible items that will be used to make the physical form of the product. In effect, those items that will become DM and/or IDM. In order to be considered RM they cannot have been, partially or fully, transformed into the product. They can be materials, supplies and/or component parts received from other sources that are in the same condition as when received.

WIP is the partially completed products. This would include some DM, DL and FOH but not all that is necessary to complete the products.
FG is the completed units of product that are ready to be sold.

Financial statements of manufacturing companies have some differences from merchandising or service businesses. The balance sheet would typically include three inventory accounts (RM, WIP & FG) instead of one inventory account for merchandising companies, or no inventory account for service businesses. There would also be an additional financial statement called the Statement of Cost of Goods Manufactured. This statement would show the details of the materials, labor and factory overhead plus the beginning and ending work in process balances. **In effect, this statement is a detailed summary of the Work In Process account.**

**COST FLOW:** You should fully understand, and be able to duplicate, the flow of costs through the accounts of a manufacturing company. It will be demonstrated during class.

**COST BEHAVIOR** refers to the two basic ways costs will behave (change) in relation to changes in production (activity). These are known as FIXED COST (FC) and VARIABLE COST (VC).

**FIXED COST:** As production increases, or decreases, a cost that does not change in amount in total is called a FC. As a result of the cost not changing in total (as the number of units produced increases or decreases) the mathematical average, based upon the number of units produced, will change in an opposite direction. In effect, an increase in production will cause the average fixed cost per unit to decrease. For example, if rent expense (generally a FC) is $1,000 per month and we produce 200 units, the cost per unit, for rent, is $5 ($1,000 / 200 = 5). But if we produce 500 units, then the cost per unit would be $2 ($1,000 / 500 = 2).

**VARIABLE COST:** As production changes (increases or decreases) a cost that does change in amount in total, and in direct proportion to the change in production, is called a VC. The wood materials used to make a desk is an example. The total amount of wood needed would be directly proportional to the number of desks made, but the amount of wood needed for each desk would be the same. For example, if the wood for one desk cost $10, then the total cost for 5 desks would be $50 ($10 * 5).

**RELEVANT RANGE** is the level of activity (production) where the costs behave as anticipated. In effect, a FC does not change in total as we produce more or less units, and the total VC changes by the same amount for each additional unit produced. A cost that behaved like a FC or one that behaved like a VC within the relevant range, might behave differently outside the relevant range.

A **COMMON cost** relates to two, or more, cost objects and it cannot be traced to any one individually. In effect, a common cost would continue, in full, even if one of the cost objects that it relates to were eliminated. For example, the salary of a supervisor who oversees three departments would continue even if one of the departments were eliminated.

When comparing two alternatives, the difference between the costs, or revenues, is referred to as the **DIFFERENTIAL costs.** Other similar terms are INCREMENTAL, AVOIDABLE, and CHANGABLE.

**OPPORTUNITY costs** refer to the benefit forgone (given up) because of the decision made. For example, if you give up one hour of time to study for this class but instead you could have worked and earned $10, then your opportunity cost of studying for this one hour is $10. Some decisions have opportunity costs and some do not. Of those that do, some can be quantified and some cannot. All decisions should factor in the opportunity cost, if any.

A **SUNK cost** is the amount paid, or to be paid, because of a previous commitment, and the cost cannot be changed by any decision made now or in the future. Sometimes a sunk cost has already been expensed and sometimes not. For example, the cost previously incurred to make ten units of inventory, eight of which have been sold and two not, is a sunk cost. Some of the cost to make the ten units, for example DM, may or may not have been already paid for. It would be paid for when the bill arrives.
APPENDIX 2A - Further Classification of Labor Costs:

Payroll Taxes and Fringe Benefits related to the DL costs are most appropriately classified as Direct Costs also. Businesses know that additional costs for payroll taxes and fringe benefits will be required of all employees therefore the portion attributable to the direct labor should also be categorized as DL. The portion attributable to IDL would, therefore, be categorized as IDL. Sometimes payroll taxes and/or fringe benefits will be classified as IDL because of Materiality or Cost-Benefit analysis.

The Overtime Premium pay and Idle Time pay related to the DL work force is most appropriately classified as Indirect Costs. These costs come about because of the totality of business, or inefficiencies of businesses, not as a result of any one particular job.

Categorizing a cost as direct versus indirect will have an impact on the unit cost calculations.

APPENDIX 2B – Cost of Quality:

PREVENTION costs have to do with the means and measures of avoiding defects before they happen. Using Quality Circles (employee groups) and/or Statistical Process Controls (measuring worker and machine accuracy) will result in overall decreased costs.

APPRAISAL costs, also known as Inspection costs, have to do with identifying products that do not conform to specifications before they are shipped or sold.

INTERNAL FAILURE costs are incurred before the product is shipped to a customer but are more specifically related to the out of pocket cost of reworking, repairing, or scrapping the product.

EXTERNAL FAILURE costs are incurred after the product is sold. These are the costs of repairing or replacing the failed product because of warranties.
C 2 - COST TERMS, CONCEPTS & CLASSIFICATIONS
Instructor's Supplemental Information
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FUNDAMENTAL CONCEPTS OF ACCOUNTING

ASSUMPTIONS OF ACCOUNTING:
1. Economic (separate) entity - revenues, expenses, assets, liabilities, business equity & transactions of business to be kept separate from those of the owners.
2. Going concern (continuity) - business has an unlimited life unless it is known to be otherwise.
3. Monetary unit (unit of measure) - events must be primarily financial in nature (expressed in dollars and cents) before recording & reporting; disregard any effects of inflation or deflation.
4. Periodicity (time period)* - the life of a business can be arbitrarily broken into monthly, quarterly, and yearly time intervals without material distortion of reported amounts.

PRINCIPLES OF ACCOUNTING:
1. Historical cost - all events to be recorded at original cost.
2. Revenue recognition - record & report revenue when earned.
4. Full disclosure - add additional information when necessary to provide an adequate understanding.

CONSTRAINTS OF ACCOUNTING:
1. Materiality (materiality threshold) - insignificant amounts need not be recorded & reported according to GAAP.
2. Conservatism - when in doubt how to record or report, don’t overstate assets or revenues.
3. Cost-benefit – the cost of providing the information should not exceed the benefits derived from using the information.
4. Industry Practice (peculiarity) - specialized types of businesses will have their own way of recording & reporting certain items. I.e., a separate set of GAAP for some business types.

ELEMENTS OF FINANCIAL STATEMENTS

INCOME STATEMENT                     BALANCE SHEET
1. Revenues                           1. Assets
2. Expenses                           2. Liabilities
3. Gains                              3. Owner's equity
4. Losses

DETAILED PRACTICES AND PROCEDURES OF ACCOUNTING
For example:
- Straight-line or Double declining balance depreciation.
- FIFO, LIFO or Average inventory methods.
- Perpetual or periodic application of chosen inventory method.

All of which must be CONSISTENTLY applied period to period.

* MANAGERIAL ACCOUNTING STUDENTS: Once the Time Period Assumption and the Matching Principle are embraced for financial reporting (either internally or externally), a distinction between Period and Product Costs are imperative for an accurate accounting to take place!