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Belverd E. Needles, Jr., Editor

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Trends

Financial Statements from 30,000 Feet: Six Numbers and Four Ratios Tell the Story

Belverd E. Needles, Jr., Ph.D., CPA
Marian Powers, Ph.D.

Teaching and learning introductory accounting can be overwhelming for students and instructors. The enormous volume of content creates a challenge … to step back and look at the big picture. Over the years we have implemented an approach in our classes that serves as an anchor to teach the basics of double-entry while at the same time emphasizing the uses of financial statements in managing a business.

Our approach is called *Financial Statements from 30,000 Feet*. While it is important to know the details, it is vitally important for business students to view the statements and see the elements of financial statements, their relationships. and how they change when actions (transactions) affect them.

We have come to focus on *Six Key Numbers and Four Key Ratios*. Why these numbers and ratios? They are based on more than 15 years of research resulting in 12 published peer reviewed articles. In this research, we wanted to learn which financial measures are most important in assessing a company's performance. We identified dozens and dozens of financial ratios found in the literature. We studied more than 20,000 companies worldwide to discover the financial characteristics of those able to sustain high financial performance, [1] We found only a small percentage of these companies met our criteria for high performance and these highly successful companies, no matter where they are in the world, invariably do well on six key numbers and four key ratios.

Some examples of U.S. high performing companies (HPCs) that students will likely recognize are

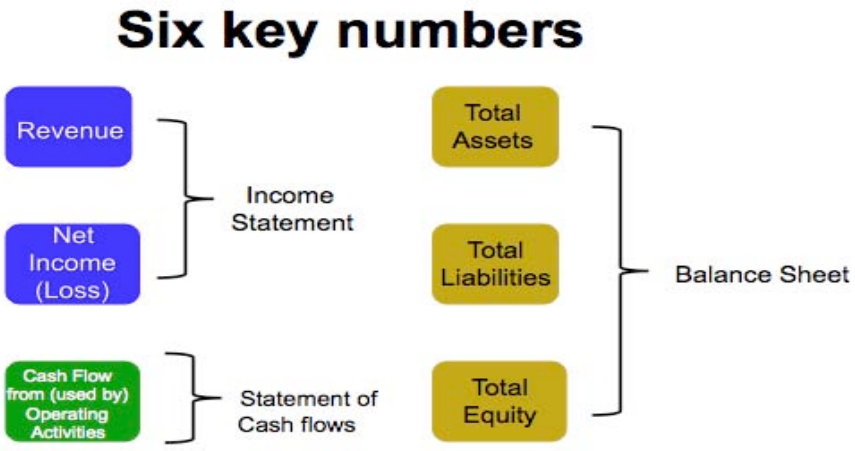
• Coca-Cola Company	• Adobe Systems
• Best Buy	• Coach

Some international high performing companies are

• Nestle SA(Switzerland)	• Yahoo Japan (Japan)
• Danone (France)	• Anheuser-Busch Inbev SA (Brazil)

[1] The latest of twelve studies is found in Needles, Jr., Belverd E., Mark Frigo, Marian Powers, and Anton Shigaev, "The Operating Performance of High Performance Companies: Strategic Direction for Management," Studies in Managerial and Financial Accounting, (Marc Epstein, ed.), (Emerald Group Publishing Ltd.), 28, 2014.

What are the *six key numbers*? They are Total Assets, Total Liabilities, Total Equity, Revenues, Net Income and Cash Flows from Operating Activities.



Note that these are the elements of financial statements that most instructors teach in the first week of introductory accounting. What you have taught and emphasized all these years is important. These key elements are something your students can learn, remember, and use. They can see the effect of almost every transaction on the balance sheet, income statement, and cash flows from operations.[2]

When these six key numbers are arranged to produce *four key ratios*, they are excellent guides as to whether a company is operating well. These ratios and their components are as follows:

- Asset turnover (Revenues/Average Total Assets)
- Profit margin (Net Income/Revenues)
- Debt to equity (Total Liabilities/Total Equity)
- Cash flow yield (Cash Flow from Operating Activities/Net Income)

Each of these ratios captures a unique characteristic of a company's financial perfomance. While the first three ratios are very familiar, the cash flow yield is most likely unfamiliar. Our research found that cash flow yield is very important indicator a company's performance. All healthy companies start with a cash flow yield > 1.0 because the calculation of cash flows from operating activities starts with net income plus depreciation and amortization. If operating working capital is managed well then CFOA will be > 1.0. Thus, a well managed company should have at least one dollar of cash flow from operating activities for every dollar of net income. Other than startups, companies that have a cash flow yield < 1.0 usually have processes around inventory,

[2] You may ask where are expenses, investing activities and financing activities? We don't ignore them in our teaching. However, the research does not identify these items separately as a statistically significant charateristic of high performing companies.

receivables and other working capital items that need improvement. On the other hand if cash flow yield is high (more than 3.0), it usually means that the company has a very low net income (profit margin).

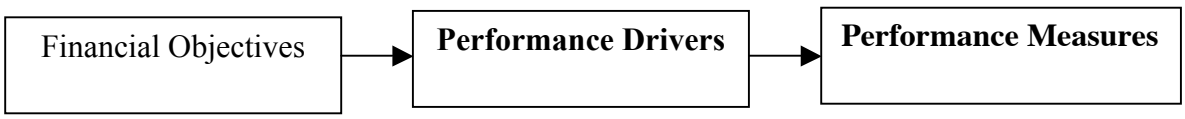
Our research indicates that the cash flow yield and asset trunover are best supplemented with the operating turnover ratios:

- Recevables turnover (Revenues/Average Accounts Receivable)
- Inventory turnover (Cost of Goods Sold/Average inventories)
- Payables turnover (Cost of Good Sold/Accounts Payable)

The four key ratios, supplemented by these turnover ratios, cover the complete spectrum of financial objectives that companies seek to achieve.

Figure 1 shows the relationships of these financial objectives to the performance drivers and performance measures. *Performance drivers* are ratios that are uncorrelated with each other yet statistically significantly different for HPCs and non HPCs. *Performance measures* are statistically significant between HPCs and non HPCs but not statistically independent from performance drivers and each other that is, not associated with a single performance objective. For example, return on assets contains some of the same components as return on equity. The two are highly correlated.

Figure 1
Relationship of Financial Objectives, Performance Drivers, and Performance Measures



Financial Objective	**Performance Drivers**	**Performance Measures**
Total asset management	Asset turnover	Growth in revenues
Profitability	Profit margin	Return on assets
Financial risk	Debt to equity	Return on equity
Liquidity	Cash flow yield	Cash flow returns
		Free Cash flows
Operating asset management	Turnover ratios	Cash cycle

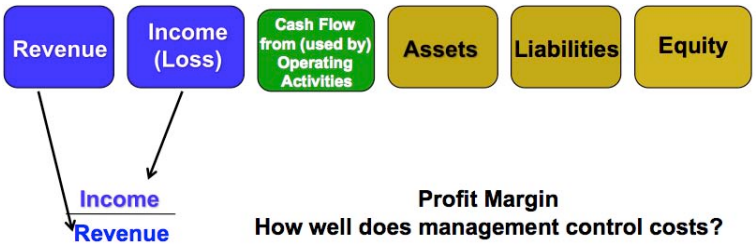
Some instructors emphasize free cash flows because it is probably the most popular cash flow performance measure used among financial analysts. However, this measure has some serious flaws as a measure of performance. First, there is no accepted definition of free cash flows. Different analysts include in free cash flow calculations whatever they want to include. Second, free cash flows are not a ratio; they represent an absolute amount. Thus, relative size is not taken into account. Comparison to benchmarks and to other companies is almost impossible. Third, it is not even clear that large free cash flows are good or that small or negative ones are bad. Large free cash flows may mean the company is not investing sufficiently. Negative free cash flow may mean the company is making large capital expenditures that are expected to produce increased future cash flows. No benchmark exists to compare or judge free cash flows. Finally, the only truly "free" cash flows are cash flows from operations because management is "free" to use them in a variety of ways:

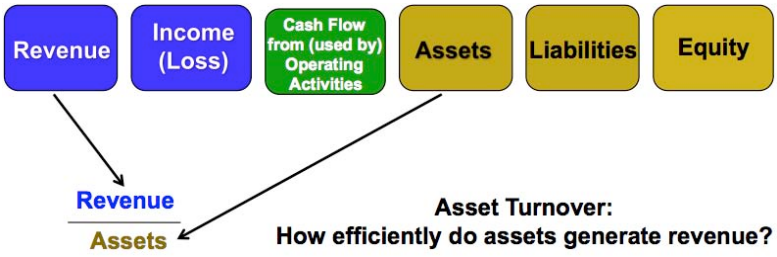
- To invest for future cash flows: net capital expenditures or acquisitions
- To save for future use: Investments in securities
- To reduce financial risk: paying down short-term or long-tern debt
- To reduce the size of the business: pay dividends or buyback stock

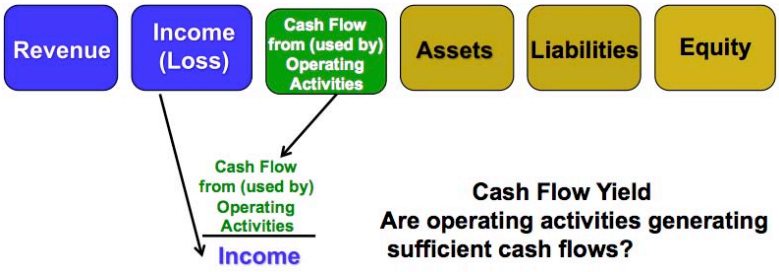
Summary

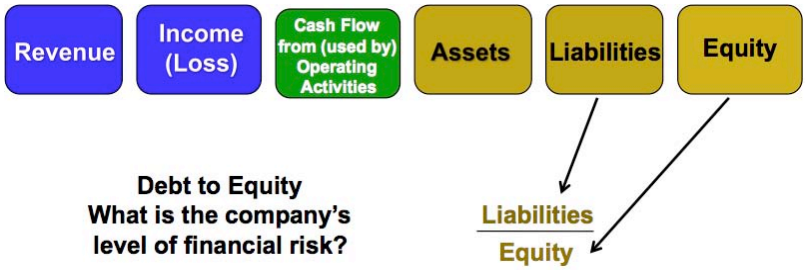
There are a multitiude of possible financial ratios that could be taught to introductory accounting students. Our experience teaching the six key numbers and four key ratios that convey big picture value creation (or destruction) has been met with success in our classes. The illustrations below show how easy they are to protray and how they show the importance of understanding the financial statements. Students quickly learn that if any one of these 4 ratios is not trending in the right direction, then more analysis would be required. But if these 4 ratios are all trending favorably then furhter analysis is not needed.

6 key numbers and 4 key ratios of high performance companies




Revenue
Income (Loss)
Cash Flow from (used by) Operating Activities
Assets
Liabilities
Equity
Revenue
Assets
Asset Turnover:
How efficiently do assets generate revenue?


Revenue
Income (Loss)
Cash Flow from (used by) Operating Activities
Assets
Liabilities
Equity
Cash Flow from (used by) Operating Activities
Income
Cash Flow Yield
Are operating activities generating sufficient cash flows?


Revenue
Income (Loss)
Cash Flow from (used by) Operating Activities
Assets
Liabilities
Equity
Debt to Equity
What is the company's level of financial risk?
Liabilities
Equity

TARGET VERSUS TESCO: COMPARING THE REPORTING OF CASH FLOWS UNDER GAAP AND IFRS

Kennard S. Brackney, Ph.D., CPA
Harlan E. Boyles Professor

Tracy N. Reed, Ph.D., CPA
Assistant Professor

Department of Accounting
Walker College of Business
Appalachian State University
Boone, NC 28608

brackneyks@appstate.edu
(828) 262-6210

October 2014

TARGET VERSUS TESCO: COMPARING THE REPORTING OF CASH FLOWS UNDER GAAP AND IFRS

INTRODUCTION

Convergence of U.S. Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) has been a high-profile issue for several years. However, in a report released by the Securities and Exchange Commission (SEC) in 2012, the SEC appears to back away from adoption of IFRS, citing significant remaining differences between the two sets of standards as a part of the reason for the shift away from adoption (SEC 2012). The two standard-setting bodies, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB), are working to converge on a few more of these differences, but a sizeable number will remain. One example of a remaining difference is the reporting of cash flows. GAAP and IFRS provide guidance that is conceptually similar, but can differ significantly on detailed requirements and implementation.

This paper offers a statement of cash flows assignment that faculty can use to help accounting students develop a better understanding of an often-overlooked financial statement as well as some of the significant differences between the GAAP and IFRS guidance. The assignment requires students to compare the reporting of cash flow information by two large retailing companies from different countries, Target Corporation and Tesco PLC, to gain insight into how the GAAP and IFRS guidance differs. Students must review the statements of cash flows and related note disclosures for the companies and research the relevant GAAP and IFRS standards that drive many of the differences in their reporting of cash flow information. This assignment can be used in an intermediate accounting course that covers the statement of cash flows or a separate international accounting course that includes a unit on IFRS.

LEARNING OUTCOMES

This assignment aims to give students:

(1) a better sense of the purpose and structure of the statement of cash flows;
(2) a stronger working knowledge of the applicable GAAP and IFRS standards, and the differences between them; and
(3) additional experience reading and interpreting the GAAP and IFRS standards.

CASH FLOW REPORTING STANDARDS

Background

The guidance in GAAP is based largely upon a standard issued by the FASB in 1987, Statement of Financial Accounting Standards (SFAS) No. 95, *Statement of Cash Flows*. SFAS 95, for the first time, required that all business entities present a statement of cash flows. It replaced a standard the Accounting Principles Board issued in 1971, Opinion (APBO) No. 19, *Reporting Changes in Financial Position*. APBO 19 called for companies to present a statement of changes in financial position, also known as a funds flow statement. The standard gave

companies flexibility in defining "funds," but required that they report the net change in working capital or cash from their operations (¶10).

Spiller and Virgil (1974, p. 115) observed that, for the first year APBO 19 was effective, 131 of 143 sample companies, 92%, defined funds as working capital. A decade later, when the FASB was developing SFAS 95, it noted an emerging trend in practice to define funds as cash (¶9). In the final standard, the FASB defined funds as cash and cash equivalents, and it required that cash flows be reported separately for operating, investing and financing activities. The Board approved the standard by a narrow 4-3 vote. The dissenting votes disagreed with several aspects, including the prescribed classification of interest received, dividends received and interest paid as operating cash flows. The current GAAP guidance is found in Accounting Standards Codification (ASC) section 230 – Statement of Cash Flows.

The current guidance in IFRS comes from a standard the International Accounting Standards Committee issued in 1992, International Accounting Standard (IAS) 7, *Cash Flow Statements*. In many ways, IAS 7 was modeled after SFAS 95. It required all business entities applying IFRS to present a statement of cash flows. The 1992 pronouncement replaced an earlier version of IAS 7, titled *Statement of Changes in Financial Position*. The earlier (1977) version required a funds flow statement. In 2007, the IASB approved revisions to IAS 1, *Presentation of Financial Statements* that, among other things, changed the title of IAS 7 to *Statement of Cash Flows*. A BDO guide on IAS 7 (2014, p. 3) describes the standard as more succinct and more stable than most others in IFRS. IAS 7 includes just 58 paragraphs, and it has changed relatively little since 1992.

Similarities and Differences

The GAAP and IFRS standards on reporting cash flows are similar in their basic approach. Both require presenting a statement of cash flows as a primary financial statement. Both require companies to explain changes in cash and cash equivalents and classify the changes according to the categories operating, investing and financing. For the operating classification, both state a preference for the direct method, but permit companies to use the indirect method. Both require disclosures, such as significant noncash investing and/or financing activities.

The two standards are similar enough in their basic approach that, previously, the SEC viewed a cash flow statement and related disclosures prepared based on IAS 7 as an acceptable substitute for the information GAAP requires. Prior to 2007, the SEC required foreign registrants using IFRS to supply a U.S. GAAP reconciliation, the equivalent of a set of U.S. GAAP financial statements. The SEC exempted a few items, such as cash flows reported according to IAS 7 (SEC 2000). The importance of this special exemption has diminished as the SEC now accepts the full set of financial statements prepared according to IFRS as, in substance, the equivalent of U.S. GAAP financial statements for foreign registrants.

While the standards are similar in their basic approach, they differ on a number of their technical requirements. Based upon our review and comparison of the two standards, we identified approximately 25 differences in the technical requirements. To gain insight into the nature of these differences, we categorized them as follows:

(1) Cash equivalents – a difference in the operational definition of cash equivalents for purposes of the statement of cash flows.
(2) Classification – a difference in how a cash flow item is classified: operating, investing or financing.
(3) Presentation – a difference in *whether*, and to a lesser degree, *how* a cash flow item is presented in the statement of cash flows.
(4) Measurement – a difference in how a reported cash flow item is measured.
(5) Disclosure – a difference in *whether*, and to a lesser degree, *where* (in the statement or in the notes) additional information is reported.

The category accounting for the largest number of differences is Presentation, followed by Classification, followed by Disclosure. Together, these three categories accounted for close to 90% of the differences we identified.

In comparing the standards, in some cases, both have established a requirement, and the requirements differ (6 cases). Examples include the treatment of bank overdrafts, the presentation of interest paid and income taxes paid, and the disclosure of noncash investing and/or financing activities. For the majority of differences, though, only one of the standards has established a single mandated treatment (19 cases). The cases are split nearly evenly between GAAP (10) and IFRS (9). The cases where GAAP mandates a specific treatment, but IFRS does not, relate primarily to *classification* issues (6 of the 10). Examples include the classification of interest received, dividends received, interest paid, capitalized interest paid, dividends paid and income taxes paid. In contrast, the cases where IFRS mandates a specific treatment, but GAAP does not, relate mainly to *presentation* issues (6 of the 9). Examples include the presentation of interest received, dividends received, dividends paid and principal paid on capital leases.

