

Chapter 3 • Analyzing Business Transactions Using T Accounts

TEACHING OBJECTIVES

- 3-1) Set up T accounts for assets, liabilities, and owner's equity.
- 3-2) Analyze business transactions and enter them in the accounts.
- 3-3) Determine the balance of an account.
- 3-4) Set up T accounts for revenue and expenses.
- 3-5) Prepare a trial balance from T accounts.
- 3-6) Prepare an income statement, a statement of owner's equity, and a balance sheet.
- 3-7) Develop a chart of accounts.
- 3-8) Define the accounting terms new to this chapter.

SECTIONS

- 1. Transactions That Affect Assets, Liabilities, and Owner's Equity
- 2. Transactions That Affect Revenue, Expenses, and Withdrawals

CHAPTER OVERVIEW/LEARNING OBJECTIVES

Learning Link: Chapter 2 illustrated basic relationships in the accounting equation and showed how to prepare financial statements. Chapter 3 introduces tools accountants use to analyze business transactions, as well as the chart of accounts.

- 13-1. This chapter shows how to set up T accounts for assets, liabilities, and owner's equity. The account name is written on the top of the letter **T**. Increases and decreases to the account are entered on either the left or right side of the vertical line.
- 13-2. This chapter explains how to enter business transactions into the T accounts.
 - a. Increases in an *asset* account appear on the debit (left) side because assets are on the left side of the accounting equation.
 - b. An increase in a *liability* account is recorded on the credit (right) side because liabilities are on the right side of the accounting equation.
 - c. Increases in *owner's equity* are shown on the credit (right) side of an account. Decreases appear on the debit (left) side.
 - d. The *drawing* account is used to record the withdrawal of cash from the business by the owner. The drawing account decreases owner's equity.

- 13-3. The chapter explains that the difference between the amounts recorded on the two sides of an account known as the *balance* of the account.
- 13-4. This chapter shows how to set up T accounts for revenues and expenses.
- a. Revenue accounts increase owner's equity; therefore, increases are recorded on the credit side of revenue accounts.
 - b. Expenses are recorded on the debit side of the expense accounts because expenses decrease owner's equity.
- 13-5. The *Trial Balance* is a statement to test the accuracy of the financial records. Total debits should equal total credits.
- 13-6. The chapter explains how to prepare an income statement, a statement of owner's equity, and a balance sheet.
- 13-7 The chapter explains how to develop a *chart of accounts* which is a list of the firm's accounts arranged in a predetermined order and are numbered for handy reference and quick identification. Typically, Balance sheet accounts come first, followed by income statement accounts.

At the beginning of the chapter, there is a short paragraph about *AT&T*. Let's read this together. . .

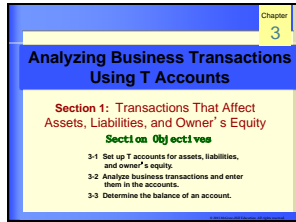


Ask. . . "How might the accountants who worked with some of the earliest telephone companies have recorded sales transaction in 1876? What effect did this transaction have on the fundamental accounting equation?"

Answer-- Students should recognize that sales will increase owner's equity, or revenue. Both the asset and the owner's equity side of the accounting equation are increased by the amount of the sale.

FAST FACTS *Alexander Graham Bell invented the telephone and gave birth to the company that would later become AT&T.*

- *Over the past century, AT&T has broadened its offerings through new product development and diversification.*
- *AT&T offers the greatest number of phones that work in most countries; the largest Wi-Fi network in the United States; and the largest number of high-speed internet access subscribers in the United States.*

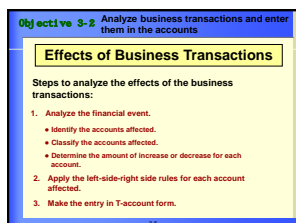
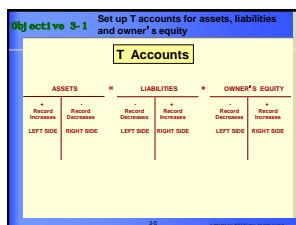
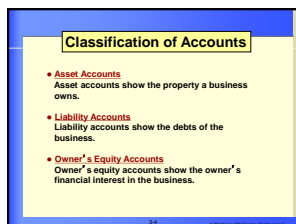
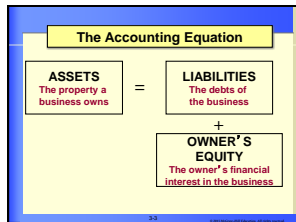


Section 1. TRANSACTIONS THAT AFFECT ASSETS, LIABILITIES, AND OWNER'S EQUITY

Objective 3-1

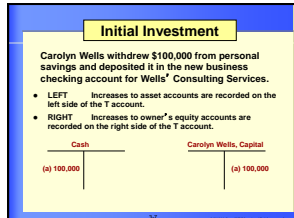
Asset, Liability, and Owner's Equity Accounts

- Write the fundamental accounting equation on the chalkboard.
- Emphasize that the two sides *must* be equal.
- Explain that accountants use the word **account** to describe the place where all information pertaining to a single item in the equation is recorded.
- Inform students that accountants use a tool known as the *T account* to illustrate transactions.



