

Paper Proposal for the 25th Annual CBFA Conference

- **Point Loma Nazarene University,**
- **October 13-15,2005**

Session Title: *Do you want to buy a car? Accounting for Fixed Asset Disposition*

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Proposed Track: Best Integrative Teaching Practices Interactive Track

Session Title: *Do you want to buy a car? Accounting for Fixed Asset Disposition*

Type of exercise or activity: *Lecture and interactive classroom computation exercise.*

Proposed audience: (e.g. discipline, new faculty, more experienced faculty, course level)

Discipline : Accounting

Faculty : New or experienced

Course level : Introductory – Principles of Financial Accounting

Minimum time needed: (15, 30, 45 minute sessions)

The lecture and classroom exercise could be conformed to 30 or 45 minutes.

Technical needs: e.g. special room configuration, special equipment

No special room configuration. Two-person tables would work best. Interactive classroom exercise could be either handwritten (best) or on a computer (requires knowledge of Excel). All special equipment and props will be provided.

Purpose of Session:

This will be a session to show innovative pedagogy in teaching accounting.

It will elucidate the process to account for the gain or loss on the sale of assets and de-mystify the underlying calculations.

The underlying teaching challenge is explaining why the net change in cash on the sale of an asset will rarely equal the gain or loss on the sale.

Integrative Learning Outcomes:

Use props and group work in a fun environment (which tends to reduce the stress associated with understanding accounting matters) that allows students to work with each other to achieve the correct solution

This lecture has been cited in session-end student evaluations as memorable and fun. In addition, a high school student attended this lecture during PLNU Preview Days and reported to the Dean of the School of Business that it was “the best class he has ever been in, ever”.

Literature Cited (if appropriate):

The accounting text used at PLNU for this topic is:

*Needles, Belverd & Powers, Marian & Crossan, Susan (2002) *Financial and Managerial Accounting*, (2002e ed) (Chapter 10 pp 455-457). Boston New York: Houghton Mifflin Company.*

There is no literature citation for the pedagogy.

Teaching notes:

1. *Upon entering the classroom, each student picks out a Hot Wheels car and takes the car to the student's desk.*
2. *Lecture begins on the purchase, depreciation, and subsequent sale of an asset including the relevant journal entries. Lecture also develops an example from class discussion to demonstrate why the net change in cash on the sale of an asset will rarely equal the gain or loss on the sale.*
3. *An exercise packet is then distributed that describes the purchase transaction data for the car that the student picked up at the beginning of the class.*
4. *The student calculates the depreciation for the second year and records the relevant journal entry.*
5. *The student then finds another student in the classroom to buy the student's car at whatever price can be negotiated.*
6. *After the sale has been consummated, the student calculates the gain or loss on the transaction, records the journal entry and proves out the net change in cash for the transaction.*
7. *Finally a packet will be distributed that includes actual lesson plan and handouts for teaching this topic in a one hour class.*

Targeted Outcomes:

1. *The professors attending this session should be able to reconcile how the economic gain or loss on the disposition of an asset equals the accounting gain or loss.*
2. *The professors attending this session experience how props and interactive exercises help a student understand a conceptually confusing and complicated topic.*

25th Annual CBFA Conference
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Do you want to buy a car? Accounting for Fixed Asset Dispositions
 Lesson Plan

I. Introduction (5 min)

- A. Upon entering the classroom, each student picks out a Hot Wheels car and takes the car to the student's desk.
- B. Lecture begins with describing the issues regarding the purchase and subsequent sale of a car.
 - 1. Purchase Price – Sales Price = Gain or Loss
 - 2. Difference in cash = Gain or Loss
- C. In business transactions the Gain or Loss on disposition rarely equals the difference in cash and the accounting records must reflect the economic reality.
- D. Explanation of basic accounting terminology
 - 1. DR = CR
 - 2. Use of T Accounts