GAAP tends to be more prescriptive in the classification of cash flows, while IFRS tends to be more prescriptive in the presentation of cash flows. The two standards also differ somewhat on their guidance for the disclosure of additional information.

FASB-IASB Convergence

The FASB and IASB have been working to converge their standards for more than a decade. The pace of convergence accelerated with the Boards' release of a detailed project agenda in 2006. Although the Boards did not include the statement of cash flows as a distinct project, they did intend to address the reporting of cash flows through the Financial Statement Presentation joint project.

In 2008, the Boards released a joint discussion paper, *Preliminary Views on Financial Statement Presentation*. The discussion paper proposed several changes pertaining to the reporting of cash flow information, including:

- dropping the concept of cash equivalents;
- using just two classifications: business, which would include operating and investing as subcategories, and financing;

- tying the classification of an item in the statement of cash flows to the classification of the related asset or liability in the balance sheet;
- requiring the direct method for operating activities; and
- requiring a reconciliation of comprehensive income to net cash flow.

In July 2010, the Boards posted for public comment a joint draft of an exposure draft, *Staff Draft of an Exposure Draft on Financial Statement Presentation* (FASB 2010b). The staff draft retained most of the changes proposed in the discussion paper, and it introduced new changes to the classification of cash flows that would permit more flexibility for U.S. companies. The staff draft proposed allowing companies to classify interest and dividends received as investing cash flows (¶¶81-82) and interest paid as a financing cash flow (¶¶85-87).

The Boards were proposing even more dramatic changes for the other financial statements. Stakeholders expressed concerns about many of them, and in October 2010, the Boards decided to set the Financial Statement Presentation project aside to focus instead on a small set of priority projects (FASB 2010a). With the bilateral convergence initiative winding down, it seems unlikely the Boards will make any further progress with this project. The IASB prefers a multilateral approach, and in 2013, it formed the Accounting Standards Advisory Forum to solicit input and assistance from a wider range of standard setters. Apart from a new, narrow-scope FASB project to clarify the classification of a select few items (Clarifying Certain Existing Principles on Statement of Cash Flows), neither Board is pursuing a general convergence of the existing differences in reporting of cash flow information. Thus, it appears the existing set of differences will continue for the foreseeable future.

CASE COMPANIES

This assignment asks students to compare the reporting of cash flow information by two listed companies, one using GAAP and the other IFRS. We chose two large retailers, Target and Tesco, for students to compare. Below, we provide a brief profile of each company.

Target Corporation

Target is headquartered in the U.S. It operates mainly in the Department Stores industry (NAICS code = 452111). According to a Deloitte (2014) study, *Global Powers of Retailing 2014*, based on sales for 2012, Target is the world's 10th largest retailer. For the year ended February 2, 2013, Target generated retail revenue of $72 billion. It conducts activities in just two countries, the U.S. and Canada. In the most recent fiscal year, ending February 1, 2014 (fiscal 2013), the U.S. accounted for 98% of the company's revenue (Annual Report Note 28). The grocery business is a significant part of the company, accounting for 21% of the U.S. revenue (Annual Report Note 29). Target's shares are listed on the New York Stock Exchange, and it uses GAAP for financial reporting purposes.

Tesco PLC

Tesco is headquartered in the United Kingdom (U.K.), and it operates mainly in the Supermarkets and Other Grocery Stores industry (NAICS code = 445110). According to the

Deloitte study, based on 2012 sales, Tesco is the world's 2nd largest retailer. For the year ended February 23, 2013, Tesco generated retail revenue of $101 billion. Tesco operates in Europe and Asia, a total of 11 countries. For the year ended February 22, 2014 (fiscal 2013), the U.K. accounted for 68% of the company's revenue (Annual Report Note 2). Tesco's business lines include groceries, clothing, general merchandise and services such as banking (Annual Report p. 11). The company's Tesco Extra format accounts for the largest percentage of floor space in U.K. operations, 42% (Annual Report p. 139). Through this format, it sells groceries, clothing, electronics and entertainment (Wikipedia). Tesco's shares are listed on the London Stock Exchange, and it uses IFRS for financial reporting purposes.

Tesco made headlines recently for its accounting practices. On September 22, 2014, the company announced the discovery of accounting irregularities, and it lowered a previous forecast of profits for the first half of 2014 by £250 million (Tesco 2014b). On October 23, Tesco reported the overstatement of profits amounted to £263 million, and more than half related to prior years, including 2013. Tesco admitted to recognizing revenues for rebates from suppliers too quickly and related expenses too slowly. Retailers such as Tesco can earn rebates from their suppliers for promoting their products to customers. Tesco's mishandling of these items caused its profit before tax for 2013 to be overstated by £70 million. The company does not view this amount as material, so it is not planning to restate the 2013 financial statements (Tesco 2014a). For purposes of this assignment, a few line items could be slightly misstated, but the classification of items and the company's overall presentation of cash flows should not be affected.

Target and Tesco overlap some in their business activities, so they should experience and report similar types of business transactions. And despite Tesco's revelation of accounting problems, the two companies offer a good contrast of the GAAP and IFRS requirements for the reporting of cash flows.

CASE REQUIREMENTS

Tasks

Review the fiscal year 2013 statement of cash flows and related disclosures for each company. Recalling the five categories of differences discussed in the Cash Flow Reporting Standards section above, search for differences in reporting that arise from differences in the guidance provided on reporting of cash flow information in the two standards. Identify at least eight differences, and supply the following information for each one:

- state the issue;
- briefly describe Target's treatment under GAAP;
- give the citation in the Codification that requires, or permits, this treatment;
- briefly describe Tesco's treatment under IFRS; and
- give the citation in IFRS (standard and paragraph number) that requires, or permits, this treatment.

Present your findings in a table. Use the template provided in Exhibit 1 as a guide for formatting your table.

Resources

You can access the fiscal year 2013 financial statements for each company from the Investors section of each company's website. For Target (www.target.com), follow the links to download the company's 2013 Annual Report (10-K), for the year ended February 1, 2014. See the comparative statements of cash flows and the related information reported in Notes 9, 15, 18 and 20. For Tesco (www.tescoplc.com), follow the links to download what the company calls its Annual Report 2014, for the year ended February 22, 2014. See the comparative cash flow statements and the related notes (1, 5, 7, 11, 18, 20 29, 30 and 34) and supplemental information (pages 132-142).

As far as the standards, you can access the Codification from the FASB's website (www.fasb.org). Anyone can register to access the Basic View free of charge. Through your institution, you may find you have access to the Academic View. This assignment can be completed using either view. You can access IFRS free of charge from the IFRS Foundation's website (www.ifrs.org). As with the Codification, you must register to establish an account.

You may find it helpful to consult other sources that discuss IFRS and the significant differences with GAAP. Examples include intermediate accounting and international accounting textbooks and reports prepared by many of the larger public accounting firms. A few of the reports prepared by public accounting firms that you may find particularly useful for purposes of this assignment include:

- Grant Thornton's *Comparison of U.S. GAAP and International Financial Reporting Standards* (April 2014);
- KPMG's *IFRS compared to US GAAP: An overview* (November 2013); and
- PwC's *IFRS and US GAAP: similarities and differences* (October 2014).

Further Suggestions

Bear in mind that Target and Tesco are different companies, with distinct business models. Concentrate on differences in their reporting of cash flow information that reflect differences in the guidance on reporting this information in GAAP and IFRS. It is quite possible that one of the companies will present a line item in the statement that the other does not present. The question to ask is, does the reporting difference arise from a requirement, allowance or suggestion stated in one standard, but not the other.

We have identified approximately 15 differences. You should not have much trouble locating the minimum requirement of eight, particularly if you keep in mind the five categories of differences discussed above. You may use an item of information more than once. For example, a given item of information could reflect both a difference in classification and a difference in presentation.

Finally, note that for a few of the differences, the citations are outside of ASC 230 and IAS 7. For one of the differences, the citation from the Codification for the GAAP treatment comes from section 205 – Presentation of Financial Statements. Other standards cited from IFRS include IAS 1, *Presentation of Financial Statements*, and IFRS 5, *Noncurrent Assets Held for Sale and Discontinued Operations*.

IMPLEMENTATION

The authors used this assignment in separate sections of an international accounting course they taught in Spring 2014. The course covers a variety of international accounting topics, including GAAP and IFRS differences. The two sections were taught in compressed timeframes of seven weeks and four weeks to accommodate the scheduling needs of returning interns. A total of 75 students completed the assignment as a required, outside-of-class activity. Students worked in pairs, and the assignment was worth approximately 5% of the course grade.

Based upon our observations to date, students performed as well on this assignment as others given during the term. The most challenging aspect for them appears to be understanding that a particular information item could represent more than one difference. For example, a single information item could reflect both a difference in classification (i.e., operating, investing or financing) and a difference in presentation (i.e., whether or how the item is shown in the body of the statement). In response to this observation, we have given more emphasis to the potential for an information item to be used multiple times in the present version of this assignment.

While we used this assignment in an international accounting course, it could certainly be used in an intermediate accounting course that covers the statement of cash flows topic, especially if the instructor is trying to incorporate IFRS. Another feature of this assignment is that it can be modified fairly easily to work for a different reporting year (e.g., fiscal year 2014 when available) or for different pairs of companies. We chose Target and Tesco because they engage in familiar retailing operations, and they offer an interesting set of differences in their reporting of cash flow information. This assignment can easily be adapted to compare a different pair of companies as long as one uses GAAP and the other uses IFRS.

We solicited feedback from students by asking them to complete a short, five-question evaluation. Of the 75 students who completed the assignment, 65 also completed the questionnaire. Using a five-point Likert scale, where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, and 5 = Strongly Disagree, students indicated strong agreement the assignment increased their knowledge of GAAP versus IFRS (mean = 1.692) and that it was a challenge for them (mean = 1.685). They also indicated strong agreement the assignment should be completed in groups (mean = 1.692). The students indicated marginal agreement on their enjoyment of the assignment (mean = 2.677), but agreement that it should be used in future offerings of the course (mean = 2.154). Exhibit 2 presents the means and standard deviations for student responses.

In their open-ended comments, students said they enjoyed working with a financial statement that is not covered extensively in other undergraduate courses; they liked the fact that the assignment uses real world companies rather than fictitious ones; and that even though they found the assignment challenging, it helped them to better understand the differences between

the two standards. They also stated that more-detailed instructions would be helpful, as well as more leeway in the grading. Overall, the students seemed to see value in this assignment.

Finally, note that Tesco's recent admission of accounting problems likely impacts the amounts for a few of the line items in the 2013 statement of cash flows. In Note 2 to the 2014 first half financial statements (Commercial income recognized in previous periods), Tesco assessed the overstatements of profit before tax in prior years, totaling £145 million, as not material. It simply charged the corrections against the 2014 first half profit, as permitted by IAS 8, *Accounting Policies, Changes in Estimates and Errors* (¶IN7). Tesco does not plan to restate the prior years (Tesco 2014a). As a result, a few of the line items in Note 29 to the 2013 financial statements (Reconciliation of profit before tax to cash generated from operations) probably are slightly misstated. The line item Profit before tax likely is slightly overstated and the line item Increase / (decrease) in trade and other payables may be slightly understated, quite possibly by offsetting amounts. Apart from these minor misstatements, the presentation of cash flow information should not be affected.

The UK's market regulator, the Financial Conduct Authority, is investigating Tesco's accounting practices. If the regulator uncovers more problems affecting 2013, it is conceivable Tesco would need to restate its financial statements for that year. We encourage faculty using this assignment to check the Tesco website to make sure they have the most recent version of the company's 2013 financial statements.

CONCLUSION

Among the primary financial statements, the statement of cash flows does not always receive the attention in the accounting curriculum it deserves. This paper offers an assignment that gives students opportunity to focus on the statement of cash flows and compare how the reporting of cash flow information by two listed companies may differ based on reporting standard. We selected two companies to highlight the surprisingly large number of differences between GAAP and IFRS standards related to the statement of cash flows. Through completing this assignment, students should gain a better understanding of both the statement of cash flows and the significant differences between the applicable GAAP and IFRS standards.

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EXHIBIT 1: TEMPLATE FOR GAAP/IFRS DIFFERENCES AND LITERATURE CITATIONS

Issue	Target's Treatment under GAAP	Tesco's Treatment under IFRS
Issue 1 . . .		
Issue 2 . . .		
Issue 3 . . .		
Issue 4 . . .		
Issue 5 . . .		
Issue 6 . . .		
Issue 7 . . .		
Issue 8 . . .		

EXHIBIT 2: STUDENT QUESTIONNAIRE RESULTS

Question	Mean (Std. Dev.)*
I enjoyed completing the Cash Flow Comparison case.	2.677 (0.896)
I would recommend that my instructor use the Cash Flow Comparison case again in future sections of this class.	2.154 (0.769)
I would recommend the Cash Flow Comparison case be completed in groups.	1.692 (0.876)
I found completing the Cash Flow Comparison case to be a challenging exercise.	1.685 (0.699)
Completing the Cash Flow Comparison case increased my knowledge of U.S. GAAP vs IFRS.	1.692 (0.606)

*Used Likert scale where 1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, and 5=Strongly Disagree

SUGGESTED SOLUTION: GAAP/IFRS DIFFERENCES AND LITERATURE CITATIONS

Issue	Target's Treatment under GAAP	Tesco's Treatment under IFRS
(1) Classification – interest received	Target does not indicate the classification of interest received. GAAP requires this item be classified as operating, so it is reasonable to believe Target included interest received in the Cash flow provided by operations (ASC 230-10-45-16b).	Tesco classifies interest received as investing, as permitted by IFRS. IFRS grants companies a policy choice: operating or investing (IAS 7 ¶33).
(2) Classification – dividends received	Target does not indicate the classification of dividends received. GAAP requires this item be classified as operating, so it is reasonable to believe Target included dividends received in the Cash flow provided by operations (ASC 230-10-45-16b).	Tesco classifies dividends received as investing, as permitted by IFRS. IFRS grants companies a policy choice: operating or investing (IAS 7 ¶33).
(3) Presentation – starting income figure for indirect format	Target uses the indirect format to present operating cash flows, and it starts with *Net earnings*. GAAP requires this format to begin with net income (ASC 230-10-45-28).	Tesco uses the indirect format as well, and it begins with *Profit before tax*. IFRS requires companies to begin with profit or loss, but does not specify a particular measure of profit or loss (IAS 7 ¶20).
(4) Presentation – interest received	Target does not present the interest received. GAAP requires companies using the direct method to present this item in the operating section (ASC 230-10-45-25b). There is no requirement for companies using the indirect method, as Target does, to present this item.	Tesco presents interest received as a separate line item in the body of the statement, as required by IFRS (IAS 7 ¶31). For the classification, see Issue 1 above.
(5) Presentation – dividends received	Target does not present the dividends received. GAAP requires companies using the direct method to present this item in the operating section (ASC 230-10-45-25b). There is no requirement for companies using the indirect method, as Target does, to present this item.	Tesco presents dividends received as a separate line item in the body of the statement, as required by IFRS (IAS 7 ¶31). For the classification, see Issue 2 above.
(6) Presentation – interest paid	Target presents interest paid in a supplemental information section of the statement. For companies using the indirect method, like Target, GAAP requires disclosure of this item in the body or notes (ASC 230-10-50-2).	Tesco presents interest paid as a separate line item in the body of the statement, as required by IFRS (IAS 7 ¶¶31-32). Tesco classifies this item as operating.

(7) Presentation – income tax paid	Target presents income tax paid in the supplemental information section of the statement. For companies using the indirect method, like Target, GAAP requires disclosure of this item in the body or notes (ASC 230-10-50-2).	Tesco presents income tax paid as a separate line item in the body of the statement, as required by IFRS (IAS 7 ¶35). Tesco classifies this item as operating.
(8) Presentation – principal payments on capital/finance leases	Target does not report the repayment of capital lease principal separately from repayment of loan principal in general. Target includes capital lease obligations in the balance sheet item *Long-term debt and other borrowings* (see Note 18). In Note 20, Target reports minimum lease payments on capital leases due in the next year (2014), but does not state the amount of principal repaid in the current year (2013). GAAP does not require separate disclosure of this item (see ASC 230-10-45-15).	Tesco presents the principal repaid on finance leases as a line item in the financing section, separate from other repayments of loan principal. IAS 7 makes specific mention of payment of a finance lease liability in a list of examples of financing cash flows (¶17e). ¶21 requires separate reporting of major classes of investing and financing cash flows, though the focus appears to be more on gross rather than net reporting of them. No further examples subject to gross reporting are provided. At a minimum, IAS 7 encourages separate reporting of this item.
(9) Presentation – number of comparative years	Target presents two comparative years (2012 and 2011) to satisfy an SEC requirement. GAAP encourages, but does not require, presentation of comparative years (ASC 205-10-45-2).	Tesco presents one comparative year (2012), as required by IFRS (IAS 1 ¶38A).
(10) Presentation – cross-referencing from statement to notes	Target makes a general reference to see the accompanying notes. GAAP does not require references to specific notes, and Target does not provide this information.	For five different line items presented in the body of the statement, Tesco refers to specific notes (7, 8, 18, 27 and 29). IFRS requires specific references to the notes in all primary financial statements (IAS 1 ¶113).
(11) Measurement – interest paid	GAAP requires the interest paid figure presented exclude any capitalized interest (ASC 230-10-50-2). Target reports the item *Construction in progress* in its February 1, 2014 balance sheet, so it likely did capitalize some interest during the year. If Target complied with GAAP, it is reasonable to believe the interest paid figure the company reports *excludes* the capitalized interest.	IFRS requires the interest paid figure presented include any capitalized interest (IAS 7 ¶32). Tesco states it capitalized £79 million of interest in 2013 (see Notes 5 and 11). If Tesco complied with IFRS, it is reasonable to believe the interest paid figure the company reports *includes* the capitalized interest.
(12) Disclosure – noncash financing and/or investing activities	Target presents a section, *Noncash financing activities*, in the statement itself. GAAP permits companies to disclose these activities in the statement or the notes (ASC 230-10-50-6).	Tesco does not provide any information on these activities. IFRS requires companies to report on their noncash activities, but the standards expressly prohibit them from showing this information in the statement itself (IAS 7 ¶¶43-44).