Objective 3-2 - Analyze business transactions and enter them in the accounts.

◆ Recording a Cash Investment



- Explain to students that using T accounts simplifies recordkeeping, by grouping all transactions of a particular type together.
- Under the accounting equation (which has been written on the board), draw a T account below each element, writing plus and minus signs.
- Point out that *Assets* are on the left side of the accounting equation. This means to *increase* any asset account you have to place the \$ amount on the left side of the T account.
- Since *Liabilities* and *Owner's Capital* are on the right side of the accounting equation, to increase those accounts you would put the \$ amount on the opposite side, or the right side of the T account.
- To record the cash investment, review the transaction analysis model with students:

For each transaction ask:

- (1) What are the accounts effected?—
Cash, Capital
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

◆ Recording a Cash Purchase of Equipment

Business Transaction	
Wells' Consulting Services issued a \$5,000 check to purchase a computer and other equipment.	
Analysis:	
(a) The asset account, Equipment, is increased by \$5,000.	
(b) The asset account, Cash, is decreased by \$5,000.	
Equipment	Cash
(a) 5,000	(b) 5,000

- To record the cash purchase of equipment, review the transaction analysis model with students:

For each transaction ask:

- (1) What are the accounts effected?— cash, equipment
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

Purchase of Equipment on Account	
The firm bought office equipment for \$6,000 on account from Office Plus.	
Analysis:	
(c) The asset account, Equipment, is increased by \$6,000.	
(c) The liability account, Accounts Payable, is increased by \$6,000.	
Equipment	Accounts Payable
(c) 6,000	(c) 6,000

◆ Recording a Credit Purchase of Equipment

- To record a purchase of equipment on credit, review the transaction analysis model with students:

For each transaction ask:

- (1) What are the accounts effected?— equipment, accounts payable
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

Recording a Cash Purchase of Supplies

Purchase of Supplies for Cash	
Wells' Consulting Services issued a check for \$1,500 to Office Delux Inc. to purchase office supplies.	
Analysis:	
(d) The asset account, Supplies, is increased by \$1,500.	
(d) The asset account, Cash, is decreased by \$1,500.	
Supplies	Cash
(d) 1,500	(d) 1,500

- To record the cash purchase of supplies, review the transaction analysis model with students:

For each transaction ask:

- (1) What are the accounts effected?—
cash, supplies
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

Recording a Payment to a Creditor

- To record the payment of a liability, review the transaction analysis model with students:

Payment of a Liability	
Wells* Consulting Services issued a check in the amount of \$2,500 to Office Plus.	
Analysis:	
(e) The asset account, Cash, is decreased by \$2,500.	
(e) The liability account, Accounts Payable, is decreased by \$2,500.	
Accounts Payable	Cash
(e) 2,500	(e) 2,500

For each transaction ask:

- (1) What are the accounts effected?— cash, accounts payable.
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

◆ Recording Prepaid Rent

- To record the cash payment of two months rent in advance, review the transaction analysis model with students:

Prepayment of Rent	
Wells* Consulting Services issued a check for \$8,000 to pay rent for the months of December and January.	
Analysis:	
(f) The asset account, Prepaid Rent, is increased by \$8,000.	
(f) The asset account, Cash, is decreased by \$8,000.	
Prepaid Rent	Cash
(f) 8,000	(f) 8,000

For each transaction ask:

- (1) What are the accounts effected?— cash, prepaid rent
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

Objective 3-3 Determine the balance of an account

An account balance is the difference between the amounts recorded on the two sides of an account.

A footing is a small pencil figure written at the base of an amount column showing the sum of the entries in the column.

Recording Account Balances

IF	THEN
the total on the right side is larger than the total on the left side.	the balance is recorded on the right side.
the total on the left side is larger.	the balance is recorded on the left side.
an account shows only one amount.	that amount is the balance.
an account contains entries on only one side.	the total of those entries is the account balance.