II. Explanation of purchase, depreciation, and subsequent sale of a vehicle (10 min)

- A. Does anyone want to buy a car?
 - 1. Handout exercise worksheet
 - 2. Solicit from the class a student that would like to buy a car
 - 3. Calculate Purchase Price say \$54,000,
 - 4. Record Purchase on June 1st

| | | |
|------|----------|----------|
| | Dr. | Cr. |
| Auto | \$54,000 | |
| Cash | | \$54,000 |

- 5. Calculate depreciation : Assume Salvage Value \$8,000, Useful Life 5 years
 (Purchase Price – Salvage Value)/Useful Life
 Depreciation = (54,000-8,000)/(12*5) = \$800 per month
- 6. Record depreciation expense for the year December 31st

$$\text{Monthly Depreciation} * \text{Number of Months}$$

$$\$800 * 7 = \$5,600$$

| | | |
|--------------|---------|---------|
| | Dr. | Cr. |
| Depr Expense | \$5,600 | |
| Acc Depr | | \$5,600 |

- B. Subsequent sale of car on December 31st for \$50,000 cash
 - 1. Calculate economic Gain or Loss : The difference in cash

$$\text{Sale Price} - \text{Cost} = \text{Economic Gain or (Loss)}$$

$$\$50,000 - \$54,000 = (\$4,000)$$

- 1. Calculate Accounting Gain or Loss

$$\text{Cash} - \text{Net Book Value} = \text{Gain or Loss}$$

$$\text{Net Book Value} = \text{Original Cost} - \text{Accumulated Depreciation}$$

$$\text{NBV} = 54,000 - \$5,600 = \$48,400$$

$$\text{Accounting Gain or (Loss)} = \$50,000 - \$48,400 = \$1,600$$

2. Record Sale

| | | |
|----------|----------|----------|
| Cash | \$50,000 | |
| Acc Depr | 5,600 | |
| Vehicle | | \$54,000 |
| Gain | | 1,600 |

3. Reconcile Economic Gain (Loss) to Accounting Records

$$\text{Economic (Loss)} = (\$4,000)$$

$$\text{Accounting Records} = \text{Depreciation Exp} + \text{Accounting Gain or (Loss)}$$

$$\text{Accounting Records} = (\$5,600) - \$1,600 = (\$4,000)$$

4. Close the books

| | DR | CR |
|-------------------|---------|---------|
| Retained Earnings | \$5,600 | |
| Depr Exp | | \$5,600 |
| Gain (Loss) | \$1,600 | |
| Ret Earnings | | \$1,600 |

5. Balance in Cash must equal the balance in Retained Earnings

III. Student Interactive Calculation (10 min)

A. Handout #2 – Recording Purchase and subsequent Sale of a vehicle

1. For this demonstration the Purchase and Depreciation Entries have been made on handout

B. Student sells their car to another student

1. Calculates Gain or (Loss)
2. Reconciles Economic Gain (Loss) to Accounting Gain (Loss)
3. Records transaction

IV. Wrap-up (5 min)

A. Handout #3 – Worksheet that I use in normal classroom setting

B. Questions or Comments

25th Annual CBFA Conference
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Do you want to buy a car? Accounting for Fixed Asset Dispositions
 Handout #1 – Lecture Worksheet

1. Record Purchase on June 1st

| | | |
|------|-----------|-----------|
| | <u>DR</u> | <u>CR</u> |
| Auto | | |
| Cash | | |

2. Calculate depreciation : Assume Salvage Value \$8,000, Useful Life 5 years

$$\text{Depreciation} = (\text{Purchase Price} - \text{Salvage Value}) / \text{Useful Life}$$

3. Record depreciation expense for the year December 31st

$$\text{Monthly Depreciation} * \text{Number of Months}$$

| | | |
|--------------|-----------|-----------|
| | <u>DR</u> | <u>CR</u> |
| Depr Expense | | |
| Acc Depr | | |