(13) Disclosure – cash flows from discontinued operations	Target did not report any discontinued operations during the period 2011 to 2013. GAAP permits, but does not require, companies to present information on cash flows from discontinued operations (ASC 230-10-45-24).	Tesco reports discontinued operations stemming from 2013 disposals of U.S. and China operations. Tesco shows cash flows from discontinued operations, classified according to operating, investing and financing activities (see Note 7). IFRS requires companies to provide this information (IFRS 5 ¶33c). Additionally, Tesco shows the full operating section for discontinued operations as supplemental information (see page 135).
(14) Disclosure – components of cash and cash equivalents	Target provides some information on cash equivalents, but does not give a full accounting for the total cash and cash equivalents of $695M. Target mentions two components of cash equivalents that sum to $350M (see Note 9). GAAP requires disclosure of the policy followed for defining cash equivalents, but does not require an accounting for the total of cash and cash equivalents (ASC 230-10-50-1).	Tesco shows the components of cash and cash equivalents (see Note 18). IFRS requires companies to disclose both the policy for defining cash equivalents and the composition of total cash and cash equivalents (IAS 7 ¶¶45-46).
(15) Disclosure – segmental cash flows	Target reports two segments (see Note 28). GAAP does not address the disclosure of cash flows by segment, and Target does not supply this information.	Tesco reports four segments (Note 2). IFRS encourages companies to disclose cash flows for reportable segments (IAS 7 ¶¶50&52). Tesco provides complete cash flow statements for its two business lines (Retail and Tesco Bank) as supplemental information (see page 134).

SUGGESTED SOLUTION: COMMENTS ON IDENTIFIED DIFFERENCES

Issues 1 and 2

IAS 7 gives companies some discretion in the classification of cash flows (¶11). The standard allows companies to classify cash flows such as interest received and dividends received in the manner that best reflects the activities of the business. Given the way Tesco classified these cash flows, it must view them as part of its investing activities.

Issue 3

Target and Tesco both elect to use the indirect method for presenting their operating activities sections. GAAP requires companies to begin the reconciliation of income to net operating cash flow with the net income figure. IAS 7 states companies must begin with profit or loss (¶20). Appendix A of the standard shows an example of the indirect method, and the example begins the operating section with profit before tax. It is common for companies using IFRS to start with profit before tax as doing so simplifies the presentation of income taxes. IAS 7 requires companies to present the income tax paid amount in the body (three main sections) of the statement, and the item normally should be classified as operating (¶35). If a company started with net income instead, it would need to add back income tax expense and then subtract the income tax paid.

Target begins its operating section with *Net earnings*, the net income reported in the Statements of Operations. Tesco starts its operating section with *Profit before tax* (Note 29), and it shows a subtraction for *Corporation tax paid* in the body of the statement.

Issues 4 and 5

For the items interest received and dividends received, the GAAP and IFRS guidance differs in two ways. First, the standards differ on how these items should be classified in the statement of cash flows (see Issues 1 and 2). Second, the standards also differ on whether each item must be presented as a separate line in the body of the statement. IFRS requires separate presentation of these items, but GAAP does not. Under GAAP, companies electing the indirect method, as Target does, are not required to present these items. The reporting by Target and Tesco illustrates both of these differences.

Issues 6 and 7

IFRS gives companies a policy choice to classify interest paid as operating or financing (IAS 7 ¶33). Tesco elected to classify interest paid the same as GAAP mandates, operating. With regard to income tax paid, the two standards generally require this item be classified as operating (ASC 230-10-45-17c and IAS 7 ¶35). Tesco classified both of these cash flow items as operating, and given the guidance in GAAP, Target probably did as well. There is one notable difference in their reporting of these items, though, and it relates to presentation. U.S. companies electing the indirect method, like Target, must report both items, but may do so through disclosure in the notes. In contrast, IFRS requires companies to present these items in the body of the statement.

Issue 11

GAAP requires the reported interest paid be measured excluding capitalized interest, while IFRS requires this item be measured including capitalized interest. Both companies appear to have capitalized some interest during the year. Consistent with GAAP, Target labels its interest paid item as being net of capitalized interest. Tesco reports interest paid of £496 million, but does not give any further information on this item.

The precise nature of the difference in reporting for interest paid depends upon the classification and presentation requirements for *capitalized* interest paid. GAAP requires that capitalized interest paid be classified as investing, but the amount need not be separately presented. IFRS does not provide any guidance on the classification of this item. The amount must be included in the interest paid presented in the body of the statement, but there is no requirement for the capitalized amount to be separately presented.

In a 2012 exposure draft, *Annual Improvements to IFRSs 2010-2012 Cycle*, the IASB proposed that capitalized interest paid be classified as investing in the statement of cash flows (see pages 35-38). The IASB subsequently tabled this matter, so companies using IFRS continue to have flexibility in classifying capitalized interest paid. The options appear to be the general ones of operating and financing, plus investing.

It is possible Tesco classified the capitalized interest paid in 2013 the same as Target, meaning an investing cash flow. Doing so would have violated IAS 7, though, as the standard requires companies to present an interest paid figure that includes any capitalized interest (¶32). Tesco does not show a separate capitalized interest paid item in its investing section. Also possible, Tesco may have complied with IAS 7 by presenting the total interest paid, and then classified the full amount, including capitalized interest, as operating. If Tesco used the second approach, it would have classified the capitalized interest differently than Target did.

Based mainly upon the clear difference in the standards on this point, we believe we can safely say there is a difference in the measurement of the interest paid item. There may be a difference in the classification of the *capitalized* interest paid as well, but Tesco does not provide enough information to determine this. Thus, we categorize the observed difference as relating to measurement.

Issue 12

As permitted by GAAP, Target reports its noncash investing and/or financing activities as supplemental information in the statement of cash flows. Target discloses one item, assets and liabilities arising from new capital leases. In contrast, Tesco does not provide any information on noncash investing and/or financing activities. It would be required to disclose these activities, if it had them. IAS 7 ¶44a specifically mentions entering into a finance lease as an example of such activities. Tesco reports finance leases, but it shows a decrease in both the assets (from £157 million to £151 million) and the liabilities (from £128 million to £121 million) during the year

(see Notes 11 and 34). From this information, it appears Tesco may not have entered into any new finance leases in fiscal year 2013.

The disclosure of noncash investing and/or financing activities qualifies as a difference because the reporting Target gives would not be permitted under IFRS. IAS 7 requires that noncash investing and/or financing activities be excluded from the statement, but disclosed in the notes (¶¶43-44).

Issue 13

As shown in the table, Tesco discloses the net effects of discontinued operations on cash flows from operating, investing and financing activities, as required by IFRS 5. The FASB recently issued ASU 2014-08, *Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity*, which modifies the definition and required disclosures for a discontinued operation. ASU 2014-08 directs companies reporting a discontinued operation to disclose, among other things, either (1) the net effects on cash flows from operating and investing activities or (2) the net effects on depreciation, amortization, capital expenditures and significant operating and investing noncash items. Listed companies such as Target must begin applying the new standard in fiscal periods beginning after December 15, 2014.

Note that under the new guidance, Target still will not be required to supply the information that Tesco did. Target could move some in that direction, though, by choosing to disclose the net effects on operating and investing cash flows.

Evaluation of Tesco's Reporting

A company applying IFRS could choose to use the discretion IAS 7 permits in classification of cash flows to increase, or decrease, its net cash flow from operating activities. Tesco's classification choices caused its net operating cash flow for 2013 to be shown at a *lower* amount. If Tesco had classified interest received and dividends received as GAAP requires, operating cash flows, its net operating cash flow for 2013 would have increased from £3,185 million to £3,368 million, a 5.7% increase. If Tesco had gone a step further, and classified its interest paid as a financing outflow, the net operating cash flow for 2013 would have increased from £3,368 million to £3,864 million, a total increase of 21.3%. From this analysis, it does not appear Tesco is using its classification choices to make its operating cash flow look better.

Applying IFRS, Tesco provides a clearer picture of the effects of interest and dividend receipts and interest, income tax and finance lease principal payments on its operating, investing and financing activities. Tesco also provides more transparency on the components of cash and cash equivalents, the effects of discontinued operations on cash flows, and the cash flows from its two main business lines. On the other hand, Tesco does not give any information on its classification of *capitalized* interest paid or its noncash investing and/or financing activities.

SUGGESTED SOLUTION: COMMENTS ON OTHER OBSERVED DIFFERENCES

Comparing the companies' reporting of cash flows, there are several other obvious differences in presentation. We did not include these differences in the table because they do not arise from differences in the standards. One example is the location of reporting the adjustments to income under the indirect method. Target presents these adjustments in the body of the statement, specifically, the operating section. Tesco shows 27 of the 29 adjustments to income in Note 29. It carries only the net figure, *Cash generated from operations*, to the operating section of the statement. As required by IAS 7, Tesco does show the interest paid and income tax paid in the body of the statement (operating section). The observed difference in presentation of adjustments to income does not arise from the standards, though, as GAAP too permits them to be shown in the notes (ASC 230-10-45-31).

Another example is Tesco's presentation of a schedule titled *Reconciliation of net cash flow to movement in net debt note* directly below the cash flow statement. This reconciliation shows the change in cash and cash equivalents in relation to the change in net debt financing. It helps users to see if the change in cash is tied to the change in the amount of debt financing. IAS 7 encourages companies to disclose information that may help users understand a company's financial position and liquidity (¶50). The standard does not refer to this reconciliation, but some companies who use IFRS elect to provide it (PwC 2010).

BEST PRACTICES FOR TEACHING ACCOUNTING COURSES ONLINE

Dr. Consolacion Fajardo, DPA, CPA

Professor of Accounting
National University, California, USA

Abstract

This article discusses the best practices in teaching and learning online accounting courses in the second largest, private, nonprofit, and accredited institution of higher learning in California. The university offers a unique one-course-a month format that caters to the needs of working adults with average age of thirty three years. The flexible online degree programs enable students to complete their degree programs in a highly intensive and accelerated time frame. This piece of research provides strategies and techniques that result to more effective and efficient teaching/learning in the Bachelor of Science in Accountancy program. It includes topics such as course outline, program learning outcomes mapped to institutional learning outcomes, specific courses and related course learning outcomes, asynchronous threaded discussion, synchronous live chat sessions, and grading factors in the assessment of students' achievement in the course. It is hoped that this research will contribute to a more productive learning and teaching experience in the global virtual classrooms.

Keywords: best practices, online courses, learning outcomes, course outline, synchronous live chats, asynchronous threaded discussion, assessment

1 INTRODUCTION

Founded in 1971, National University is the second-largest private, nonprofit institution of higher education in California and 12th largest in the United States. It caters to the educational needs of working adult with average age of 33. Courses are offered in a unique highly intensive one-course-a-month format. With headquarters in La Jolla, San Diego, California, National University offers a variety of degrees that include associate's degree, bachelor's degree, master's degree, and teaching credential. Programs are available online in more than 45 convenient locations throughout California, Florida, Georgia, Nevada, Texas, and Virginia. National University consists of five schools and one college, including the Schools of Business and Management, Education; Engineering, Technology and Media, Health and Human Services; and Professional Studies, and the College of Letters and Sciences. Currently, National University offers 100 undergraduate and graduate degrees, as well as 30 certificates and 22 credential programs and over 1,200 courses online [1].

2 BEST PRACTICES

There are a variety of best practices being offered by professional organizations and educational institutions with the goal of providing quality education, improving teaching performance, and enhancing student's learning experience and success in the online environment.

Best Practices have been developed by the eight regional accrediting commissions in response to the emergence of technologically mediated instruction offered at a distance as an important component of higher education. These *Best Practices* are designed to assist educational institutions planning to offer online courses and to provide a self-assessment framework for those already having online programs. The two main goals are quality distance education and assessment of faculty and students' performance. Developed to reflect current best practice in online education, these *Best Practices* were initially drafted by the Western Cooperative for Educational Telecommunications (WCET). These *Best Practices* consist of five separate components: (1) Institutional Context and Commitment, (2) Curriculum and Instruction, (3) Faculty Support, (4) Student Support, and (5) . Evaluation and Assessment [5].

Irlbeck (2008) aligned the foundational statements for best practices of Capella University to the International Board of Standards for Training Performance and Instructions (IBSTPI) competencies that include: (1) Build faculty –learner relationship, (2) Manage and facilitate the learning process, (3) Build and communicate professional expertise, and (4) Assess learning and teaching [10]. In 2007, the faculty initiated the process which was finalized in 2008 with corporate commitment and support for implementation incorporating best practices for faculty. The Office of Faculty Engagement reinforces the best practices efforts and continues to emphasize key aspects of success in teaching and learning [10].

Ragan (n.d.) 10 Principles of Effective Online Teaching: Best Practices in Distance Education intended to serve as a valuable guidebook for new online educators, or those who are looking for proven strategies to help them overcome the unique challenges of online teaching include: (1) Show Up and Teach, (2) Practice Proactive Course Management Strategies, (3) Establish Patterns of Course Activities, (4) Plan for the Unplanned, (5) Response Requested and Expected, (6) Think Before You Write, (7) Help Maintain Forward Progress, (8) Safe and Secure, (9) Quality Counts, and (10) Click a Mile on My Connection. He explains that this is the articulation of what the institution expects from the online instructors to assure consistency and ensure a quality teaching and learning experience. The "10 principles" of online instructors featured in the report were developed by Penn State's World Campus to specifically define the anticipated teaching and classroom management behaviors of the online instructor. The document attempts to create an expectation of the core behaviors of the successful online instructor. These expectations establish a minimum set of activities for online instructors. It also helps to define parameters around the investment of time on part of the instructor [16].

3 THEORETICAL CONSTRUCTS

In an online environment the teacher becomes the facilitator, guide, and coach in the teaching/learning process. This embodies a paradigm shift. It emphasizes a student-centered approach, problem oriented, uses multiple resources, and the virtual classroom learning/teaching activities are linked to the real world setting. *Andragogy, Self- regulated Learning, and, Engagement Theory* are three different but related theories that are relevant to the qualities and attributes that contribute to adult learners' success in online learning.

3.1 Andragogy

Andragogy is the art and science of helping adults learn [11]. Lee's article stated that Malcolm S. Knowles (who died in 1997 at the age of 84) was considered the father of adult education and was one of the strongest advocates of andragogy. Andragogy focuses on the characteristics of adult learners and a set of assumptions for most effectively teaching adults: *self-concept, experience, readiness to learn, orientation to learning, and motivation*. The essence of the theory is that the adult learners need to be self-motivated and to be active participants in their own learning [12].

3.2 Intentional Learning/Self-regulated Learning

While not termed andragogy, the recommendations of the Accounting Education Change Commission [13] were based on the andragogical paradigm. AECC maintained that educators must prepare graduates to become accounting professionals by equipping students with lifelong learning skills. *Intentional learning* is the focus of the AECC monograph and is defined as learning with *self-directed intent* and choice of how and what to learn.

Smith (2001) describes lifelong learning as either *self-directed learning* or *self-regulated learning*. Self-directed learning is the term often used in the study of adult education outside a formal educational setting, while self-regulated learning focuses on students in a formal educational setting. Smith's study focused on the review of research on *self-regulated learning*. Smith provided a self-regulated learning model that includes what she calls *self-regulatory attributes* and *self-regulatory processes*. *Self-regulatory attributes* include: (a) self-efficacy, which refers to situation specific self-confidence in one's ability to organize and execute a course of action to attain certain outcomes), (b) self-awareness which means knowledge of one's own person, task, and strategy in a given context, and (c) resourcefulness which means control of physical surroundings to optimize performance, such as seeking help from social sources such as persons or other references. *Self-regulatory processes* consist of: (a) attributions that pertain to views regarding the causes of an outcome which can be internal or external, controllable or uncontrollable, (b) goal setting which guides the learning effort in a particular direction and serves as a standard for performance, and (c) self-monitoring representing the

intentional efforts to control the learning process by comparison of performance to a standard or a goal. At the core of this model is self-motivation or the inner drive to learn. Smith posited that self-regulatory attributes and self-regulatory processes influence the strength of the learner's self-motivation [14].

3.3 Engagement Theory

Kearsley (2000) cited another learning theory called Engagement Theory, which may be viewed as another version of the andragogical paradigm. The Engagement Theory posits that the learner must *be actively engaged* in a meaningful task to achieve effective learning. The Engagement Theory states that all learning must have three important characteristics: (1) *collaboration* or the interaction among students, teachers, and subject-matter experts via e-mail, discussion forums, and conferencing, (2) *problem-based*, which means that all student activities involve completing assignments or projects rather than taking tests or exams, and (3) *authenticity* where all course materials and activities are realistic and directly related to the student's interests [15].