Computing the Account Balance

Cash	
(a) 100,000	(b) 5,000
	(c) 1,500
	(d) 2,500
	(e) 8,000
Bal. 83,000	17,000
(100,000 - 17,000)	

Footing

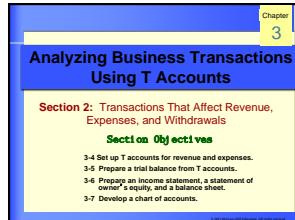
Summary of Account Balances

ASSETS		LIABILITIES		OWNER'S EQUITY	
Cash		Accounts Payable		Cash/In Wells, Capital	
(a) 100,000	(b) 5,000	(c) 2,500	(d) 6,000	(e) 100,000	
	(c) 1,500		Bal. 3,500		
	(d) 2,500				
	(e) 8,000				
Bal. 83,000	17,000				

SUMMARY OF ACCOUNT BALANCES		
ASSETS	LIABILITIES	OWNER'S EQUITY
83,000	3,500	100,000
8,000	8,000	
1,000	1,000	
102,500	3,500	100,000

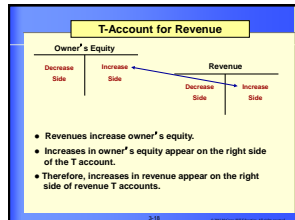
Objective 3-3**Account Balances**

- Review with students the procedure for balancing a T account:
 - Total amounts on the left (debit) side.
 - Total the amounts on the right (credit) side.
 - Subtract the smaller amount from the larger amount or "foot."
- Remind students that each element of the fundamental accounting equation is equal to the sum of the balances of all T-accounts it includes.
- Thus, the balances of all T accounts will result in equality of the fundamental accounting equation.
- Remind students that *Wells' Consulting Services* is a new business so all of the T accounts started out with \$0 balances.
- Explain that the T accounts for an established business would include previous balances.
- Have student's demonstrate their mastery of T accounts by asking them to record various transactions—you could call on certain students to orally describe what happens or have students come up to the board and enter the transactions into T accounts.

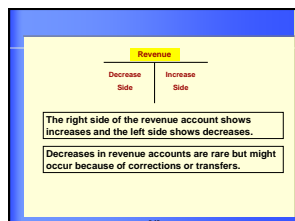


Section 2. TRANSACTIONS THAT AFFECT REVENUE, EXPENSES, AND WITHDRAWALS.

Revenue and Expense Accounts



- Review the definition of owner's equity.
- Draw a T account on the board and label it "Owner's Equity."
- On the left side, write "Expenses" and "Drawings." On the right side, write "Revenues."
- Discuss how expenses and the Drawing account reduce Owner's Equity and how revenues increase Owner's Equity.



◆ Recording Revenue from Services Sold for Cash

- To record the cash receipt from revenue earned:

For each transaction ask:

- (1) What are the accounts effected?— cash, fees income
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

- Remind students that revenues cause an increase in Owner's Equity. Hence, we enter the \$ amount on the right side of the *Fees Income* account.

Objective 3-4

Objective 3-4 Set up T accounts for revenues and expenses

Recording Revenue from Services Sold for Cash

Cash	Fees Income
Bal. \$3,000 (a) 36,000	(a) 36,000

\$36,000 is entered on the left (increase) side of the asset account Cash.

\$36,000 is entered on the right side of the Fees Income account.

◆ Recording Revenue from Services Sold on Credit

- To record a customer charging for services we performed, review the transaction analysis model with students:

For each transaction ask:

- (1) What are the accounts effected?— accounts receivable, fees income
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

Recording Revenue from Services Sold on Credit

In December, Wells' Consulting Services earned \$11,000 from various charge account clients.

Analysis:

(h) The asset account, Accounts Receivable, is increased by \$11,000.

(h) The revenue account, Fees Income, is increased by \$11,000.

Accounts Receivable	Fees Income
(h) 11,000	(h) 11,000

- Remind students that even though we haven't been paid for our services yet, we record the revenue because we have *earned* it.

◆ Recording Collections from Accounts Receivable

- Review the Left-Right rules for asset accounts as you review this transaction.



Ask students, "Why don't we record revenue when we receive this payment?" — because we would be recording the revenue *twice*.

Receipt of Payments on Account

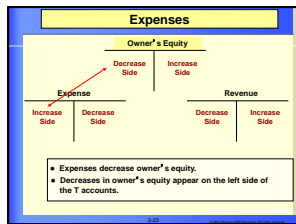
Charge account clients paid \$6,000, reducing the amount owed to Wells' Consulting Services.