4. Subsequent sale of car on December 31st for \$50,000 cash

a. Calculate economic Gain or Loss : The difference in cash

$$\text{Sale Price} - \text{Cost} = \text{Economic Gain or (Loss)}$$

b. Calculate Accounting Gain or Loss

$$\text{Cash} - \text{Net Book Value} = \text{Gain or Loss}$$

$$\text{Net Book Value} = \text{Original Cost} - \text{Accumulated Depreciation}$$

c. Record Sale

| | | |
|----------|-----------|-----------|
| | <u>DR</u> | <u>CR</u> |
| Cash | | |
| Acc Depr | | |
| Vehicle | | |
| Gain | | |

5. Reconcile Economic Gain (Loss) to Accounting Records

$$\text{Economic (Loss)} =$$

$$\text{Accounting Records} = \text{Depreciation Exp} + \text{Accounting Gain or (Loss)}$$

$$\text{Accounting Records} =$$

6. Close the books

| | | |
|-------------------|-----------|-----------|
| | <u>DR</u> | <u>CR</u> |
| Retained Earnings | | |
| Depr Exp | | |
| Gain (Loss) | | |
| Ret Earnings | | |

7. Balance in Cash must equal the balance in Retained Earnings

CBFA - 25th Annual Conference Purchase and Sale Exercise

ACC201 - Section _____

Your Name _____

| Make and Model of Car | Color | Details | | | | | | | | | | | | | | | | |
|--|----------------------|---------|----------------|-------------|--------|--------------|--------------|-------------|---------------------|---|--|------------------|--|-----------|-------------------|---------|-------|--|
| <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="border: 1px solid black; padding: 2px;">Purchase Information</td> </tr> <tr> <td style="width: 60%; padding: 2px;">Date Purchased</td> <td style="padding: 2px;">May 1, 2002</td> </tr> <tr> <td style="padding: 2px;">Amount</td> <td style="padding: 2px;">\$ 25,000.00</td> </tr> <tr> <td style="padding: 2px;">Savage Value</td> <td style="padding: 2px;">\$ 7,000.00</td> </tr> <tr> <td style="padding: 2px;">Useful Life (years)</td> <td style="padding: 2px;">5</td> </tr> </table> | Purchase Information | | Date Purchased | May 1, 2002 | Amount | \$ 25,000.00 | Savage Value | \$ 7,000.00 | Useful Life (years) | 5 | <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="border: 1px solid black; padding: 2px;">Sale Information</td> </tr> <tr> <td style="width: 60%; padding: 2px;">Date Sold</td> <td style="padding: 2px;">December 31, 2002</td> </tr> <tr> <td style="padding: 2px;">Sold To</td> <td style="padding: 2px;">_____</td> </tr> </table> | Sale Information | | Date Sold | December 31, 2002 | Sold To | _____ | |
| Purchase Information | | | | | | | | | | | | | | | | | | |
| Date Purchased | May 1, 2002 | | | | | | | | | | | | | | | | | |
| Amount | \$ 25,000.00 | | | | | | | | | | | | | | | | | |
| Savage Value | \$ 7,000.00 | | | | | | | | | | | | | | | | | |
| Useful Life (years) | 5 | | | | | | | | | | | | | | | | | |
| Sale Information | | | | | | | | | | | | | | | | | | |
| Date Sold | December 31, 2002 | | | | | | | | | | | | | | | | | |
| Sold To | _____ | | | | | | | | | | | | | | | | | |

(1) Record the purchase of the Auto for cash \$ 25,000.00

(2) Calculate Depreciation Expense for the year ended December 31, 2002

$$\text{Deprciation} = \frac{(\text{Purch Price} - \text{Salvage Value})}{\text{Useful Life}} = \boxed{\$ 60.00} \text{ per month}$$

| | | | | | | | | | | |
|----|-----------|---|----|------------|---|-----|---|----|-------|-----------|
| \$ | 25,000.00 | - | \$ | (7,000.00) | / | 300 | = | \$ | 60.00 | per month |
|----|-----------|---|----|------------|---|-----|---|----|-------|-----------|