4 PURPOSE OF THE STUDY

This piece of research documents the Best Practices at National University in the Bachelor of Science in Accountancy program patterned after the five Best Practices components as delineated by the Western Cooperative for Educational Telecommunications [3): (1) Institutional Context and Commitment, (2) Curriculum and Instruction, (3) Faculty Support, (4) Student Support, and (5) Evaluation and Assessment [3].

5 METHODOLOGY

This paper will document the implementation of the five components of Best Practices as they apply to the Bachelor of Science in Accountancy at National University.

6 DISCUSSIONS

6.1 Institutional Context and Commitment

6.1.1 The Mission of National University

National University's mission is to make lifelong learning opportunities accessible, challenging, and relevant to a diverse student population. Its aim is to facilitate educational access and academic excellence through exceptional management of University operations and resources, innovative delivery systems and student services, and relevant programs that are learner-centered, success-oriented, and responsive to technology. National University's central purpose is to promote continuous learning by offering a diversity of instructional approaches, by encouraging scholarship, by engaging in collaborative community service, and by empowering its constituents to become responsible citizens in an interdependent, pluralistic, global community [1].

6.1.2 Institutional Learning Outcomes

National University has seven Institutional Learning Outcomes: (1) Apply information literacy skills necessary to support continuous, lifelong learning, (2) Communicate effectively orally and in writing, and through other appropriate modes of expression, (3) Display mastery of knowledge and skills in a discipline, (4) Demonstrate cultural and global awareness to be responsible citizens in a diverse society, (5) Demonstrate professional ethics and practice academic integrity, (6) Utilize research and critical thinking to solve problems, (6) Utilize research and critical thinking to solve problems, and (7) Use collaboration and group processes to achieve a common goal [1].

6.1.3 Bachelor of Science in Accountancy Program Learning Outcomes

Bachelor of Science in Accountancy Program Learning Outcomes include: (1) Use information technologies and computerized accounting software for financial accounting and reporting, (2) Apply generally accepted accounting principles to measure and report information related to accounting for the assets, liabilities, equities, revenues and expenses, and cash flows of business enterprises and governmental and not-for-profit entities, (3) Prepare tax returns and reports for individuals and

business enterprises, (4) Interpret cost data and prepare managerial accounting reports, (5) Apply generally accepted auditing standards in the audit of public and private entities, (6) Apply ethical and legal concepts to accounting and tax related issues, (7) Demonstrate effective communication of accounting information [2].

The Program Learning Outcomes (PLO) are mapped to the Institutional Learning Outcomes (ILO) and then to the Courses Learning Outcomes (CLO).

6.2 Curriculum and Instruction

6.2.1 Bachelor of Science in Accountancy Description

The major in Accountancy academically prepares students for a wide range of accounting-related careers, including public accounting, corporate accounting, internal auditing, accounting in not-for-profit organizations, and job opportunities with state and local government agencies such as the Internal Revenue Service, Defense Contract Audit Agency, FBI and others. All students are advised to contact a full-time accounting faculty member for a brief interview by phone or personal visit for the purpose of reviewing the student s career objectives [2].

To serve the needs of students who are intending to take the CPA exams, the course content were designed following the American Institute of Accountants (AICPA) Content Specification Outlines (CSOs) [4].

Adjunct faculty hired are required to have at least a bachelor's degree with major in accountancy, a master's degree, and preferably with certifications such Certified Public Accountant (CPA)\ and or Certified Management Accountant (CMA), as well as practice in the field of accounting. Full-time faculty are academically qualified (AQ) and or Professionally Qualified (PQ) as per guidelines from accrediting institutions such as the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC) and International Assembly for Collegiate Business Education (IACBE).

The 2013 Handbook and WASC accreditation describes the changing context for accreditation that rebalances the dual role that requires educational institutions to support both public accountability and institutional improvement. Universities are expected to be more accountable for student academic achievement, to be more transparent in their accreditations reporting, and to demonstrate their contribution to the public good. Accounting for quality is a matter of public trust considering the huge amount of financing provided by government to educational entities [3].

6.2.1 Course Outline

The course outline for the accounting courses in the Bachelor of Science in Accountancy follows a standard format. It consists of nine (9) pages that includes detailed information about the course such as the beginning and end date, textbook information including the ISBN and link to the publishers' supplementary materials, prerequisite for the course, contact information of the instructor (phone and e-mail), course description, course learning outcomes, course requirements specifying that the course requires three hours or more of study on a daily basis, the grading system that includes a variety of learning activities that will help students maximize their learning students. It also includes the websites of professional organizations, journals, and publications related to the accounting field.

With regards to the prerequisites, National University catalog specifies that students must have completed ACC201 or its equivalent with a minimum grade of C within two years of taking any of the core courses, unless a grade of 75 or better is received on an appropriate challenge exam. Research indicates that success in upper-level accounting courses depends on adequate prerequisite knowledge because the learning process is sequential and hierarchical. Sargent (2013) investigated how enforcing the prerequisite impacted course outcomes in intermediate accounting. The prerequisites were enforced using a proficiency test administered online in a system that also offered tutoring to remedy any learning shortfalls. Students received all-or nothing credit (100% or 0) for mastering adjusting entries and the financial statements. The study concluded that students proficient in prerequisite skills earned better project and cumulative final exam scores [8].

6.2.2 Grading Factors

Graded learning activities are specified with assigned points to make students aware of the expectations for achieving success in the course. Points are designated for chatroom participation, homework assignments, threaded discussions, quizzes, research paper, practice CPA simulation problems, and Comprehensive Final Exam. The points are distributed approximately one third (1/3)

for quizzes, and one third (1/3) for the comprehensive final exam, and one third (1/3) for the other graded activities. By providing a variety of learning activities, students are given the opportunity to determine in advance how he/she can be successful in the course.

6.2.3 Synchronous Live Chats

To overcome the limitations of what is essentially a two-dimensional text-based learning environment, some universities are adding a *third dimension* to their online courses in the form of synchronous (live) class sessions that make use of voice-over-internet-protocol (VoIP) technology, to provide what is here called a *voice/visual* learning environment. Though the system accommodates web cams, they are not used, at least for the time being, because of bandwidth constraints that would seriously degrade audio quality, especially for those students with dial-up internet connection. The technology does, however, permit a function called *application sharing* in which instructors can display on their computer screen virtually any software application, and have the students view the *instructor's* screen rather than their own, while listening to the instructor's oral presentation. In a similar manner, students can present their papers or projects to their classmates. This *voice/visual* environment permits the use of a wide variety of teaching/learning activities that come close to matching those of a traditional onsite classroom. In a typical voice/visual learning environment, both the instructor and the students have headsets with microphones.

National University is now using Class Live Pro (CLP) that enables the instructor and students to speak into their headset microphone and talk to each other as if in a regular onsite classroom. These two hour live class chat sessions are scheduled twice a week on Tuesday and Thursday or Monday and Wednesday or any two days that the instructor may decide to schedule, normally from 6:30PM to 8:30PM. A combination head Set and microphone is being used for the chat sessions. Students are expected to actively participate in each chat using the microphone to ask questions or respond to questions from the faculty or other students. Chat sessions are accessible in the online course web site. For students having online live chats for the first time, an orientation is provided for free by the university.

There are eight chats in each course. Students are expected to participate in all eight chats. Students are encouraged to solve the assigned exercises, cases, or problems before the chat so that students are ready to participate and the chat will work out effectively and efficiently. Students who are unable to attend the live chat sessions can do a make-up by listening to the recorded chats and preparing one to two page comprehensive summary of the missed chats. The make-up summary is to be submitted on the day immediately following the missed chat as an attachment to an e-mail to be sent to the instructor.

6.2.4 Asynchronous Threaded Discussions

In a totally asynchronous online environment, there are no live class sessions in which instruction and live interaction take place. The principal means of student/instructor interaction is through *threaded discussions* in which instructors periodically post discussion questions, and students generally have a few days to post responses to the instructor and to the responses of their classmates. Such asynchronous interaction is particularly effective for questions that call for reflection and critical thinking. Online communication is text-based with interpretation of conceptual understanding contingent on the students' ability to express their ideas through typewritten messages. Assessing the quality of these messages is difficult and instructors often look at volume as an indicator of participation, rather than at cognitive presence or critical thinking.

Threaded Discussion topics are uploaded in each of the four weeks. Students are required to make two postings at the minimum. The first posting is to answer the threaded discussion questions and the

second as an interaction to another student's posting (an argument, a comment, an explanation, or a disagreement). A mere "I agree or I disagree" or just a question will not be counted for grading. The Threaded Discussion (TD) grade is based on the quality of the contributions posted (at least 4 sentences for every post). The treaded discussions consist of cases on ethics, analysis of actual companies, and a practice on searching the FASB Codification.

Thiede in his article stated that this is a great technique to encourage students to be analytical in their thinking. By reading others' thoughts and opinions, students can compare and contrast ideas, develop pros and cons concerning an issue, or take a position and support it logically. In addition, students can learn from reading the responses and reactions of others who have reviewed their assignments and papers [7].

6.2.5 Homework Assignments

Detailed homework (HW) assignments are included in the course outline with specification in terms of problems, exercises, cases, questions, and others. Weekly homework for the first three weeks is due on or before Saturday, 11:00 PM, PT. The final week's homework is due on or before Friday, 11:00 PM, PT, due to Saturday being the final day of class. HW solutions are uploaded at 8:00 AM the following morning to give students the opportunity to review the solutions before taking the weekly quizzes. Homework should be completed using Excel and submitted through the use of each weekly Homework Assignment DROPBOX and must be submitted one file only. HW submitted after due date and time will have a 20% reduction in points. In fairness to all students, HW submitted after the solutions are posted (8:00 AM the following morning) will not receive points. The HWs are graded individually and the grade posted in the gradebook. Partial credits are awarded for incorrect answers with associated calculations on completed HW assignments.

Students are encouraged to exchange ideas, but the HW that is submitted to the faculty must be the individual work of the student. Homework submitted that appears to have been copied from another student or source will get zero points. As indicated in the National University catalog, cheating or other forms of academic dishonesty may result in a failing grade. Academic honesty is highly valued at the ONLINE CAMPUS just as it is in each National University classroom. A student MUST always submit work that represents his or her original words or ideas. If any words or ideas are used that do not represent the student's original words or ideas, the student must cite all relevant sources. The student must also make clear to what extent each reference is used.

6.2.6 Research Project

A writing assignment is required in every accounting class in consonance with the university goal of writing across the curriculum initiative. On the first week, students are requested to pick their research topics from those that will be covered in the particular course. There should be no duplication. Students make their choices on a "First Come, First Served" rule when posting their choice of topic. The assignment requires the use of the Library/Internet research to locate and study reference materials on current accounting related topics. This includes a four to five pages double spaced paper The objective of this activity is for students to be aware of what is happening in the real world that relates to intermediate accounting--to practice their writing skills and make the study of accounting more meaningful. APA style is required for this assignment.

6.2.7 Comprehensive Final Exam

The Final Exam is scheduled on the last day of class. The Final Exam must be taken online and at the time specified to be fair to everyone and can be accessed for just one time. The exam is comprehensive (all chapters covered). The topics for the Final Exam are taken directly from the course learning outcomes shown on the course outline. The Final Exam is randomized. Phone numbers to call are provided in case of technical problems while taking the exam.

6.2.8 Students End of Course Evaluation

As part of the assessment process, an end of course evaluation is administered on the last week of the class starting on Monday and ending on Thursday for all classes for the particular month. Course evaluation results are reviewed by the program lead, the chair of the accounting department, and the dean. Instructors with scores lower than expectations are to be contacted by the program lead, the problematic areas are discussed and remedial measures or mentoring administered as appropriate to improve teaching performance and increase student satisfaction and success in the course.

6.3 Faculty Support

6.3.1 Faculty training and Master Templates

Adjunct faculty hired are required to have at least a bachelor's degree with major in accountancy, a master's degree, and preferably with certifications such Certified Public Accountant (CPA)\ and or Certified Management Accountant (CMA), as well as practice in the field of accounting. Full-time faculty are academically qualified (AQ) and or Professionally Qualified (PQ) as per guidelines from accrediting institutions such as the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC) and International Assembly for Collegiate Business Education (IACBE).

New hires are provided training. Instructors cannot be staffed with classes until after the rigorous training is completed. To maintain consistent content coverage for every class and to provide as a guide to instructors, master templates are developed for all the courses in the program and copied to each new class. One month before the start of class, the assigned instructor is provided access to the particular class. The instructor needs to review each and every item in the course shell, to update the content, the dates, and to make the class his/her own. The instructor prepares a comprehensive course outline following the sample provided in the master template, but is given the freedom to make modifications to suit the instructor's teaching style. The course outline is reviewed and approved by the program lead before being distributed to students. The course outline if forwarded to the assistant to the dean for the school files. There are faculty meetings for adjunct faculty held four times a year: two onsite in San Diego and two online where expectations are discussed and best practices shared.

The 2013 Handbook and WASC accreditation describes the changing context for accreditation that rebalances the dual role that requires educational institutions to support both public accountability and institutional improvement. Universities are expected to be more accountable for student academic achievement, to be more transparent in their accreditations reporting, and to demonstrate their contribution to the public good. Accounting for quality is a matter of public trust considering the huge amount of financing provided by government to educational entities [3].

6.3.2 Program Lead

The program lead provides guidance and support to the instructors. After reviewing the end of course evaluations, the program lead calls the particular adjunct when the scores are below expectations and discuss with the instructors appropriate action to remedy problematic areas and work on strategies to improve teaching performance. Once a year, the instructor's class is observed by the program lead and advice and mentoring provided as necessary.

6.3.3 Funds for Course Development

University wholeheartedly supports course development efforts. In the Program Assessment Review (PAR), the program lead specifies the expected activities for the improvement of the program and the courses together with the amount of funding needed. After approval, the amount needed are incorporated in the annual budgets for funding. Courses are continuously being monitored and modified to assure that the courses are current, the books are updated to the latest editions, and the course contents are relevant to the needs of students and employers in workplace.

6.3.4 Full-time Faculty Development Fund

To encourage scholarly activities, National University provides faculty development fund for full-time faculty members that covers registration fees for conferences, airfares, food, taxi fares, and supplies.

6.4 Student Support

A variety of support services provided the students to help them succeed in the courses they are taking that includes academic advisors, faculty advisors, student orientation tutorial service, career center, writing center, Math Online Tutor Lab, Library Resources and Services, and students concierge services. All of these services are intended to make the students life as convenient as possible. The concierge service, for example, is available 24/7.

6.5 Evaluation and Assessment

6.5.1 Assessment at National University

The University has been engaged in assessment and reflection for more than seventeen years, previously using paper-based system. Due to the difficulty of inputting data manually, the University switched to the use of Accountability Management System (AMS) that is available both on and off campus and, through use of its discussion boards, allows for collaboration between faculty and across a department, a school, and the University. Minimized paperwork allows faculty to focus on analyzing assessment results and collaborate on identifying ways to improve program curriculum and, thus, student learning. The Office of Institutional Research and Assessment (OIRA) coordinate training for the faculty to assist them with any changes in assessment process and technology. At the introduction of the AMS, OIRA assisted the faculty by pre-loading program information, current program descriptions, existing program learning outcomes, and curriculum maps [6].

The University Academic Assessment Committee (UAAC) is the coordinating body for assessment, and its membership includes representatives from each school, the vice president of the Office of Institutional Research and Assessment (OIRA), and the associate provost. The process of assessment of student learning is ongoing and integrated. The alignment between institutional learning outcomes, program learning outcomes, and course learning outcomes is understood to enhance this process. Focusing on program learning outcomes assessment provides faculty with a mechanism to assure that all graduates have a consistent body of knowledge. Feedback from assessment is used to adjust the learning environment and/or increase skills and knowledge of instructors and to identify areas that need improvement both in onsite and online courses. Accessibility of the new Accountability Management System (AMS) allowed for more ongoing assessment as well as discussion and conversations throughout the year [6].

6.5.2 Responsibility for assessment

Faculty members are primarily responsible for the assessment of student learning. The administration works with the faculty to support the continuous improvement of student learning. This support consists of providing resources for faculty to engage in professional development about best practices in assessment, the promotion of two faculty members to devote time as assessment fellows, a dedicated Office of Institutional Research and Assessment, and annual events that commonly provide forums to enrich faculty knowledge on assessment practices. The major University-wide events include the Annual Assessment Summit, the Academic Assembly, and the Spring Symposium. These are in addition to monthly meetings held by the School Assessment Committees (SACs). The University Academic Assessment Committee (UAAC) is a coordinating body for all faculty initiatives on student learning assessment [6].

There is a mandatory yearly Program Assessment Review (PAR) that covers one or two program learning outcomes assessed using two direct measures and two indirect measures followed by a comprehensive 5 year program review. External Reviewers are invited to do an independent appraisal of the programs whose comments are included in the overall recommendations. The direct measures are a combination of Comprehensive Exams and Research Projects/Cases given to all students at the end of the mastery courses. Indirect measures consist of Alumni survey send to graduates usually covering the previous three years and an exit survey administered to all students at the last course in the program. The results of the direct measures are analyzed and remedial measures recommended and if necessary request for funding for course developments are also incorporated for administrative approval and implementation.

7 CONCLUSIONS

Online learning offers the flexibility of time and space and capability of reaching a greater student population around the globe. While best practices vary in strategies and techniques, incorporation of best practices for online learning and teaching helps in providing students a more consistent, productive and successful online experience.

