

# Flip or Be Flipped: Is it Time to Flip the Classroom?

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Slides posted on AAA Commons and

[www.navigatingaccounting.com/presentation/presentations#Teaching](http://www.navigatingaccounting.com/presentation/presentations#Teaching)

# Is it Time to Flip the Classroom?

## Agenda

- Preliminaries
- Hands on illustrations
  - Intel and Starbucks: applications of basic concepts
  - Balance Sheet Toulmin exercise: critical thinking
  - Mall exercise: financial leverage and the credit crisis
- Wrap up
  - What, if any, valuable lessons did you learn?
  - What, if any, actions are you ready to seriously pursue?

# Is it Time to Flip the Classroom?

## Preliminaries

- Rapidly changing environment
  - Public outcry about rising costs of college
  - Perceived solution: MOOCs – low cost, high quality
  - Creative destruction – faculty & students can be outsourced
- Flipped classroom
  - What's new?
- Moving up the flip continuum
  - Focus on faculty-student interactions that can't yet be replicated by MOOCs
  - Keep learning new flips: stay ahead of technology

# Is it Time to Flip the Classroom?

## Preliminaries

- Flipping challenges
  - Knowledge and skills
  - Motivation and resources
- Broader challenges
  - How do we put ten pounds of sugar in a five-pound bag?
  - How do we address student diversity?
- Course design levers
  - Concepts
  - Technology
  - Incentives

# Is it Time to Flip the Classroom?

## Hands On Illustration – Applications of Basic Concepts

### Exercise materials

PowerPoint and OneNote slides and teaching note video

<http://www.navigatingaccounting.com/content/instructors-forum#part-7-income-measures-anchor>

Intel Exercise

<http://www.navigatingaccounting.com/exercise/exercise-iswisscoe022>

Starbucks Exercise

<http://www.navigatingaccounting.com/exercise/exercise-iswbnisbse060>

# Is it Time to Flip the Classroom?

## Hands On Illustration – Discussion

- What challenges would you expect if you were to use these or similar exercises with your students?
- What benefits would you expect, if any?

# Is it Time to Flip the Classroom?

## Hands On Illustration – Critical Thinking

### **Exercise materials**

Analyzing Balance Sheets and Financial Condition Exercise (Analysis Mini-Case Series)

<http://www.navigatingaccounting.com/exercise/exercise-bshunafc040>

Toulmin Model of Argumentation:

[http://www.navigatingaccounting.com/sites/default/files/Posted/Common/Resources\\_web\\_book/Toulmin\\_Model\\_of\\_Argumentation.pdf](http://www.navigatingaccounting.com/sites/default/files/Posted/Common/Resources_web_book/Toulmin_Model_of_Argumentation.pdf)

# Is it Time to Flip the Classroom?

## Hands On Illustration – Risks and Rewards Application

### **Exercise materials**

PowerPoint and OneNote slides and teaching note video

<http://www.navigatingaccounting.com/content/instructors-forum#part-5-risk-and-rewards-application-mall-exercise-credit-crisis-anchor>

Mall and Credit Crisis Exercise

<http://www.navigatingaccounting.com/exercise/exercise-bshunafc030>



# Is it Time to Flip the Classroom?

## How can you get started?

- Borrow from others:
  - Find resources from colleagues
  - Find resources on-line
- Use clickers:
  - Assess what students “know and don’t know” to more efficiently focus class discussions
- Try 1 or 2 flipped classes:
  - Identify topics students struggled with in the past
  - Identify concepts students need to internalize versus memorize
- Other ideas?

# Is it Time to Flip the Classroom?

## Flipped Classroom – the Flip Continuum

### Keep learning new flips

- The boundaries of what can and can't be learned effectively through electronic media without significant faculty-student interaction will continue to evolve with new technologies and learning models.