Analysis:

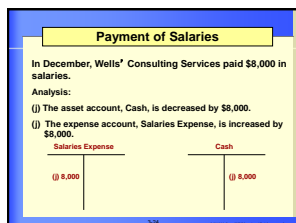
(i) The asset account, Cash, is increased by \$6,000.

(i) The asset account, Accounts Receivable, is decreased by \$6,000.

Cash	Accounts Receivable
(i) 6,000	(i) 6,000



Ask students, "You own a bakery, and you sold pastries, muffins, loaves of bread, coffee, and wedding cakes. Would you want to have only one revenue account or several different revenue accounts? Why?" –More revenue accounts provide more detailed information which is used to make business decisions.



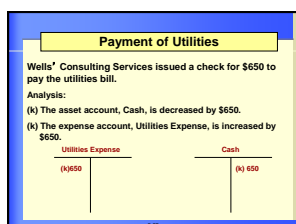
◆ Recording an Expense for Salaries

- To record the cash payment for salaries expense:

For each transaction ask:

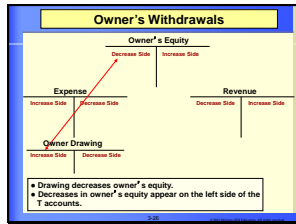
- (1) What are the accounts effected?—, salaries exp. and cash.
- (2) What is the account classification?
- (3) Then review the Left-Right rules for recording the transaction in a T account.

- Remind students that expenses cause a decrease in Owner's Equity. Hence, we enter the \$ amount on the left side of the *Salaries Expense* account.



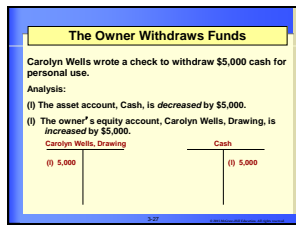
◆ Recording an Expense for Utilities

- Ask a volunteer from the class to describe the effects of this transaction on the accounting equation.
- Emphasize the Left-right rules for expense and asset accounts.

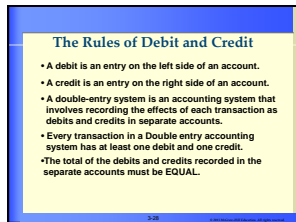


The Drawing Account

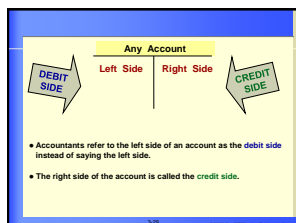
- Explain that the owner's withdrawals are recorded in a separate account called, *Carolyn Wells, Drawing*.
- Remind students that withdrawals cause a decrease in Owner's Equity. Hence, we enter the \$ amount on the left side of the *Carolyn Wells, Drawing* account.



The Rules of Debit and Credit



- Accountants do not use the term *left* and *right* when they talk about making entries into accounts. Instead they use the terms *debit* and *credit*.
- Explain that banks use these terms as well on your bank statements. Because your checking account is a *liability* to the bank, whenever you make a deposit, the bank credits your account (increasing *their* liability). When you write a check or withdraw money, the bank debits your account (reduces *their* liability).
- The accounting system is called the *double-entry system*. This is because:
 - Every transaction has at least two accounts which are effected and,
 - Total of the **debit \$** = total of the **credit \$**



Objective 3-5 Prepare a trial balance from T accounts

1. Use the proper heading to include who, what, and when information.
2. List the accounts in chart of account order or in the same order as they appear in the financial statement.
3. Enter the ending balance of each account in the appropriate Debit or Credit column.
4. Total the Debit column.
5. Total the Credit column.
6. Compare the column totals. They should be equal.

Objective 3-5**The Trial Balance**

- Review the definition of trial balance in the Glossary at the end of the chapter.
- The trial balance is not a formal financial statement.
- The only thing it tells you is whether the total of your debit balances in your accounts equals the total of your credit balances in your accounts.
- Explain that, once the trial balance is completed and balances, it can be used to prepare the financial statements.

The Trial Balance		
Wally Consulting Services		
Trial Balance		
December 31, 2011		
Account Name	Debit	Credit
Cash	111,200.00	
Accounts Receivable	5,000.00	
Supplies	5,000.00	
Prepaid Rent	5,000.00	
Equipment	12,000.00	
Accounts Payable		1,000.00
Unpaid Salaries		100,000.00
Unpaid Utilities		5,000.00
Owner's Drawings	5,000.00	
Owner's Equity		47,000.00
Retained Earnings	5,000.00	
Unpaid Expenses	5,000.00	
Totals	150,000.00	150,000.00

Errors	
Some common errors in a trial balance are:	
• Adding trial balance columns incorrectly	
• Recording only half a transaction – for example, recording a debit but not recording a credit, or vice versa	
• Recording both halves of a transaction as debits or credits rather than recording one debit and one credit	
• Recording the incorrect amount for a transaction	
• Recording a debit for one amount and a credit for a different amount	
• Mathematical errors in calculating account balances	
• Forgetting to carry over an account balance to the Trial Balance	

◆ Understanding Trial Balance Errors

- Explain that errors in the trial balance may be either an error in the listing of accounts on the trial balance or an error in the accounts.
- Review the list of possible trial balance errors with students. (Addition, recording an incorrect account, recording only half of a transaction, and recording both halves as debits or credits, etc.)