Engaging the students in a variety of learning experiences afford more opportunity for students to be actively engaged in the learning process and facilitates their successful completion of online classes. The various theories mentioned in this study point to the fact that successful online learners are adult students who are self-motivated [12], confident in themselves, and have a strong drive and determination to succeed [14]. Students demonstrate more positive attitudes and higher level of performance when online classes are highly interactive [17]. The emergence of modern technology has allowed students at all levels, young and mature, the opportunity to participate in advancing their education in an environment that is diversified, rich in best practices, yet progressive enough to allow

students to proceed in a self-paced manner [9]. Active learning, as opposed to passive learning, has become a key concept in the online classroom. As more universities offer flexible online courses, students who, because of location or commitments at work or at home, are unable to attend on-campus classes, will have available in their online courses a learning environment that is comparable to the traditional face-to-face classroom experience.

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CASE STUDIES, TECHNOLOGY AND PEDAGOGY: DELIVERING CASES THROUGH MULTIPLE PLATFORMS

George Joseph
Associate Professor of Accounting
University of Massachusetts Lowell

Email: george_joseph@uml.edu

ABSTRACT

The Case method is a powerful student-centered teaching tool that brings real-life situations into the classroom. This paper describes variations and insights that emerge from the experiences in teaching cases using diverse online and in-class available technologies. Cases can impart pedagogic outcomes such as critical thinking, communication, and interpersonal skills in addition to depth and multidisciplinary breadth of content. The case method serves to bridge the gap between theory and practice, and impart pedagogic outcomes such as critical thinking, communication, and interpersonal skills in addition to depth and multidisciplinary breadth of content.

Given the ubiquitous nature of technology supporting pedagogy, this article highlights how technology may be applied to the case study method. Different teaching approaches (hybrid and fully online approach) facilitated by technology supports a range of learning environments with additional advantages from group interaction and synchronous presentation tools. It is also relevant that the use of modern technology will give tomorrow's leaders the advantage of having learned in the same environment in which they will work.

CASE METHOD: AN OVERVIEW

Reading and discussing cases form an important pedagogic tool. Working through complex, ambiguous, real world problems engages students with the course material, encouraging them to see it within its specific context "from an action perspective, rather than analyze it from a distance" (Angelo & Boehrer). The approach has been significantly advanced by the Harvard Business School. Barnes et al. (1994) defines the case method:

> "A case is a partial, historical, clinical study of a situation which has confronted a practicing administrator or managerial group. Presented in narrative form to encourage student involvement, it provides data -- substantive and process -- essential to an analysis of a specific situation, for the framing of alternative action programs, and for their implementation recognizing the complexity and ambiguity of the practical world."

Barnes et al. (1994) point out that when successful, the case method of instruction produces a manager grounded in theory and abstract knowledge and, more important, able to apply those elements. Cases introduce different aspects of the firm, such as a mission and vision, important stakeholders of the firm and their involvement in the firm, problems faced by the firm and alternative action programs available to the firm. Cases also introduce possible risk implications and other outcomes, and highlight the complexity of the practical world.

TECHNOLOGY-ENHANCED APPROACHES TO THE CASE METHOD

While cases developed as an in-class pedagogic tool since its inception, the question arises about whether the tool may be successfully adapted to the new technology environment. Specifically, tools such as ECHO 360 (http://echo360.com/), Blackboard and the Blackboard Collaborate toolkit (http://www.blackboard.com/) and Wimba Classroom (originally used within Blackboard, but is now Blackboard Collaborate) have transformed the communication of knowledge and the concept of the classroom. Briefly, the Echo360 Platform is an active learning system with video and audio recording for capturing lectures, remote learning, improved content

management and student engagement. The core feature is however, the classroom lecture capture feature. Wimba Classroom (now Blackboard Collaborate) is a platform that includes audio, video, chat, whiteboard and application sharing tools to create a virtual classroom environment. Wimba Classroom was an add-on feature in Blackboard Vista version and is now fully integrated within the Blackboard Learn version as Blackboard Collaborate.

These technologies allow for two means to interaction, namely, synchronous and asynchronous. The synchronous interaction closely replicates face-to-face meetings, but with participants in different physical locations and occurs between participants at the same time from remote locations using "live" chat tools (e.g., Wimba Live Classroom). The case discussion usually has a clearly defined time frame or class period, as does a case discussion in a classroom-based course. In contrast, asynchronous interactions occur between participants at different times and can use such tools as discussion boards, email, and assignment tools. Importantly, the technology also allows within-group interaction that facilitates replication of a close classroom group activity. This group activity also allows the application of case method which is popularly based on group interactions.

IMPLEMENTATION

We experimented with applying the technologies to cases over several semesters. These resulted in different approaches which are consolidated broadly into two broad approaches, the hybrid and the online (indicated in figures 1 and 2). The first approach, the hybrid, used two teaching technologies, namely Blackboard and ECHO 360, to teach cases in the classroom, with technology serving to enhance the student experience. The second focused on online teaching, facilitated by Blackboard and supporting technologies. The basic sequence in both approaches suggests similar frameworks, except differences in the application of technology, and the consequent differences in emphasis on student skills development. For example, the optional activities to integrate online communications segment (as in Hybrid A and online) emphasized teamwork skills, and the online critique segment (Hybrid B using ECHO 360) emphasized oral communication skills, i.e., groups would provide feedback on the presenting group work on communication of the case.

The approaches (as suggested in the figures) consist of two main components:

1. Planning: The first step is preparing the case assignment, integrating the course objectives, and assigning the cases to the respective groups.

2. Group Case Assignments and Implementation: There are a variety of methods of case analysis and presentation. The approaches in this paper consider the optimal use of technology in case analysis and presentation, and increased role of groups in enabling different perspectives to increase the depth of analysis. For example, the asynchronous interaction facilitates group preparations and case submission using Blackboard (Hybrid A and Online). This allows for setting up separate online forums for teams, with topical threads and case being used in both approaches.

Given the application of different technologies and methods of instruction (in-class versus online) the different possibilities may be distinguished as below:

Hybrid (in-class and online) Approach: The Hybrid approach integrates the traditional classroom case approach with advantages of direct interaction, while facilitating use of technology in coordinating teamwork. The detailed hybrid approach may take two forms as in ***Figure 1***: Hybrid A involves the use of Blackboard, and includes extensive use of asynchronous online group work. This option emphasizes online group discussion, and can be useful for assessment and for developing online communication and teamwork skills. The synchronous interaction is during the in-class presentations. Hybrid B begins with the traditional group discussion (face-to-face), but uses the ECHO 360 tools in class to record the case presentations and have groups critique them to emphasize communication skills.

Online-only Approach: This is the traditional online class, where case discussions and presentations are conducted using online synchronous and asynchronous technologies. This approach emphasizes the online group interaction technology (Blackboard & Blackboard Collaborate) in facilitating group work (as indicated in ***Figure 2***).

As suggested in the figures, to allow greater depth of analysis, and increase variety in the approach to analysis, groups may be assigned differing roles, such as initiating the case, critiquing the work of the initiating group or presenting the case in the *synchronous* classroom (online or face-to-face). The case presentation would follow a cycle that begins with preparation and discussions at the group level, followed by postings that allow for critiques, and finally the presentation at the chats.[1] Case difficulty levels are factored into the presentation and assessment outcomes. The specific role of groups would be as follows:

- The "Initiating" group members will discuss the case within their "group discussion forum", and then post their group response to questions in the forum provided (Hybrid A and Online) or present in class (Hybrid B). They would focus on the content of the case.
- The "Critiquing" group members will receive the "Initiating" group postings in the online forum (or review the presentation either in class or through the Echo360 recording), and critique the case analysis. Specifically, they need to consider the content, consolidating ideas from the content of the case, highlighting strengths and areas for improvement, with reference to the case analysis and supporting references.
- Finally, the "Consolidating/Presenting" group will consolidate the material from the initiating and critiquing groups, and present a consolidated version during the online session (or in the classroom). The presenting group must also be well acquainted with the case materials as well as other supplements to make a strong presentation that integrates their views with that of the other groups. This will allow for discussions and further clarifications.

The above roles were similar for both the Hybrid A and Online-only approaches; the main difference between the Hybrid A and Online-only options was the presentation – face-to-face in the classroom for the former, and in Blackboard Collaborate/Wimba for the latter. For Hybrid B, the presenting group also initiated the case, and the critiquing group critiqued not only

[1] While a variety of other options may be used (e.g., having only two types of groups, initiating or analyzing and presenting), this option is particularly useful in organizing large classes, and has the advantage of increasing the depth of case analysis, while supporting diversity in participation levels for different cases analyzed.

the content but also the presentation (which was recorded using ECHO 360, uploaded and made available for all to view).

STUDENT LEARNING

The case method offers opportunities for students to get a closer view and understanding of firms (particularly live cases of firms with online websites and online information), while also developing critical thinking and analytical skills. The application of technology does not detract from student development of these skills. Rather, it provides opportunities to increase the skillsets associated with working in this technological environment. For example, the two approaches (Hybrid A and Online-only) enhance teamwork and technological skills using Blackboard. Faculty can also assess individual participation in online group activity, given the written trail, and therefore, provides greater motivation for student participation. These approaches also support written and oral communication. The online presentations increase teamwork and coordination, and presentation skills (the **Appendix** provides a rubric for assessing communication skills). The online method also increases opportunities for research into topics and the firm, particularly given the increased use of online sources. Thus, research readings and online websites may be included in the assignments to increase depth of coverage. The Hybrid B method could include critiquing of communication skills, and assessing individual perception of the outcome of the presentation that helps increase self-awareness, leading to more conscious efforts to improve communication. For example, student feedback in the Hybrid B approach, have indicated a greater awareness of their own communication skills that enabled them to develop plans to improve those skills.

While we emphasize the strengths of the approaches highlighted above, it is also important to be cognizant of their limitations, and optimize the use of technology to focus on the strengths. For example, the online presentations do increase dependency on technology, and cannot avail of the advantages of in-class communication, both verbal and non-verbal enhanced in large part by the face-to-face atmosphere. This limitation, however, may be offset by increased focus on other skillsets, particularly flexibility in group communication, research and technology usage skills. Thus, while the hybrid approach incorporates many advantages of the traditional case analysis, technology provides added advantages and opportunities.

SUMMARY AND CONCLUSION

Cases are crucial teaching tools, particularly in business fields, as it brings the real-life complexity into the classroom. The advances in technology have not reduced the applicability of the case approach; rather it has enhanced the opportunity to use them from different perspectives and emphasize different learning objectives. For example, as illustrated above, online technology facilitates increased online group work and access to online resources. In sum, irrespective of the approach used, the ability to harness the value of the case method with the continued innovations in technology increases the potential for student learning experience. Specifically, this exposure will provide tomorrow's leaders the advantage of learning in the same environment in which they will work.

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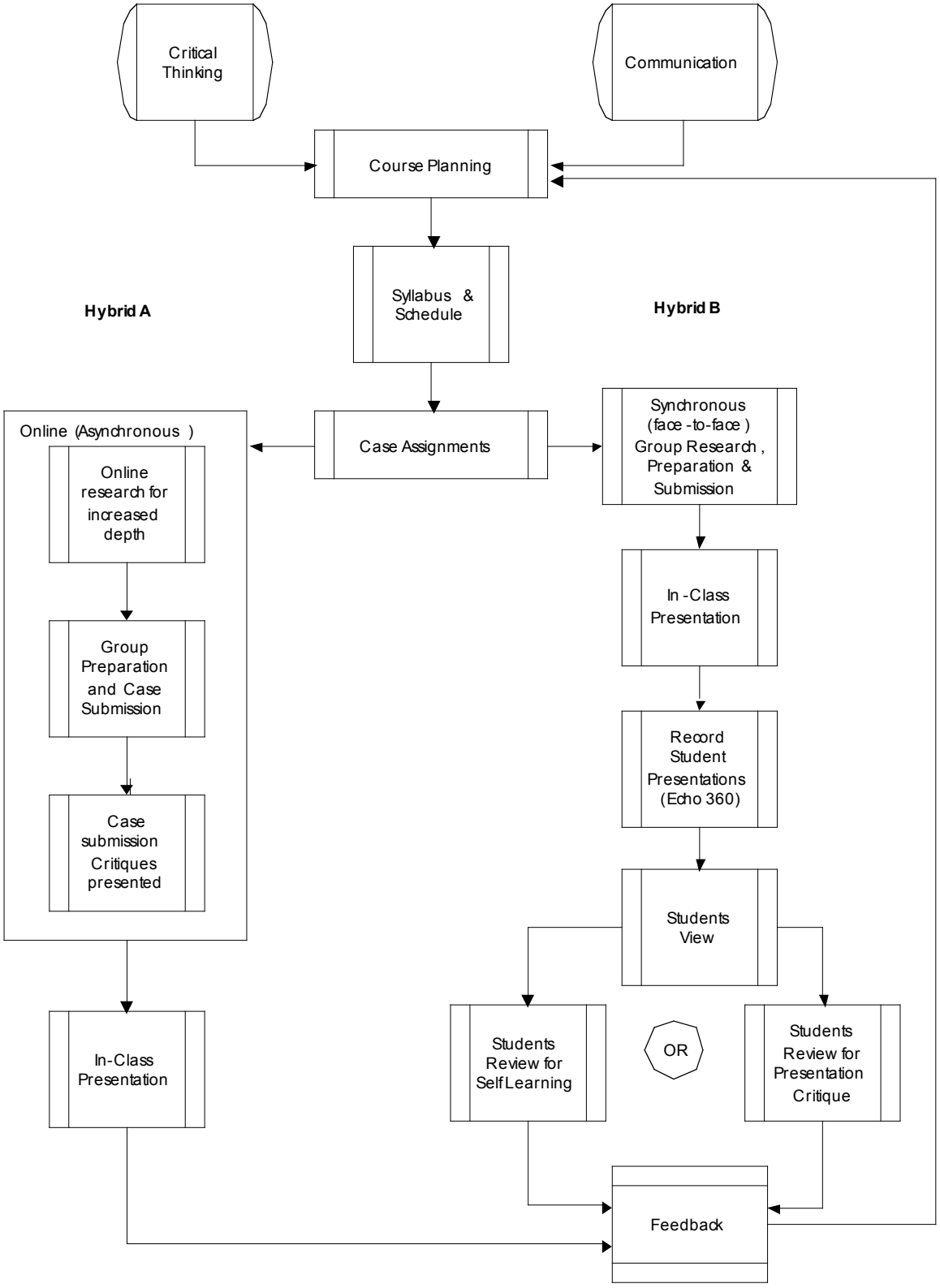
ECHO 360: http://echo360.com/

Blackboard and the Blackboard Collaborate toolkit: http://www.blackboard.com/

WIMBA Classroom: http://www.wimba.com/solutions/higher-education/wimba_classroom_for_higher_education

Figure 1: The HYBRID Approach



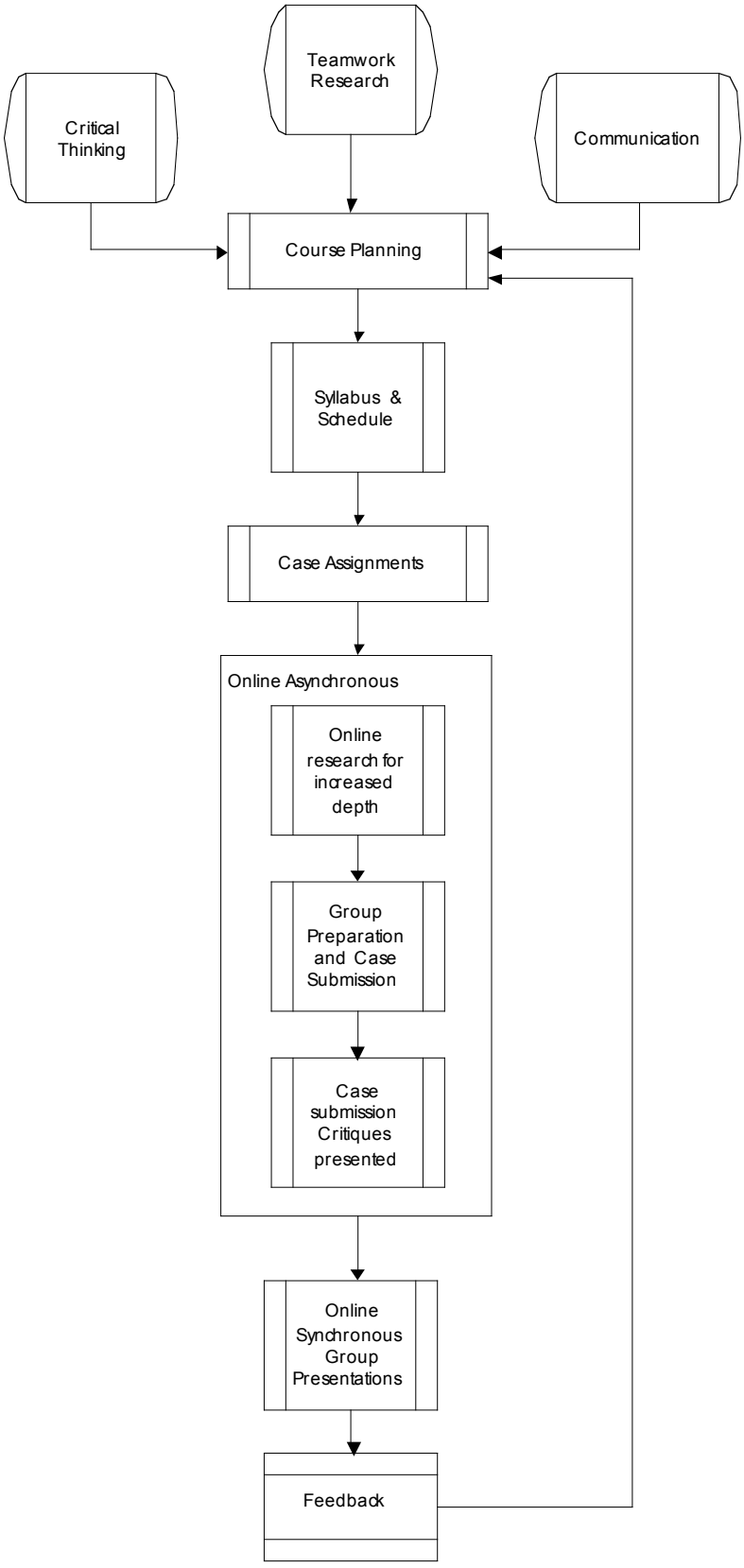


Figure 2: The ONLINE Approach

Appendix: Presentation Grading Rubric

Criteria	Level 1	Level 2	Level 3	Level 4
Content				
Overall Completeness & Credibility	Not organized, with no sequence of information	Information not consistently presented in logical manner; some information and supporting material missing or incomplete	Information presented logically in sequence; some information or supporting material missing or incomplete	Has strong introduction, is clear, with effective transitions between sections, leads to clear conclusion; indicates sufficiency of information and supporting material; sense of closure provided at end.
Individual Contribution	Student does not have grasp of information; unable to answer any questions.	Student able to address rudimentary concepts only related to individual part.	Student able to address concepts with ease related to individual part, and answer questions.	Student able to answer questions elaborately and with ease of the paper as a whole and the individual parts, displaying an overall understanding of the topic.
Communication				
Visual aids	Visual aids insufficient, poorly prepared, does not clarify points.	Visual aids not proofread; overuse of graphics or text; does not clarify many points	Visual aids prepared well; need to more effectively clarify points.	Visual aids carefully prepared; used appropriately, and effectively to clarify points
Articulation	Casual language; unfamiliar terms unexplained.	Language mostly appropriate to audience (some casual words); technical/ unfamiliar terms unexplained	Language mostly appropriate to audience (more professional terminology);	Language appropriate to audience; Technical/ unfamiliar aspects explained

CHEATING ON EXAMS? NOT IN MY CLASSROOM!