<http://www.fanpop.com/spots/jacob-black/images/8583965/title/taylor-lautner-flips-rolling-stones-photo>



<http://gymnastics.about.com/od/famousgymnasts/ig/Shawn-Johnson-Gallery/Shawn-Johnson-Flip-.htm>

# Is it Time to Flip the Classroom?

## Aim High

### Gold medalist flippers

**Marva Collins**



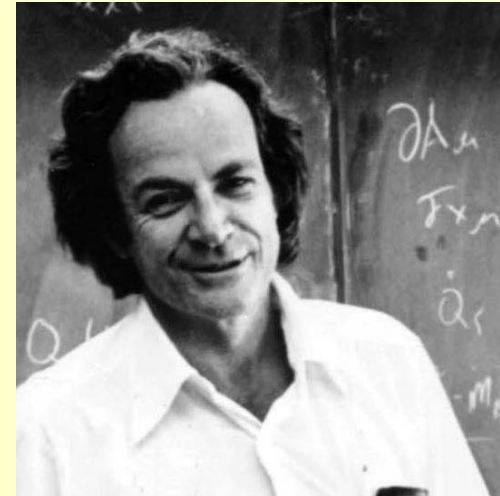
<http://www.marvacollins.com/biography.html>

**Eric Mazur**



<http://www.youtube.com/watch?v=WwsIBPj8GgI>

**Richard Feynman**



<http://uweanimation.blogspot.com/2011/03/interesting-scientist-richard-feynman.html>

# Is it Time to Flip the Classroom?

## Wrap Up

- What, if any, valuable lessons did you learn?
- What, if any, actions are you ready to seriously pursue?

# Is it Time to Flip the Classroom?

## Flip Examples

The following slides provide flipping examples from our introductory financial accounting course.

# Is it Time to Flip the Classroom?

## Flip Example – Class Preparation: Income Statement Basics

### COURSE MAP

FINANCIAL ACCOUNTING

MA031, FALL 2012

BOSTON COLLEGE

PETE AND CAROLYN WILSON

FULTON 552A, 617-552-1963

Guidance  
is  
essential

### Session 5: Income statements and statement of changes in owners' equity

#### Watch

"What Do I See: Income Statements?" videos

[http://www.navigatingaccounting.com/book/income-statements#wis\\_is](http://www.navigatingaccounting.com/book/income-statements#wis_is)

**Additional guidance:** When preparing for Session 5, we recommend you: (1) watch the express route paying particular attention to the last take-away: "What should you do next?" (2) Try the exercises following the guidance in the "What should you do next?" take-away.

#### Do

"What Do I See: Income Statements?" exercises.

Go to the exercise link under the Express video on the web page.

- **Practice problems**

Exercises is.wis.is.010, is.wis.is.020, and is.wis.is.040

- **Assigned problem**

Exercise is.wis.is.030

*We will go over this exercise during class if we have time left after discussing is.wis.scoe.021.*

# Is it Time to Flip the Classroom?

## Flip Example – Class Preparation : Income Statement Basics

Students watch videos to learn basics prior to class and review them later

Express Route

Search...

Introduction

OEC map

IS hierarchy:

- 1 Comprehensive income
- 2 Major categories
- 3 Significant subcategories
- 4 Line items

Take-aways

Owners' equity change map (OEC map)

**BISCHOFF'S 2013 OWNERS' EQUITY CHANGE MAP** OEC map

2012 fiscal year end		2013 fiscal year end
A Assets	L Liabilities = OE Owners' Equity	A Assets - Liabilities = OE Owners' Equity
\$746	\$260 = \$486	\$940 - \$327 = \$613

2012 fiscal year end → 2013 fiscal year end  
One-year performance period

Invested cap. = 100  
Income 10  
110

Fiscal 2013 balance sheet change

Change in Assets	Change in Liabilities	Change in Owners' Equity
ΔA Change in Assets	ΔL Change in Liabilities	ΔOE Change in Owners' Equity
\$194	\$67	\$127

Return on the capital

Transactions with owners during the period that changed the value of the net assets: \$14

- Contributions from owners
- Distributions to owners

Other events or circumstances during the period that changed the value of net assets: \$113

- Comprehensive Income
- Change in accounting policy

03:05 / 11:59

# Is it Time to Flip the Classroom?

## Flip Example – Class Preparation: Income Statement Basics

Students tackle exercises prior to class and identify areas where they are having difficulty.