◆ **Finding Trial Balance Errors**

- Review the procedures to locate trial balance errors.
 - (1) Check the trial balance for math errors.
 - (2) Verify that the account balances were transferred correctly.
 - (3) Verify the account balance calculation.
 - (4) Check individual transactions.



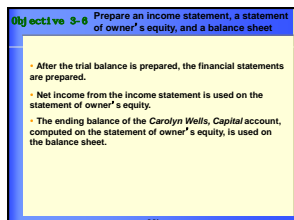
Ask students, "If the trial balance balances, does that mean that everything was recorded correctly?"---NO

Managerial Implications:



Ask students, "If you hired a person who didn't understand accounting to record all of your business transactions, what would be some of the possible consequences?"

Answers—checks could bounce, your credit rating of the business could be affected, the business may lose clients because payments on account are not recorded properly, etc.



Objective 3-6

Financial Statements

- Emphasize that when T account balances are accurately carried forward to a trial balance and the resulting trial balance has been balanced, it should be used to prepare financial statements.

Wells Consulting Services Trial Balance Month Ended December 31, 2015	
Account	Amount
Cash	47,500.00
Accounts Receivable	0.00
Office Equipment	0.00
Owner's Equity	0.00
Total	47,500.00

- Looking at the Trial Balance created in the text for Wells' Consulting Services, call on students to determine onto which financial statement the account should be placed.

Objective 3-7

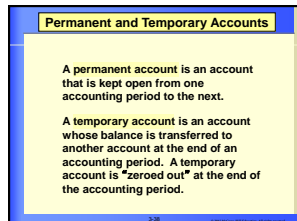
Chart of Accounts

Objective 3-7 Develop a chart of accounts

- Each account has a number and a name.
- The Balance Sheet accounts are listed first, followed by the Statement of Owner's Equity accounts, ending with the income statement accounts.
- The account number is assigned based on the type of account.
- Each account should have a number assigned to its title (name)
- Balance Sheet accounts are listed before income statement accounts.

- Explain that a *chart of accounts* is a list of the firm's accounts arranged in a predetermined order and are numbered for handy reference and quick identification. Typically, Balance sheet accounts come first, followed by income statement accounts.
- Review the chart of accounts for *Wells' Consulting Services* near the end of the chapter.
- Emphasize that the chart of accounts helps to locate and identify accounts quickly.
- Not all charts of accounts are identical. Account numbers and names may vary. In addition, account numbers can begin with any digit, as long as the numbering sequence groups similar accounts together.

Wells Consulting Services Chart of Accounts	
Balance Sheet Accounts	ASSETS
100-100 Cash	100-100 Cash
100-101 Accounts Receivable	100-101 Accounts Receivable
100-102 Office Equipment	100-102 Office Equipment
100-103 Owner's Equity	100-103 Owner's Equity
Statement of Owner's Equity Account	LIABILITIES
200-100 Owner's Equity	200-100 Owner's Equity
Income Statement Accounts	EXPENSES
300-100 Revenue	300-100 Revenue
300-101 Cost of Sales	300-101 Cost of Sales
300-102 Selling Expenses	300-102 Selling Expenses
300-103 Administrative Expenses	300-103 Administrative Expenses



Permanent and Temporary Accounts

- Explain that *permanent* or *real* accounts (assets, liabilities and the owner's capital account) have a balance which is carried forward to the next accounting period.
- Explain that the balances in *temporary* or *nominal* accounts (expense, revenues and the owner's drawing account) are transferred to the owner's capital account at the end of an accounting period so their balances are only temporary. In the next period, these accounts start with zero balances.

Help your students remember the various characteristics of the accounts that have been introduced to them. Make an assignment where they must make flash cards of accounts. They should write the name of an account on a 3 x 5 card. On the back of the card they must fill in the following:

- ✓ Type of account?
- ✓ How to increase the account.
- ✓ On which financial statement it would appear.
- ✓ Permanent or temporary account?