Ronald E. Marden, PhD

Professor of Accounting

Walker College of Business

Appalachian State University

Boone, NC

mardenre@appstate.edu

*Timothy B. Forsyth, PhD

Kenneth E. Peacock Distinguished Professor of Accounting

Walker College of Business

Appalachian State University

Boone, NC

forsythtb@appstate.edu

*Corresponding author

CHEATING ON EXAMS? NOT IN MY CLASSROOM!

There are dozens of insightful articles on *why* students cheat on exams and almost as many on *how* students accomplish this. There are also other interesting sites that offer pictures of students actually carrying out their deceitful methods. This article focuses on the *how* question combining discussion with illustrations so that educators can get a sense of what to look for when suspicions arise. This can go a long way in detecting as well as preventing this devious behavior.

Let's begin by considering the case of Adam taking the forbidden apple as the original exam on ethics; and we all know what happened to him. Perhaps if he realized the high probability that he would indeed get caught and what was going to happen if he did, he wouldn't have tried to get away with being dishonest. The point is, unless one thinks they won't get *caught* cheating, why not? The rewards can be substantial even if that translates into simply passing an exam. Without a price to pay, the downside risk may not outweigh the potential upside. Put into a classroom context, if a teacher isn't aware of how cheating can be accomplished, it becomes easier for students to pull off the deception while rationalizing that the potential upside is just too good to pass up. The bottom line is that teachers need to be mindful of all the methods currently being used in order to limit cheating opportunities.

Unfortunately, advances in technology are shrewdly being used to cheat in ways never before imagined. This makes it critical for teachers to keep up to date on the current techniques being employed as well as the old tried and true methods still in use since the very first test was ever given.

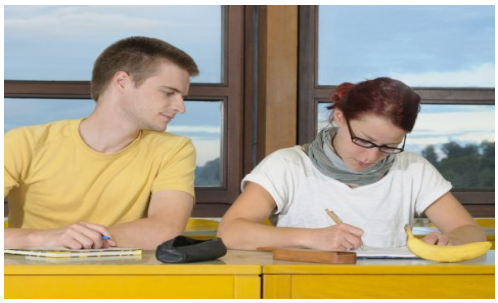
CHEATING BASICS

This section begins with some of the simpler cheating methods such as copying from another's exam (either with or without their knowledge), using crib notes, helping another by passing along crib notes, or switching exams with another student. Cheating using modern day technology is discussed in the next section.

As with any cheating scheme students can give help, receive help, or simply help themselves. A common theme that runs through most of the methods discussed in this paper is that these techniques are ordinarily committed when the instructor is simply not paying attention, so take a close look at the provided illustrations and train yourself to be on the look-out for signs that might point to the following.

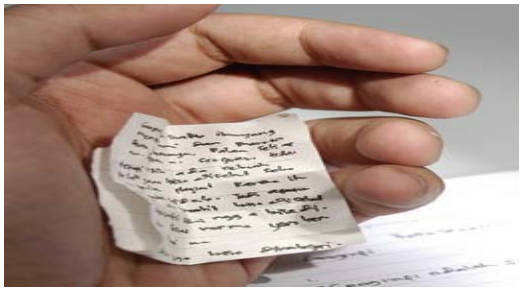
The "Peek –A-Boo" Method

The peek-a-boo method is simply a case of one student glancing over the shoulder or arm of another. In the first picture the female is not aware that she is being copied. It's likely that she is the better student and he is looking for some help. In the second frame, the female appears to be allowing the male to copy. Notice that she is right handed but has moved her exam over to her left side and that her head is somewhat tilted, perhaps even pointing out some key information. An instructor's watchful surveillance and periodic verbal warnings should minimize this usage.




The "Original Crib Note" Method

This is where students are trying to help themselves or one or more partners. The first picture shows an example of a cheat sheet or "crib" note that is hidden in the palm of the hand or elsewhere, or as shown in the next frame, used and then passed along to others.




Crib notes can be put on almost anything besides just plain paper, including the inside of an opened gum wrapper or a tissue that is discarded after use with a phony sneeze and a tight crumple. A clever student may even attempt the "rubber band" version. A thick band or two is openly worn to class, perhaps innocently mingled in with other wrist bracelets as pictured in the first frame. However, the student has previously stretched out the band and carefully written the notes as small as possible so that when the band is un-stretched the notes are so close together they're unrecognizable. When stretched the notes are readable as shown in the second frame. The teacher needs to keep an eye out for students pretending to relieve exam tension through excessive eye contact and twiddling with rubber bands.


The "Handyman" Method

In this case students are trying to avoid getting caught with physical evidence and instead inscribe the notes on the inside of their hands. Depending on how much thought they've put in to this, the ink may or may not be so easily removed so look for a box of tissues and a sudden case of sweaty hand wiping if they think you're on to them. Further, watching a student constantly looking at his non-writing hand and clenching it after each glance may also signal a problem.


The "Nothing Up My Sleeve" Method

Hiding notes under a sleeve is an outgrowth of the handyman method as shown below in the first picture. Students may find the sleeve method more to their liking if the teacher always shakes hands when exams are handed out (e.g., insincerely claiming it's for good luck). A rolled up sleeve with written notes on an arm should be easy to spot unless the notes are configured to look like a tatoo. However, if the student is practiced at the deciet, a larger shirt or sportcoat sleeve can allow an arm to easily slide in and out and will be harder to detect as shown in the second frame. Another version of this technique is to write the notes on a separate piece of paper and tape it to the arm so that the evidence can be easily discarded after use or if a student senses teacher suspicion.


The "Thigh Spy" Method

This one can be tricky, especially if the teacher is male. In the first picture the notes are written directly on the upper thigh. But this might leave visible evidence, so the notes may also be written on paper (similar to the sleeve method) and taped to the leg as pictured in the next two frames.

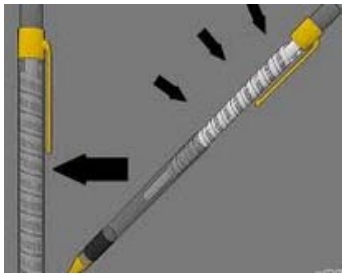


Unfortunately, even if the teacher strongly suspects this method is being used, just what are the options? Asking a female to pull up their skirt or dress could be considered sexual

harassment! Further, if the student *is* asked to show her thigh, she may flat out refuse. And that's the beauty of it; it's unlikely a male teacher would press the issue. Even a female teacher might seriously consider the consequences if the demand yields no inappropriate conduct. In either case, requiring a no-skirt dress code on exam days may not even be enforceable, much less legal. Perhaps a stern warning or two before or during the exam to the class about cheating and what will happen if caught may be a worthwhile preventive measure. This may be an easier sell if the classroom is tiered with open desks and students are reminded that teacher can view the students from the floor on up.

The "Mechanical Pencil" Method

Some mechanical pencils and even some pens can have clear stems. The idea is to write crib notes on a small piece of paper which can then be carefully rolled up, inserted, and glanced at as necessary. The pictures below give an illustration on how this may be accomplished. However, since the amount of space is somewhat limited a larger piece of paper may be tightly rolled in the stem and then pulled out at an opportune time with eventual return or discard after use. Close observation of students and their utensils may help catch this trick. If students know there are sharp eyes out looking for suspicious activity, the teacher will have a better chance at deterring this kind of behavior.




The "Non-Verbal" Method

Students have also been known to use pre-arranged body and facial gestures to signal answers with each motion representing a specific piece of information. Some indications of non-verbal communications might include repeated touching or scratching of the nose, chin, ear, head or tapping one's finger or pencil on the desk. Consider the following illustrations:



It would take a very perceptive teacher to distinguish between the typical body tics driven by test anxiety and deliberate non-verbal communications unless trained to do so. Still, spotting recurring gestures of the same sort should suggest that something wrong is going on. Also, the student receiving the message would have to be noticeably gazing in the sender's direction.

Again, a warning or two before or during the exam about cheating and the potential downside if caught may work as a good preventive measure.

The "Hat Trick" Method

Male as well as female students wear caps. Caps can hide crib notes in the brim as pictured in the first frame, especially if the cap has an over sized duck-billed brim as pictured in the second frame. Another way to use caps is to curve the brim as a baseball player might to keep out the sun. The purpose of the curve is that it can completely hide a student's eyes from the teacher but allow just enough eyesight to angle a glance at a neighbor's exam as pictured in the third frame.



The "Share and Share-A-Like" Method

Occasionally there may be a number of students involved in a cheating scam. But rather than trying to synchronize a risky group cheating, the idea is for only one of them to discover the exam questions ahead of time and pass the information forward. The other students will benefit if the exact or similar exam material is used from one semester to another or in one semester but over several sections of the same class. This method generally works best when a stack of exams are passed out in a row; each student is asked to take one and pass the rest along. The elected student then cautiously grabs an extra copy of the exam while it's being distributed. The second copy is concealed under the original and inconspicuously slipped into a book bag or briefcase.

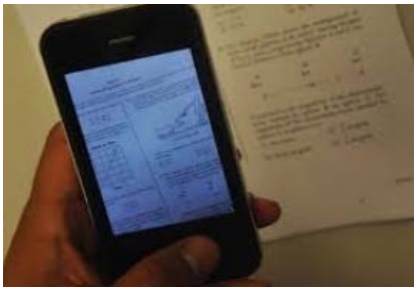
One way to avoid this is to have an exact count of exams for the given number of students regardless of whether the classroom holds sixty, seventy, or even a hundred students as shown in the first picture. Each student should have one exam with their name plainly written on it and literally handed out individually as shown in the second frame.


Another version, albeit riskier, is when a student simply does not hand in the completed exam (i.e., keeps it) and then claims that it was returned when no grade is assigned. The student contends that the teacher has inadvertently lost or misplaced it and since missing exam is not the student's fault, he or she should be able to take the exam over. Even if the make-up exam is a

different version from the original, an average student will probably still get an average grade. This is easier to pull off in a large auditorium environment which can be chaotic if the teacher is frequently responding to student questions. Regrettably, with either method the confiscated exam will likely find its way into a fraternity or sorority's files, the pre-arranged group, or sold to the highest bidder.

One way to avoid this second version is to require students to personally hand the exam back upon completion, as opposed to simply placing it in a stack on a table. Writing students names on exams, personally handing them out and collecting the finished product may take some extra time but should go a long way in discouraging the theft. Employing one or more graduate assistants would be helpful.

A more modern version of this practice combines the sharing method with smart phone technology. Students can take digital photographs of the test as pictured below in the first two frames. The pages can then be sent along to one or many receivers as illustrated in the third frame. This would be very difficult to detect if students are allowed to use electronic devices that can accomplish this.


More discussion on smart phone usage and other present-day technologies follows as we continue to our next section on contemporary cheating techniques.

MODERN DAY CHEATING TECHNIQUES

Some of the more contemporary techniques are pretty shrewd and take full advantage of the latest advances in technology. In some courses students are being asked or even required to use laptops in the classroom, and who hasn't seen a student or two staring at their smart phones or listening to their IPODs? While these devices, including even the simplest calculators, seem harmless enough, the following illustrations are various ways these modern-day tools can be used to unfairly improve performance… in other words, cheat.

Figures Don't Lie

Calculators have been around for a long time and might not be considered a modern-day instrument, but many of today's calculators are smart and even programmable. Assume in this case that an exam is all multiple-choice and any calculations will only require one or more of the basic functions of adding, subtracting, multiplying or dividing. In order to avoid cheating with smart calculators, further assume the teacher provides each student with a simple four function calculator; no other devices are allowed. Surprisingly, a student can still cheat by making use of the memory function. Objective answers of a, b, c, or d are entered in the calculator as a 1, 2, 3, or 4, respectively. Depending on the size of the number that can be put into memory a student could put a 10 digit number such as 4234123412 to represent the answers d, b, c, d, a, b, c, d, a, and b to questions 1 through 10 (see the illustrations below). The calculator would then be shared

between two students as they covertly exchange their calculators without the instructor's awareness. The answers would then be compared and adjustments made as necessary.



If students are allowed to bring their own calculators, some of the more advanced brands (e.g., Texas Instruments, Casio, etc.) may even hold as many as 10 memories (Memory 1, Memory 2 etc.). The scam could be harder to detect since even with a hundred multiple choice problems, the calculator would only have to be exchanged once.

In either case, even if the teacher's customary control over cheating is to walk around the classroom and randomly peek over student shoulders, the numbers in the memory(s) do not display unless the memory recall button is hit. Accordingly, if students see the teacher approaching they can simply clear the display and pretend they're busy thinking about an exam question.

Are you Smarter Than a Smart Phone?

One might think that tablets and smart phones should be more obvious as devices for cheating but students may argue that because they're accustomed to working with them, they'll be more be efficient and effective in performing exam calculations. Unfortunately, the reason they may be more effective is they can also store and easily recall volumes of summarized cheat sheets.

When use of these devices is prohibited, they're generally going to be hidden from view under the desk, in the palm of the hand, or behind another student's back as shown in the first picture. A crafty student may even be able to skillfully fit a phony calculator cover over a smart phone or tablet as pictured in the second frame.


Of course the instructor could simply ask students to turn in all their cell phones and electronic devices as shown in the first picture. However, if the classroom is large, this undertaking may become unmanagable as shown in the second frame.

The Sound of Music

Another way to utilize tablets, smart phones or even IPODs is if a student has earplugs or headphones hooked up to a device as pictured below. The claim is that listening to white noise or quiet background music helps the student focus his or her concentration because it eliminates the distractions from all the noise coming from other students and outside sources.

Regrettably a glimpse at the song title may not reveal the deception because these prerecorded dialogues are likely given recognizable song titles. Further, even if a teacher asks to listen in, the student may inconspicuously connect to a legitimate song to satisfy the teacher's curiosity and suspicion.

Not On My Watch

One of the latest innovations is the smart watch. These timepieces do more than simply keep time; some of them are basically mini-computers which are programmable and can even access the internet as shown in the first picture. Others may not be as sophisticated, but still capable of sending text messages to accomplices as shown in the second frame. These watches are battery operated so students shouldn't be constantly pretending to adjust the settings.

When Things Aren't Quite What They Seem

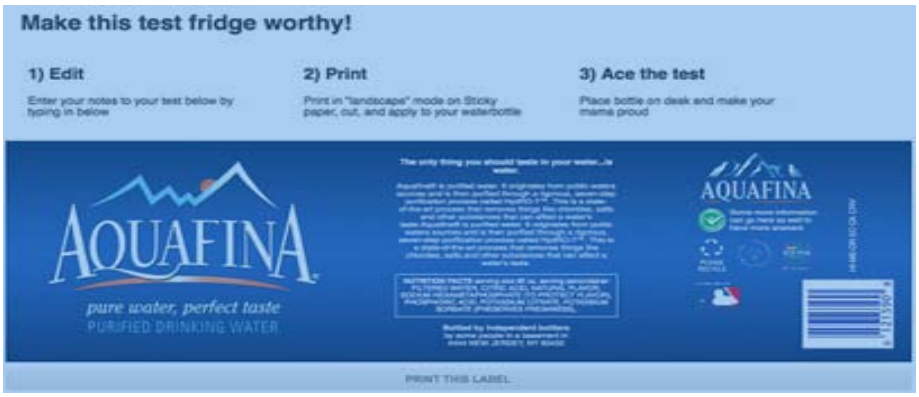
Many students get jumpy when they take an exam. Whether it's because of nerves or the effects of caffeine, there's usually *some* bodily movement every few minutes or so. Complete motionlessness should be pretty obvious in smaller sized classes where the teacher might easily notice an obvious fake appendage as shown in the first picture. However, in larger auditorium settings this may well be worthy of the student's effort. And while a teacher's repeated scans around the room might be fully expected during an exam, continual gazes to this sensitive region, as shown in the second and third frames, may result in the same problems discussed with the skirt methods.