### EXERCISES

#### [is.wis.scoe.021 Applying a hierarchical approach to measuring Intel's performance](#)

These questions pertain to **Intel's** consolidated financial statements in their fiscal 2011 annual report. See the exercise materials for this section. No solution is provided.

#### Part I: Owners' Equity Change Map

- (a) Use Intel's fiscal 2011 annual report to locate its consolidated balance sheets and consolidated statements of stockholders' equity.
- (b) Complete the owners' equity change map template on the next page.

#### Part II: True or False

- (c) True or False: Intel received more contributions from owners than it distributed to owners in dividends and stock repurchases during fiscal 2011.
- (d) True or False: There was no change in owners' equity during fiscal 2010 or 2011 due to changes in accounting policies or restatements.
- (e) True or False: Intel's other comprehensive income was positive during fiscal 2010 and negative during fiscal 2011 (representing a loss).
- (f) True or False: Intel's net profit was positive during fiscal 2010 and negative during fiscal 2011 (representing a loss).

#### Search



This exercise helps you learn how to search for information.

#### Compute



This exercise helps you learn how to compute information.

#### Usage



This exercise helps you learn how to use accounting information.



# Is it Time to Flip the Classroom?

## Flip Example – Classroom Activities: Refining Basics

The screenshot shows a Microsoft OneNote window titled "Announcement - Microsoft OneNote". The ribbon includes "File", "Home", "Insert", "Share", "Draw", "Review", and "View". The notebook has tabs for "Session 01" through "Session 06". The current page is titled "Announcement" and contains two bullet points:

- Open Intel's annual report to the balance sheet
- Be prepared to identify parts of Exercise is.wis.021 you would like to discuss

A red box highlights the second bullet point. A larger red box at the bottom of the page contains the following text:

Students are polled at the start of class to identify places in the assignment where they need help before moving on to more challenging applications.

On the right side of the OneNote window, a "New Page" list is visible, showing the following pages:

- Announcement
- 01 introduction: evolution of Intel's BS 1
- 02 introduction: evolution of Intel's BS 2
- 03 introduction: evolution of Intel's BS 3
- 04 introduction: evolution of Intel's BS 4
- 05 introduction: evolution of Intel's BS 5
- 06 is.wis.scoe.021 Part I: question
- I: BS change template
- I: BS change solution
- I: clicker 01 question
- I: clicker 01 solution
- I: clicker 02 question
- t I: clicker 02 solution
- I: clicker 03 question
- I: clicker 03 solution
- I: clicker 04 question
- I: clicker 04 solution

# Is it Time to Flip the Classroom?

## Flip Example – Classroom Activities: Refining Basics

13 is.wis.scoe.021 Part I: clicker 03 question - Microsoft OneNote

File Home Insert Share Draw Review View

Session 01 Session 02 Session 03 Session 04 Session 05 Session 06 Session 07 Session 09 ... Search All Notebooks (Ctrl+E)

MA031F12M

13 is.wis.scoe.021 Part I: clicker 03 question

### Owners' Equity Change Map Intel 2011

**Question**  
Intel's 2011 other comprehensive income is:

- a) \$12,942
- b) (\$1,114)
- c) \$11,404
- d) \$11,828
- e) none of the above

A	-	L	=	OE		A	-	L	=	OE
Assets		Liabilities		Owners' Equity		Assets		Liabilities		Owners' Equity
\$63,186		\$13,756		\$49,430		\$71,119		\$25,208		\$45,911

2010 fiscal year end      2011 fiscal year end

Fiscal 2011 balance sheet

ΔA	-	ΔL	=	ΔOE
Change in Assets		Change in Liabilities		Change in Owners' Equity
\$7,933		\$11,452		