(3) Record Depreciation Expense in General Journal

$$\text{Depr / month} \times \text{Num Mos} = \text{Depreciation Expense for year}$$

| | | | | | | |
|----|-------|---|---|---|----|--------|
| \$ | 60.00 | x | 8 | = | \$ | 480.00 |
|----|-------|---|---|---|----|--------|

(4) a Calculate economic Gain or (Loss)

$$\text{Sales Price} \quad \text{—} \quad \text{Original Cost} \quad = \quad \text{Economic Gain or (Loss)}$$

$$\boxed{} \text{ --- } \$ 25,000.00 \text{ = } \boxed{}$$

(4) b Calculate Net Book Value

Original Cost - Accumulated Depreciation = Net Book Value

$$\begin{array}{r} \$ 25,000.00 \\ - \quad (480.00) \\ \hline \end{array} \text{ = } \$ 24,520.00$$

Calculate Accounting Gain or (Loss)

| | | | | |
|------|-----|----------------|---|----------------------|
| | --- | Net Book Value | = | |
| Cash | | Value | | Acctg Gain or (Loss) |
| | --- | \$(24,520.00) | = | |

CBFA - 25th Annual Conference Purchase and Sale Exercise

(4) c Record Sale of Auto for Cash - See General Journal

(5) Reconcile Economic Gain or (Loss) with Accounting Gain or (Loss)

Economic Gain or (Loss)

Depr Exp + Acctg Gain (Loss) = Change in Cash in Accounting Records

$$\begin{array}{r} \$ \quad 480.00 \\ + \\ \hline \end{array} \text{ + } \boxed{} \text{ = } \boxed{}$$

(7) Close the general ledger at December 31, 2002 - See General Journal

(8) Reconcile Cash balance to Retained Earnings Balance

Cash Balance = _____

R/E Balance = _____

General Journal

| Trans | Description | Post Reference | Balance | |
|-------|---|----------------|--------------|--------------|
| | | | DR | CR |
| (1) | Auto | | \$ 25,000.00 | |
| (1) | Cash | | | \$ 25,000.00 |
| | Purchase Auto on 5/1/02 | | | |
| (2) | Depreciation Expense | | \$ 480.00 | |
| (2) | Accumulated Depreciation | | | \$ 480.00 |
| | Record depreciation expense for the year | | | |
| (4) c | Cash | | | |
| (4) c | Accumulated Depreciation | | \$ 480.00 | |
| (4) c | Gain (Loss) on Sale - if you have a (Loss) | | | |
| (4) c | Gain (Loss) on Sale - if you have a gain | | | |
| (4) c | Auto | | | \$ 25,000.00 |
| | Record sale of auto for cash | | | |
| (6) a | Retained Earnings | | \$ 480.00 | |
| (6) a | Depreciation Expense | | | \$ 480.00 |
| | Close our Depreciation Expense | | | |
| (6) b | Gain (Loss) on Sale | | | |
| (6) b | Retained Earnings | | | |
| | If you have a gain - close out Gain (Loss) Acct | | | |
| | OR | | | |
| (6) c | Retained Earnings | | | |
| (6) c | Gain (Loss) on Sale | | | |
| | If you have a loss - close out Gain (Loss) Acct | | | |

| Cash | |
|-------|-----------|
| (4) c | \$ 25,000 |

| Auto | |
|------|-----------|
| (1) | \$ 25,000 |
| | \$ 25,000 |
| | \$ - |

| Accumulated Deprecia | |
|----------------------|--------|
| (4) c | \$ 480 |
| (4) c | \$ 480 |
| | \$ |

| Depreciation Expense | |
|----------------------|--------|
| (2) | \$ 480 |
| | \$ 480 |
| | \$ - |

| Gain or (Loss) on Sale | |
|------------------------|--|
| (4) c | |
| (6) b | |

| Retained Earnings | |
|-------------------|-----|
| (4) c | 480 |
| (6) c | |
| (6) c | |

Handout #3

Note: This handout is a similar Excel worksheet as handout #2. However, it did not transfer from excel to word in a form that suitable for printing.