Still, it never hurts to take a detailed look at every student at least once or twice during the course of an exam for anything that seems out of the ordinary.

Have a Drink on Me

Believe it or not one of the latest "advertised" techniques for cheating on exams is the plastic bottle and label scheme. There are actually websites that illustrate how students can printout perfect reproductions of labels from well-known products such as Aquafina water and Coke that can be edited with information needed on the exam. Here are two designs taken right off the web:

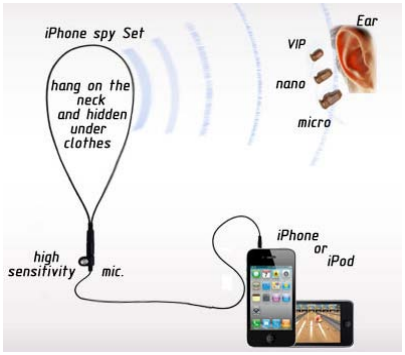


Students will not only be quenching their thirst but also their knowledge from these ingenious tactics as pictured below.

Using labels is nothing new, but with so many products to choose from and actual instructions on how to carry out the scam; it's likely that someone is probably over-hydrating at each exam. With any luck, the teacher should sense there's something amiss if the label is from a *Jack Daniels* bottle.

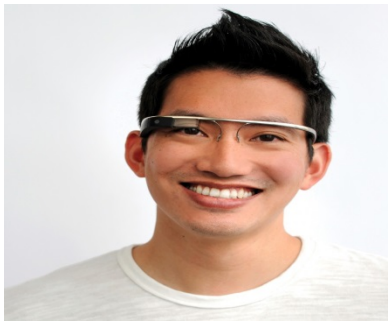
<u>Now Hear This</u>

Transmitters and receivers are getting so small that they're practically invisible. The first frame illustrates how a student can use a small microphone under his or her shirt where whispered questions can be delivered. At an outside location, another student has access to information helpful in answering the questions and sends it back via a hidden ear piece. The second frame tries to show how hard it is to detect an ear piece if it's intermingled with jewelry. The third frame makes it clear that with the right headpiece or even just long hair, the ear won't be exposed at all and virtually impossible to detect.



The Eyes Have It

Google Glass, one of the latest advances in technology, is a voice activated wearable computer with an optical head-mounted display. It can deliver information in a smartphone-like hands-free format as shown in the first frame and even snap pictures simply using natural language voice commands. When they first came out wearers were somewhat obvious, but over the past two years the frames have become more main-stream as shown in the second picture. The third picture illustrates the difficulty of detecting a wearer if hair is covering the side stems. The advantages of having an undetectable voice activated computer to cheat with are too numerous to list but include virtually all of those previously discussed throughout this article.


MODERN DAY MEASURES TO CURB CHEATING

There's not much any teacher can do if a student has undetected access to say, the google glasses as just discussed above or smart phones. However, there are a few steps one can take.

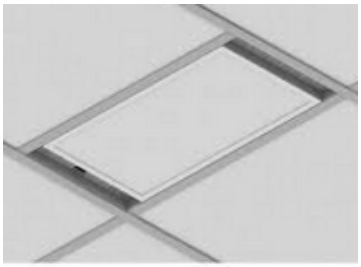
Using Two or More Exam Versions

If we assume two or more students are trying to cheat, one preventive measure is to make two versions of the same exam. This may be time consuming if the two versions have completely different questions. However, if the exam has multiple-choice questions and a scan sheet is used to record the answers you'll simply need to make two separate answer keys. Another method is to use the same questions but in a different orders. Again, if scan sheets are used, additional answer keys will be needed. Also, keep a watch for the swapping of exams. Students sitting next to each may try to obtain the same version by exchanging their exam with others. Using different colored paper as shown below should mitigate the problem by being obvious upon inspection. Another countermeasure might be to use only two colors but actually have three versions. Students who think they're copying answers from another student with a similar exam version might soon find out, when grades are posted, they were not.

Using Video Cameras

Besides being detective tools for teachers, students may be less likely to even attempt any cheating knowing they're being closely observed with video cameras. The first two frames illustrate what an obvious camera set up might look like. The idea is to let the students know they're indeed being observed which doubles as both a detective and a preventive measure.

The next three pictures are examples of concealed cameras that are being used without the students' knowledge. These are used principally for detection of suspicious behaviors.



This may seem extreme, but drones equipped with cameras are excellent surveillance devices. Not only can they view the classroom from many angles, but can also zoom in and out spotting even the slightest inappropriate activity. The problem is that they may be quite disruptive in a small classroom, but perhaps less disturbing in larger auditorium style settings.

Using Cell Phone Detectors

If smart phones or other devices that use radio frequency transmissions are not allowed during exam, these detectors can be used to continuously scan and activate a choice of alerting options for the teacher when transmissions are discovered. This may come in handy in larger auditorium settings and remind the teacher to keep a watchful eye out for dishonest activity.



SO WHAT CAN A TEACHER DO?

It's important to start with understanding *how* cheating occurs so you know what to look for. Be attentive when administering an exam; don't read a magazine or work on a computer; walk around the room; and give a warning before the exam starts. Watch for unusual seating arrangments and students who fake confusion about a question to draw your attention so others can cheat. If room allows, put seating spaces between students. In more exteme cases ask for student photo IDs; require that all electronic devices be put away or collect them during the exam; require baseball caps to be turned backward, and check drink bottles for false labels.

And perhaps most importantly, plainly articulate the "Academic Integrity Policy" at the beginning of each exam, along with the severe repercussions if caught (embarrassment, shame, exam failure, failed course, university judicial review, or even expulsion). You may even ask them to sign a statement at the beginning of each school year, semester, or as each test begins (i.e., signed on the first page of each and every exam) signifying that they have read and are aware of the policy. This preventive measure may go a long way in deterring even the faintest attempts at cheating and certainly lets students know where you stand on the issue.

Hopefully, students will realize, as with most ventures in life, when risk exceeds reward, the potential upside is *not* always too good to pass up. Nevertheless, always remember that some students may still try to lie, cheat and steal; not all of them and not all of the time….but it happens.

THE GAMES THAT PEOPLE PLAY!
TWO ACTIVITIES TO LIGHTEN AND LIVEN AN AIS COURSE

September 2014

By:

M. Elizabeth Haywood, Ph.D., CPA, CMA
Associate Professor of Accounting
Rider University
2083 Lawrenceville Road
Lawrenceville, New Jersey 08648

609-895-5544
msullivan@rider.edu

Fax: 609-896-5304

THE GAMES THAT PEOPLE PLAY!
TWO ACTIVITIES TO LIGHTEN AND LIVEN AN AIS COURSE

Active Learning in Accounting Information Systems

Games are becoming more popular in business and accounting courses as educators look for ways to promote active learning. I discuss two activities, in the form of games, which I have successfully incorporated into my Accounting Information Systems ("AIS") course. I have witnessed greater student participation and advanced preparation when I employ these methods. Achieving greater student engagement is an especially daunting task in the Accounting Information Systems course because it is often one of the accounting major's least favorite classes. Vatanasakdakul and Aoun (2011) cite numerous reasons why.

In Vatanasakdakul and Aoun's (2011) paper titled, "Why don't accounting students like AIS?" the authors discover that course structure, pre-existing knowledge of information systems, assessment of critical thinking, teaching style and the availability of academic assistance to students all significantly impact the students' learning experience in Accounting Information Systems courses. In my experience teaching AIS, I have witnessed that the course structure and the level of technical knowledge make the students especially uncomfortable.

In the course, the nature of the material - conceptual rather than computational – can create uneasiness in accounting students who are used to classes with mathematical problems and computations. Moreover, without these computational problems to keep students engaged, the delivery of the material lends itself to more of a passive or traditional lecture-based approach.

Furthermore, most students have not been exposed to the wide range of content covered in an AIS class. Because of the complexity, diversity and volume of material covered in Accounting Information Systems courses (Dillon and Kruck 2008), preparation time can be great for AIS instructors. Class time tends to be precious as educators feel they must cover both accounting and information technology topics. Since instructors view traditional lectures as a low-cost, quick way of disseminating information to classes (Beegle and Coffee 1991), educators often default to lecture-based delivery.

However, our current student body, Millenials (born after 1980), insist on action-oriented learning (Faust et al. 2001). Studies show that students learn and retain more when students actively participate in problem-solving rather than passively absorbing information through lectures (Bligh 1972; Pascarella and Terenzini 1991; Hermanson 1994). Furthermore, Cook and Hazelwood (2002) point out that, by offering alternate teaching methods, students with different learning styles grasp the material better.

One learning activity that modifies the traditional lecture involves games. Hoffjan (2005) explains that instructors are increasingly using games in business courses because these games enhance the student's ability to recall factual knowledge and require cooperation with other students. Accounting instructors have also recognized the usefulness of games. Murphy (2005) uses "Jeopardy!" in a government accounting course while Cook (1997) employs it when teaching revenue recognition concepts. Haywood, McMullen and Wygal (2004) use a Bingo game to demonstrate ethics and professionalism in several managerial and financial accounting

courses. Cook and Hazelwood (2002) successfully incorporate a derivation of "Who Wants to Be a Millionaire?" in a second semester accounting course. Cook and Hazelwood (2002) note that an added benefit to playing their game was that it created a relaxed atmosphere for their students.

The 2013 AACSB Standards also request active learning in the curriculum. From the AACSB website, it states that "curricula facilitate and encourage active student engagement in learning. In addition to time on task related to readings, course participation, knowledge development, projects, and assignments, students engage in experiential and active learning designed to improve skills and the application of knowledge in practice is expected."

In this paper, I present two active learning approaches that instructors can easily embed into an AIS course. Neither of them requires significant preparation time or expense for the instructor, but the benefits can be everlasting when students look back and remember the "fun" they had while learning the material.

Family Feud (for Review)

The first game mirrors the TV game show, "Family Feud." I use this game as a review mechanism before tests. Accounting Information Systems is full of material about "lists" and this makes it easy to fit into the Family Feud format. I usually prepare 10-12 slides for each exam review, and this activity requires about 30 minutes of class time.

To simplify the game in class (in contrast to the actual game show), I do not assign points to each answer. In other words, each answer weighs the same. Using PowerPoint slides, I keep the slides in normal view (not slideshow view) so I can add the answers to the board as the class progresses through the game. I do not allow any open notes or books – students must recall the answers from memory. This forces them to start studying prior to the review session.

I first divide the class into two teams. I have class sizes that average 20 students and typically do not exceed 30 students. This makes it easy for teams to collaborate. If the class size is large, however, then I would suggest that the teacher pick volunteers to play the game at the front of the class while other students serve as the audience.

Two opposing team members face off to see which team will gain control of that question. The "buzzers" are call bells that I purchased at an office supply store. Just as in the original game, whoever buzzes first gains control of the game board.

For example, on my first test, I cover the topic of "Cloud Computing" and on the review, I ask, "What are the advantages of Cloud Computing?" The following screenshot shows the slide I created in PowerPoint.

[Insert Figure 1 here]

The person on one team that "buzzes" in (rings the bell) first provides an answer. For example, if that person chooses "Cost Savings," as an answer, I type it into the PowerPoint slide as follows.

[Insert Figure 2 here]

That person then confers with his/her team whether to play the question or pass it to the other team. Whichever team plays the question, I only require that a total of five answers be revealed on the board – the initial response and four more. This allows for many review questions to be covered. Moreover, after the initial face-off, instead of the game requiring individual responses, I allow team members to collaborate and decide upon the next four answers.

When a team guesses an answer that is not on the board (or fails to respond within about a minute or so), it gets a "strike"; three strikes cause the team to relinquish control of the board. With three strikes, the other team gets the chance to steal by guessing one of the remaining answers. If that team guesses an answer correctly, it earns the point. If it does not, then no one gets the point. The point does not revert back to the other team (which differs from the original Family Feud.) I then reveal the remaining answers.

[Insert Figure 3 here]

When covering flowcharting symbols and acronyms (e.g., NFC = Near Field Communication) relating to systems, I use the "lightning" round. Here, I flash up individual slides with a symbol or acronym. I alternate between the teams – either asking individual team members or the teams to collectively answer. Here, usually four correct "lightning" round responses earn one point for the team.

[Insert Figure 4 here]

Some class teams become intensely competitive, but overall, there is a lot of laughter, and more importantly, realization of what the students do not yet know (and must study) for the test.

Scavenger Hunt (of the Inputs/Outputs of Business Processes)

The scavenger hunt is an in-class opportunity (no students leave the room, to their chagrin) to "hunt" or locate source documents and reports related to the numerous business processes. Over the past three weeks, we have covered revenue, purchasing, fixed assets, human resources, conversion and financing cycles. This activity provides a nice summary of the relations between various forms and reports and the business processes. Students have also commented that it served as a helpful study tool for the test. However, this exercise also could be used as an introduction to business cycles or as a pre-test before one covers business processes or assigns a Systems Understanding Aid.

I prepare a comprehensive list of the various inputs and outputs covered in Excel and then alphabetize them so that those documents are not grouped in any particular order. I distribute a hard copy to the class of the following list.

[Insert Figure 5 here]

For this exercise, I do allow students to use books or notes, but not the internet. However, that would be up to the instructor's discretion if he or she would like to add this type of resource.

I give students ten minutes to identify which document or report fits into a particular cycle. Obviously, certain inputs and outputs can be used in multiple cycles, and the students feverishly try to verify the appropriate cycle or cycles. After the time limit is up, students count up how many they found.

[Insert Figure 6 here]

We then go over them and they deduct points for any answers that were incorrectly labeled. From start to finish, this exercise usually requires about 30 minutes of class time.

Student Feedback

I have been teaching Accounting Information Systems for the past five years and have had 15 different sections. Informally, students remarked on the effectiveness of these approaches through comments made in class and on teaching evaluations. However, I only began to formally assess their impact at the end of the Spring 2014 Semester through an anonymous, seven-question survey. Sixty-one students completed the survey on the Family Feud Game and 60 students on the Scavenger Hunt.

Question 1 was open-ended. Questions 2-6 required the students to rate their level of agreement/disagreement on various aspects of the exercises using an 11-point Likert Scale where -5 represented strong disagreement, +5 represented strong agreement. Question 7 asked the students to evaluate their interest in the approach by rating the game/activity as either poor, fair, good, very good or excellent.

Questions 2, 3 and 5 assessed the goal of enhancing student comprehension through active learning approaches. Questions 4 addressed how students viewed these approaches as compared to lecture-based delivery. Questions 6 asked about the students' perception of the efficiency of the approaches given the constraint of class time. These questions were:

1. What is your general reaction to the game?

2. The game/activity helped me to identify areas that I needed to study for the exam.

3. The game/activity enhanced my understanding of concepts and terminology covered on the exam. (Family Feud)

The activity enhanced my understanding of inputs and outputs of business processes. (Scavenger Hunt)

4. Compared to lecture-based delivery used to cover and review material, this game/activity was effective.

5. Compared to other active learning approaches (i.e., projects, cases, exercises) used to cover and review material, this game/activity was effective.

6. Employing this game/activity in class was an efficient use of class time.

7. How would you rate the game/activity overall?

In my experience with these activities, students became deeply engaged in the tasks at hand and the overall reaction has been extremely favorable. While a few responded that these approaches were "okay" or "so-so," the majority of the students felt the exercises were beneficial and enjoyable. As shown in Table 1, 84% of the students rated the Family Feud Game as either "Excellent" or "Very Good," while 65% ranked the Scavenger Hunt as either "Excellent" or "Very Good." None of the students rated either as "Poor."

[Insert Table 1 here]

Responses to Question 1 (General Reaction to Game/Activity) with respect to the Family Feud Game included: "Fun, definitely interactive and entertaining." "I enjoy being active because I retain information better." "Helped me see what I needed to study. Fun." "Good to know what I need to study, but can be slow moving if we didn't look over the material beforehand."

I witnessed similar reactions with the Scavenger Hunt with student comments such as: "Challenging and engaging." "I did horrible on this, but afterwards, I really liked having it to study from." "Helped me get more familiar with the processes and was a good study tool after."

The evidence also suggested quite strongly that both of the activities help students to gain a better understanding of the material through active-learning methods. Responses to Questions 2, 3 and 5 resulted in means of 3.69 or higher. All means were statistically different from the neutral response of zero at $p<.0001$ level. These findings were reinforced by the written responses above.

To assess the students' views on these games as compared to lecture-based delivery, the mean response was 3.85 ($p<.0001$) for the Family Feud Game and 3.88 ($p<.0001$) for the Scavenger Hunt, asserting that the students preferred the active method to traditional disseminations of material through lectures.

Student responses to Question 6, which addressed the efficiency of the Family Feud Game and Scavenger Hunt given class time, included means of 4.19 and 3.98, respectively. Again, these means are statistically different from the neutral response at $p<.0001$ level.