**Class works on problem areas as quickly as possible. Here, locating OCI.**

New Page

- Announcement
- 01 introduction: evolution of Intel's BS 1
- 02 introduction: evolution of Intel's BS 2
- 03 introduction: evolution of Intel's BS 3
- 04 introduction: evolution of Intel's BS 4
- 05 introduction: evolution of Intel's BS 5
- 06 is.wis.scoe.021 Part I: question
- 07 is.wis.scoe.021 Part I: BS change temp
- 08 is.wis.scoe.021 Part I: BS change soluti
- 09 is.wis.scoe.021: Part I: clicker 01 questi
- 10 is.wis.scoe.021: Part I: clicker 01 soluti
- 11 is.wis.scoe.021: Part I: clicker 02 questi
- 12 is.wis.scoe.021: Part I: clicker 02 soluti
- 13 is.wis.scoe.021 Part I: clicker 03 questi
- 14 is.wis.scoe.021: Part I: clicker 03 soluti
- 15 is.wis.scoe.021: Part I: clicker 04 questi
- 16 is.wis.scoe.021: Part I: clicker 04 soluti

# Is it Time to Flip the Classroom?

## Flip Example – Classroom Activities: Extending Basics

Session 01

Session 02

Session 03

Session 04

Session 05

Session 06

Session 07

Session 09

Session 10

...

✱

59 review: clicker 10 question

### Question

AT&T's 2011 consolidated other comprehensive income is:

- a) \$4,651    b) \$4,412    c) \$468    d) \$467    e) none of above

#### Total Comprehensive Income, net of tax:

Net income attributable to AT&T	\$ 3,944
Other comprehensive income attributable to AT&T per above	468
<b>Comprehensive income attributable to AT&amp;T</b>	<b>\$ 4,412</b>
Net income attributable to noncontrolling interest	240
Other comprehensive income (loss) attributable to noncontrolling interest per above	(1)
<b>Comprehensive income attributable to noncontrolling interest</b>	<b>\$ 239</b>
<b>Total comprehensive income</b>	<b>\$ 4,651</b>

#### Consolidated Statements of Changes in Stockholders' Equity (continued)

Dollars and shares in millions except per share amounts

	2011 Amount
<b>Accumulated Other Comprehensive Income</b>	
<b>Attributable to AT&amp;T, net of tax:</b>	
Balance at beginning of year	\$ 2,712
Foreign currency translation adjustments, net of taxes of \$66, \$146 and \$70	123
Net unrealized gains (losses) on available-for-sale securities: Unrealized gains (losses), net of taxes of \$(21), \$(12) and \$84	(41)
Less reclassification adjustment realized in net income, net of taxes of \$(29), \$1 and \$23	(54)
Net unrealized gains (losses) on cash flow hedges: Unrealized gains (losses), net of taxes of \$(140), \$(182) and \$329	(256)
Less reclassification adjustment realized in net income, net of taxes of \$0, \$7 and \$0	15
Defined benefit postretirement plans (see Note 13): Net prior service credit arising from period, net of taxes of \$699, \$290 and \$1,303	1,140
Amortization of net prior service credit, net of taxes of \$(282), \$(243) and \$(94)	(460)
Other	1
Other comprehensive income attributable to AT&T	468
<b>Balance at end of year</b>	<b>\$ 3,190</b>
<b>Noncontrolling interest:</b>	
Balance at beginning of year	\$ 303
Net income attributable to noncontrolling interest	240
Distributions	(220)
Acquisition of interests held by noncontrolling owners	(59)
Translation adjustments attributable to noncontrolling interest, net of taxes	(1)
<b>Balance at end of year</b>	<b>\$ 263</b>
<b>Total Stockholders' Equity at beginning of year</b>	<b>\$111,950</b>
<b>Total Stockholders' Equity at end of year</b>	<b>\$105,797</b>
<b>Total Comprehensive Income, net of tax:</b>	
Net income attributable to AT&T	\$ 3,944
Other comprehensive income attributable to AT&T per above	468
<b>Comprehensive income attributable to AT&amp;T</b>	<b>\$ 4,412</b>
Net income attributable to noncontrolling interest	240
Other comprehensive income (loss) attributable to noncontrolling interest per above	(1)
<b>Comprehensive income attributable to noncontrolling interest</b>	<b>\$ 239</b>
<b>Total comprehensive income</b>	<b>\$ 4,651</b>

The accompanying notes are an integral part of the consolidated financial statements.

AT&T Inc, 2011 Annual Report, Page 61

Use “clicker questions” to assess students’ understanding of basic concepts or their capacity to apply them in other contexts

# Is it Time to Flip the Classroom?

## Flip Example – Class Preparation: Analysis

### COURSE MAP

FINANCIAL ACCOUNTING

MA031, FALL 2012

BOSTON COLLEGE

PETE AND CAROLYN WILSON

FULTON 552A, 617-552-1963

### Session 9: Group assignment 2

#### Watch

"How Do I Use the Numbers: Analyzing Financial I

<http://www.navigatingaccounting.com/book/>

**Additional guidance:** As you work your way through the assignment, you might find it useful to watch menu items (related to topics you are working on) in the scenic route videos for the “What Do I See?” modules. To this end, you can use the descriptions below the scenic routes in the Chapter Map to locate appropriate scenic routes.

#### Do

Industry Comparisons Exercises: Series 04

Exercise 2: Analyzing Income Statements

<http://www.navigatingaccounting.com/exercise/industry-comparisons-exercises-series-04#exercise-2-income-statements-and-return-on-assets-anchor>

This link takes you to the Industry Comparisons Exercises: Series 04 web page. Scroll down the page and click on Exercise 2: Analyzing income statements.

#### *Report Guidance and Submission Process*

Follow the directions on pages [12](#) - 16.

Group assignments help students move up to level 2 of the thinking hierarchy

# Is it Time to Flip the Classroom?

## Flip Example – Class Preparation: Analysis

### Exercise 2: Analyzing Income Statements

#### Topics:

- Level 1: Analyzing Comprehensive Income- ROE-CI
- Level 2: Analyzing Major Categories- ROE
- Level 3: Analyzing Significant Subcategories- DuPont Model
- Level 4: Analyzing Line Items- Common-Size Statements and Revenue Growth
- Overall Financial Performance Across Companies and Industries

#### Exercise Materials:

[Exercise 2](#) [pdf]

[Excel template 2](#) [xlsx] [Excel template 2](#) [xls]

[Word template 2](#) [docx] [Word template 2](#) [doc]

#### Videos:

[Searching and Locating Annual Reports 1](#) [10 minutes]

[Using Excel 1:Basics](#) [26 minutes]

Online resources  
for group  
assignments

# Embracing Changes and Teaching Effectiveness

## Flip Example – Class Preparation: LIFO-FIFO Analysis

is\_hun\_ind\_com\_ex\_04.xlsx [Read-Only] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Add-Ins PDF

B1

BCDEF G H I J K L M N O P Q R S

### Comparing Income Statements Across Industries

Type your name here:

**Required**

Fill in the boxes with the red borders.

**Important Points About The Table Below**

- When you have completed the exercise, the subtotals and totals below should match the related ones reported by the company. Assume the numbers include controlling and non-controlling interests.
- Numbers in the table below are either disclosed on the company's income statement with similar captions or they combine numbers disclosed on the income statement with related items.
- Caution: Companies may use different signing conventions so expenses may be signed negatively or positively when presented on the income statement. The template below

	Ryanair Holdings plc			Microsoft Corporation			
	3/31/2011	3/31/2010	3/31/2009	3/31/2009	6/30/2008	6/30/2007	1/1/2007
<b>INCOME STATEMENTS</b>							
Net revenues		2,988		58,437	60,420	51,122	
Cost of goods or services sold		0		12,155	11,598	10,693	
Gross profit		2,988		46,282	48,822	40,429	
Other operating income and (expenses)		(2,586)		(25,919)	(26,551)	(21,991)	
Operating profit		402		20,363	22,271	18,438	
Other income and (expenses)		(61)		(542)	1,543	1,663	
Profit before taxes		341		19,821	23,814	20,101	
Income tax expense		36		5,252	6,133	6,036	
Net profit (loss) from continuing operations		305		14,569	17,681	14,065	
<b>SELECTED FINANCIAL DATA</b>							
(controlling and non-controlling)							
Comprehensive Income		404		14,398	17,167	14,490	
Beginning total assets	7,563	6,388		72,703	63,171	52,155	