[Insert Table 2 here]

Conclusion

The paper describes two active learning approaches used in my Accounting Information Systems course: a Family Feud Review game and a scavenger hunt for inputs and outputs of business processes. While these exercises target specific course content, instructors could apply or expand on them to almost any setting where they want to infuse active learning. Students

benefit from the alternate delivery methods and cite that learning is enjoyable. Indeed, it is a "win-win" situation for all involved.

Table 1
Student Rating of Activities

Panel A: Family Feud: How would you rate this game overall?

Rating	**Percentage**
Poor	-
Fair	3%
Good	13%
Very Good	49%
Excellent	35%
Total	100%

Panel B: Scavenger Hunt: How would you rate this activity overall?

Poor	-
Fair	3%
Good	32%
Very Good	40%
Excellent	25%
Total	100%

Table 2
Results of Debriefing Questions 2-6

Panel A: Results from Family Feud Review Game

Question #	N	Mean	Std Dev	t Value	p-value
2. The game helped me to identify areas that I needed to study for the exam.	61	4.20	1.08	31.46	<.0001
3. The game enhanced my understanding of concepts and terminology covered on the exam.	61	3.69	2.41	18.56	<.0001
4. Compared to lecture-based delivery used to cover and review material, this game was effective.	61	3.85	2.24	20.12	<.0001
5. Compared to other active learning approaches (i.e., projects, cases, exercises) used to cover and review material, this game was effective.	61	3.75	2.70	17.85	<.0001
6. Employing this game in class was an efficient use of class time.	61	4.19	1.32	28.54	<.0001

Panel B: Results from Scavenger Hunt of Inputs/Outputs of Business Processes

Question #	N	Mean	Std Dev	t Value	p-value
2. The activity helped me to identify areas that I needed to study for the exam.	60	3.80	1.32	25.58	<.0001
3. The activity enhanced my understanding of inputs and outputs of business processes.	60	3.89	1.30	26.38	<.0001
4. Compared to lecture-based delivery used to cover and review material, this activity was effective.	60	3.88	1.39	25.49	<.0001
5. Compared to other active learning approaches (i.e., projects, cases, exercises) used to cover and review material, this activity was effective.	60	3.80	1.36	25.25	<.0001
6. Employing this activity in class was an efficient use of class time.	60	3.98	1.35	26.58	<.0001

Figure 1
"Blank" PowerPoint Slide in Family Feud Game

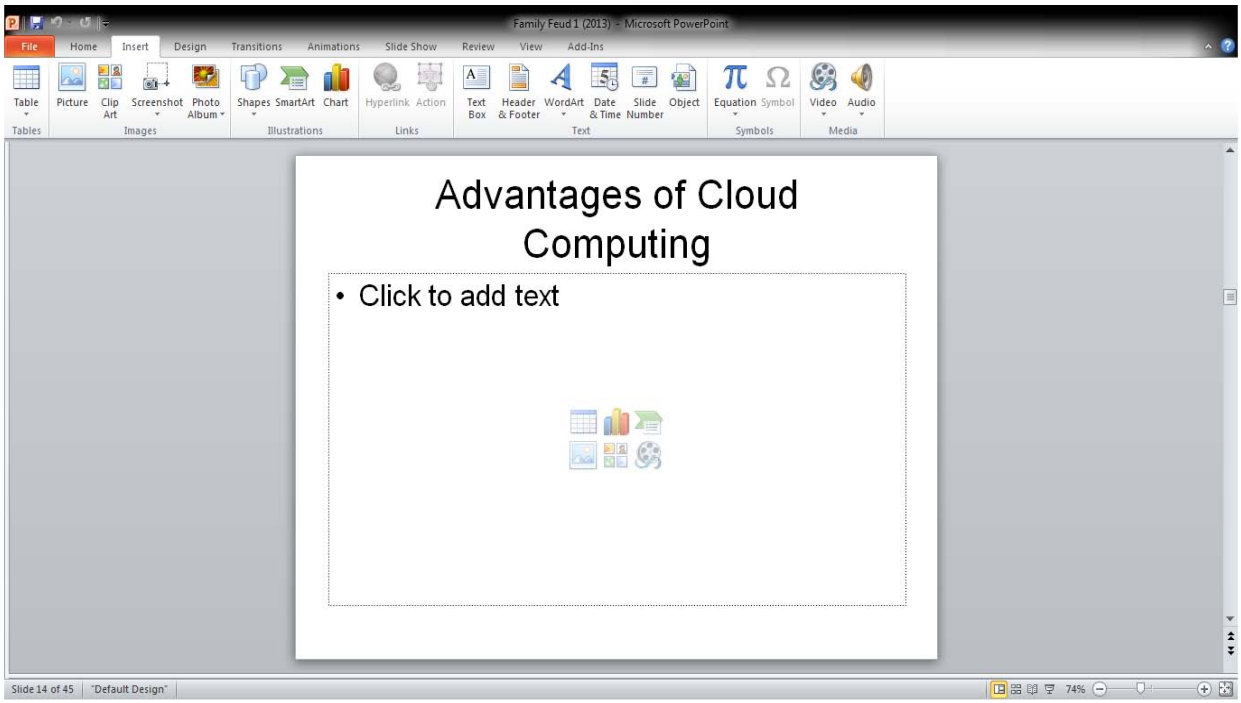


Figure 2
PowerPoint Slide in Family Feud Game with One Response

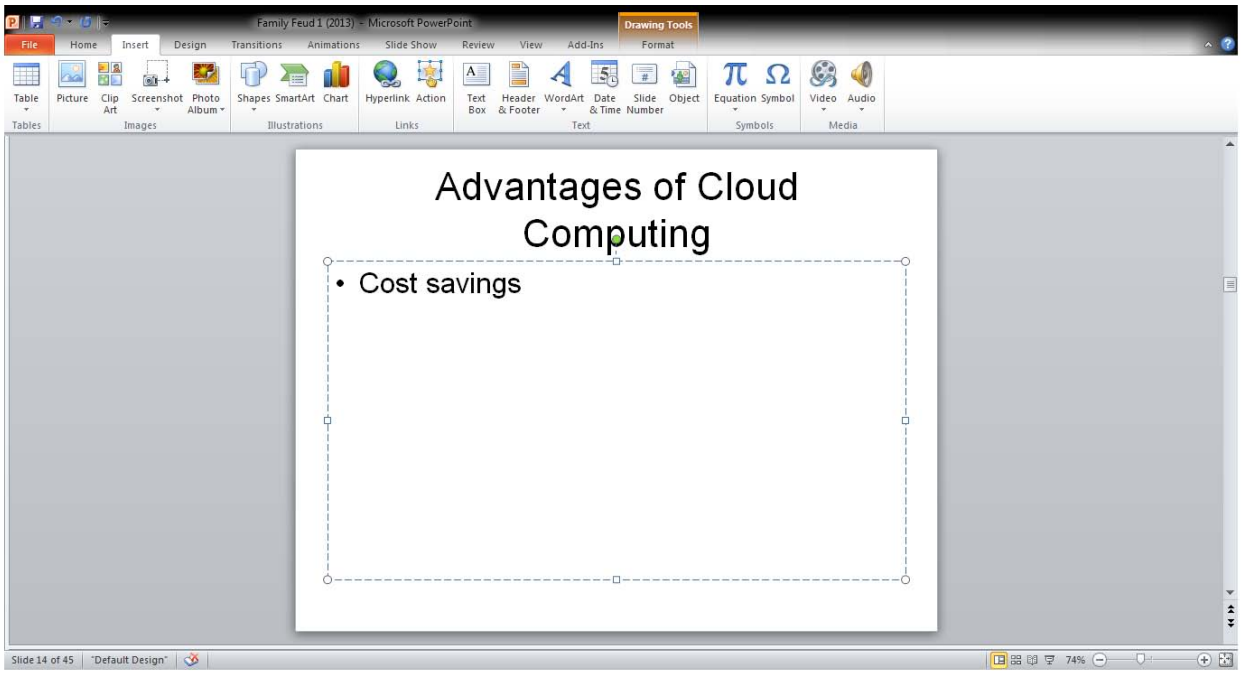


Figure 3
PowerPoint Slide in Family Feud Game with All Answers Revealed

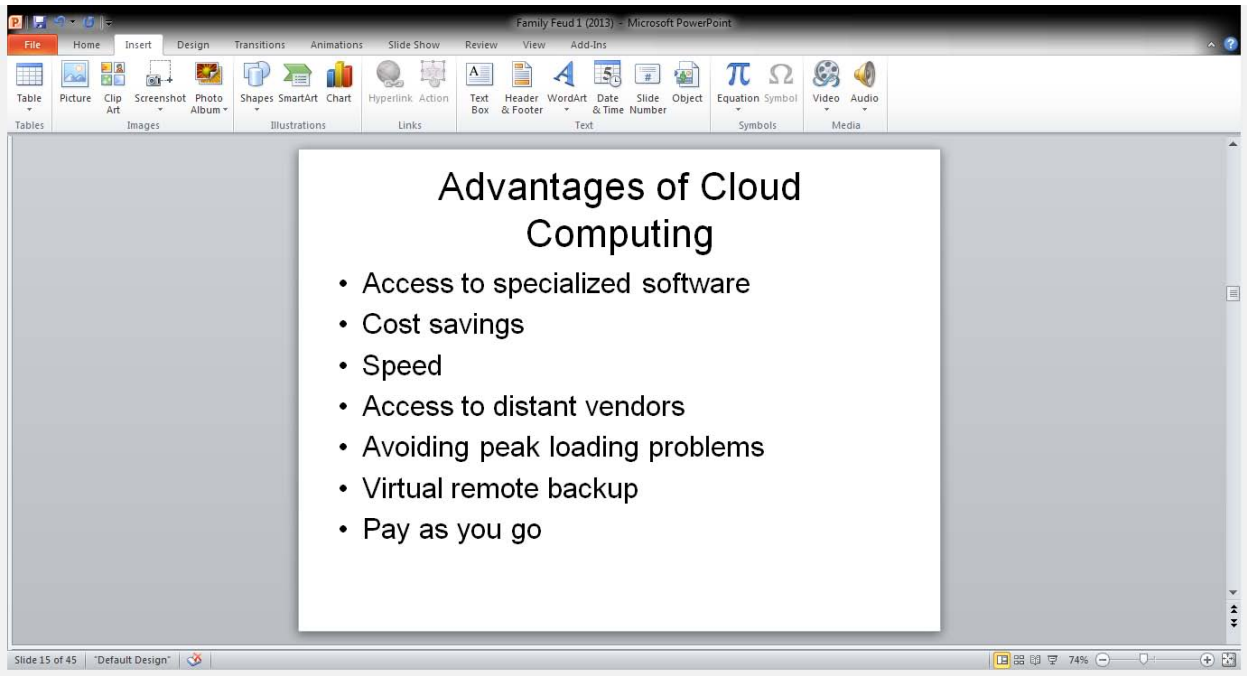


Figure 4
PowerPoint Slide of Lighting Round in Family Feud Game

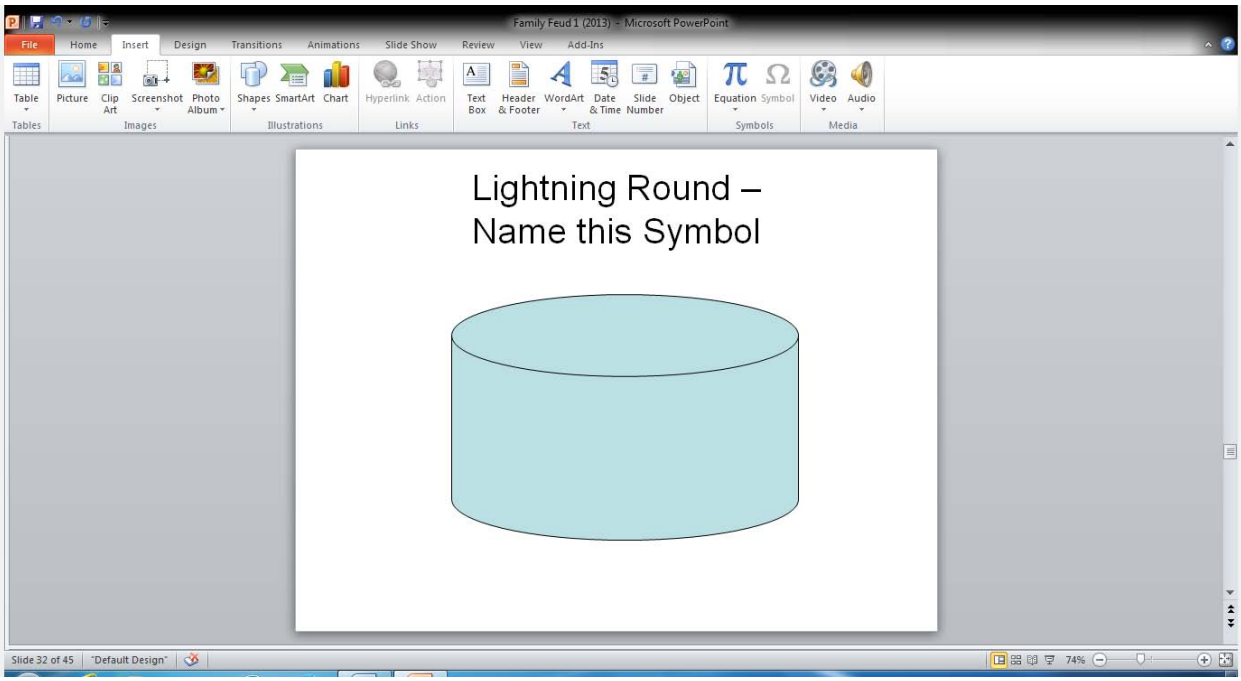


Figure 5
Listing of Business Processes for Scavenger Hunt – Student Worksheet

Inputs (Source Documents) & Outputs (Reports)	Business Process/Cycle
Aging Report	
Bad Debt Report	
Bank Statements	
Bill of Lading	
Bill of Materials	
Cash Budgets	
Cash Receipts Register	
Cash Requirements Forecast	
Check Register	
Checks	
Construction Work Orders	
Customer Billing Statement	
Customer Listing	
Debit/Credit Memoranda	
Debt and Interest Reports	
Deduction Reports	
Depreciation Register	
Discrepancy Reports	
Employee Listings	
Financial Planning Model Reports	
Financial Ratios	
Fixed Asset Change Forms	
Fixed Asset Register	
Interest Data	
Inventory Reconciliation Reports	
Inventory Status Reports	
Investment Reports	
Job Time Card	
Manufacturing Status Reports	
Master Production Schedule	
Materials Price Lists	
Materials Requisition Form	
Packing Slip	
Paychecks	
Payroll Deduction Authorizations	
Payroll Summaries	
Periodic Usage Reports	
Personnel Action Forms	
Production Cost Reports	
Production Order	
Purchase Analysis Reports	
Purchase Order	
Purchase Requisition	
Purchase Requisition	
Receiving Report	

Remittance Advice	
Repair and Maintenance Records	
Repair and Maintenance Reports	
Retired Asset Report	
Sales Analysis Reports	
Sales Invoice	
Sales Order	
Shipping Notice	
Stock Market Data	
Supplier Invoices	
Tax (Regulatory) Reports	
Tax Withholding Forms	
Time Sheets	
Vendor Checks	
Vendor Listing	

Figure 6
Listing of Business Processes for Scavenger Hunt – Answer Key

Inputs (Source Documents) & Outputs (Reports)	Business Process/Cycle
Aging Report	Revenue
Bad Debt Report	Revenue
Bank Statements	Financing
Bill of Lading	Purchasing
Bill of Materials	Production
Cash Budgets	Financing
Cash Receipts Register	Revenue
Cash Requirements Forecast	Purchasing
Check Register	Purchasing, Human Resources
Checks	Financing
Construction Work Orders	Fixed Assets
Customer Billing Statement	Revenue
Customer Listing	Revenue
Debit/Credit Memoranda	Revenue, Purchasing
Debt and Interest Reports	Financing
Deduction Reports	Human Resources
Depreciation Register	Fixed Assets
Discrepancy Reports	Purchasing
Employee Listings	Human Resources
Financial Planning Model Reports	Financing
Financial Ratios	Financing
Fixed Asset Change Forms	Fixed Assets
Fixed Asset Register	Fixed Assets
Interest Data	Financing
Inventory Reconciliation Reports	Production
Inventory Status Reports	Production
Investment Reports	Financing
Job Time Card	Production
Manufacturing Status Reports	Production
Master Production Schedule	Production
Materials Price Lists	Production
Materials Requisition Form	Production
Packing Slip	Purchasing
Paychecks	Human Resources
Payroll Deduction Authorizations	Human Resources
Payroll Summaries	Human Resources
Periodic Usage Reports	Production
Personnel Action Forms	Human Resources
Production Cost Reports	Production
Production Order	Production
Purchase Analysis Reports	Purchasing
Purchase Order	Purchasing
Purchase Requisition	Purchasing
Purchase Requisition	Fixed Assets
Receiving Report	Purchasing, Fixed Assets

Remittance Advice	Revenue, Financing
Repair and Maintenance Records	Fixed Assets
Repair and Maintenance Reports	Fixed Assets
Retired Asset Report	Fixed Assets
Sales Analysis Reports	Revenue
Sales Invoice	Revenue
Sales Order	Revenue
Shipping Notice	Revenue
Stock Market Data	Financing
Supplier Invoices	Fixed Assets
Tax (Regulatory) Reports	Human Resources
Tax Withholding Forms	Human Resources
Time Sheets	Human Resources
Vendor Checks	Purchasing
Vendor Listing	Purchasing

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