Students must collect some of the inputs for their analyses from companies' disclosures

# Is it Time to Flip the Classroom?

## Flip Example – Class Preparation: LIFO-FIFO Analysis

### Part 2 Question

- Compare and contrast the financial performance for the five companies in the data template during the four years in the template, ignoring fiscal-year-end differences.

### Part 2 Guidance

- *Limit your analyses of the companies' performances to:*
  - The ratios in the data template. Restrict your analyses to the ratios and related data within each level as indicated in the guidance below.
  - For levels 3 and 4 only, integrate your understanding of the companies' businesses and the ways they were likely impacted by the financial crisis during this period. Your understanding of the companies' businesses should be informed by related excerpts from the Management Discussion and Analysis (MD&A) section of the annual report.
- *Organize your responses with the following titles and guidance:*
  - (a) **Level 1: Analyzing Comprehensive Income—ROE-CI**

Consistent with its name, comprehensive income is the broadest performance measure reported by for-profit companies. This level one analysis is facilitated by the **equity ratio—comprehensive income** divided by average owners' equity during the period (the average of the beginning and ending balance sheet).

Calculate the companies' ROE-CIs during the three years, ignoring:

#### Usage



This exercise helps you learn how to use accounting information.

#### Judgment



This exercise helps you learn how to analyze accounting judgments.

Provide exercises and guidance to help students move up the thinking hierarchy

# Is it Time to Flip the Classroom?

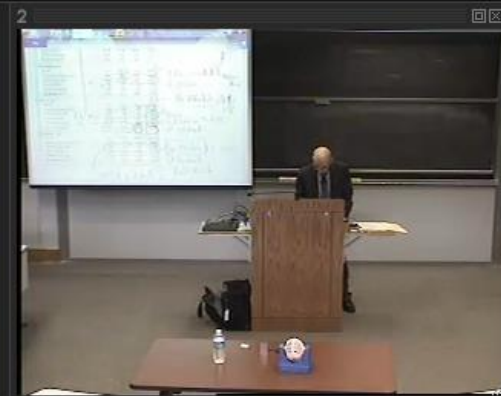
## Flip Example – Classroom Activities: LIFO-FIFO Analysis

Financial Accounting - Honors (MA0312013F-01) Fall 2012 (2013F)

Company	BS date	1/1/12	12/11	1/3/10	12/28/08
Tim Hortons Inc.	Return-on-Equity (ROE)	30%	48%	27%	23%
	Profit margin ratio	19%	33%	21%	21%
	Asset turnover	1.22	1.11	1.19	1.18
	Financial leverage	1.80	1.70	1.70	1.77
Macy's Inc.	Return-on-Equity (ROE)	22%	17%	7%	-66%
	Profit margin ratio	7%	5%	2%	-20%
	Asset turnover	1.24	1.19	1.08	1.00
	Financial leverage	3.73	4.12	4.57	3.43
Komatsu Ltd.	Return-on-Equity (ROE)	17%	5%	10%	25%
	Profit margin ratio	12%	5%	6%	15%
	Asset turnover	0.90	0.73	0.99	1.14
	Financial leverage	2.22	2.28	2.31	2.30

*Handwritten notes:*

- Tim Hortons:** Δ'd acc standard - Sold stores
- Macy's:** No alternative - Diller & JP, crisis cut back on purchases of nice brands
- Komatsu:** Construction crisis → revenue ↓ Profit Margin ↓
- Macy's:** Partial Mynis Big fraction →
- Bottom:** Cut & Jobs ↓



Lead open ended interactive discussions during class