

Integrated Accounting Principles: A Best Practices Course for Introductory Accounting

D. Lee Warren and Marilyn N. Young

ABSTRACT: For many years, the accounting profession has encouraged accounting educators to rethink the introductory accounting principles courses. In response, accounting educators have developed strategies for enhancing the first courses, including: a new sequence for the course topics, active learning pedagogies, an emphasis on critical thinking, use of simulations, use of articles from the business press, and a reduced emphasis on debits and credits. Individually, each of these innovations moves us closer to the ideal course envisioned by the leaders in the profession, but what if all of these innovations were combined into the learning goals of a single principles course? The purpose of this paper is to describe a best practices course entitled “Integrated Accounting Principles” (IAP). This course focuses on accounting knowledge and skills development in the learning goals, and is taught with an active learning pedagogy in a six-hour format. This course draws on many innovative learning strategies from the accounting and education literature, as well as a few new and adapted tactics. In addition, the course is aligned with the goals outlined by the accounting profession and encourages a high level of student engagement.

Keywords: accounting principles; course development; accounting curriculum.

INTRODUCTION

Most colleges and universities include one or more introductory accounting courses in the core requirements for all students pursuing degrees in business. At many institutions, additional required business courses, including finance and strategic management, reinforce and build upon the accounting foundation. These curricular decisions reflect the belief that understanding financial and managerial accounting concepts is necessary preparation for any business career. Introductory accounting courses serve a diverse population and must perform three primary functions: (1) prepare accounting majors for upper-level accounting course work, (2) provide all business majors with essential accounting tools, and (3) attract accounting majors from among the non-accounting-major population.

In addition to the challenge presented by the diversity of the students’ majors and career objectives, teaching the introductory principles courses is challenging because students often bring a negative perception of accounting into the class. Whether attributable to the media (Cory 1992) or specific course reputations, students anticipate the first accounting courses will be dominated by

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“number crunching” and “bean counting.” Neither accounting nor non-accounting majors assign much value to the courses (Chen et al. 2004), nor does either group feel that the courses are relevant to success in their chosen careers (Turner et al. 2006). Mladenovic (2000) identifies two important reasons for changing these perceptions: (1) Perceptions influence the ways in which students learn, and the resulting learning outcomes, and (2) Perceptions affect student choices of academic majors and careers.

As many have written, the traditional approach to the introductory accounting courses is apt to reinforce, rather than challenge, these stereotypes. “The first accounting course [is] traditionally an introductory financial accounting course with the major emphasis being on the mechanical, bookkeeping aspects of financial accounting . . . By the second week, students were being taught debits and credits, and journals and ledgers” (Saudagaran 1996, 85). This approach requires students, predisposed to think accounting is irrelevant to them, to learn the new language of debits and credits and to meet instructors on unfamiliar turf, likely in a “land” the students hope to visit never again. Academically strong students find the approach mechanistic and boring (Adams et al. 1994; Cohen and Hanno 1993). In addition, students who do not immediately master the language are doomed to fail by the second week in the term. Further, this first course does not adequately prepare students for the upper-division core business courses or professional careers, as most future managers will not be required to make journal entries. This traditional first course is followed by a second principles course devoted to budgeting and decision-making. Students who struggled with the language of debits and credits in the first course receive a fresh start in the second course. The separation of the content of the courses creates a false distinction between financial and managerial accounting that does not exist within a business, and the order of the courses incorrectly implies that financial reporting precedes budgeting in the operating cycle for managers.

Neither the importance of nor the weaknesses in the traditional accounting principles courses are news to accounting faculty. For many years, the accounting profession has consistently delivered the message that the first courses in accounting are critical and deserve our best efforts. The Bedford Committee suggested that we “approach accounting education as an information development and distribution function for economic decision-making” (American Accounting Association [AAA] 1986, 169). The Accounting Education Change Commission (AECC) recommended “the first course in accounting should be an *introduction* to accounting rather than *introductory* accounting . . . it should be a rigorous course focusing on the relevance of accounting information to decision-making (use) as well as its source (preparation)” (AECC 1992, 250). Albrecht and Sack (2000) called for an overhaul of accounting education, leaving behind pedagogies that reward memorization and moving toward skill development and decision-making.

Such challenges have prompted accounting faculty to develop an array of strategies for enhancing student learning in the first accounting courses. A partial list of these learning strategies includes: a new sequence for the topics presented in the principles courses (Cunningham et al. 2008; Wilson 2009), active learning pedagogies (Graeff 2010; Bonwell and Eison 1991), an emphasis on critical thinking (Cunningham 1996), use of business simulations (Springer and Borthick 2004; Knechel 1989), use of articles from the popular press (Rankine and Stice 1994), and excluding (Pincus 1995) or minimizing the emphasis on the mechanics associated with debits and credits. In addition, research suggests that we should more directly focus on the perceptions students bring to the first course (Chen et al. 2004; Mladenovic 2000) and address those perceptions on the first day of class (Wilson and Wilson 2007; Higgins 2001). Individually, each innovation included in the partial list above moves us closer to the ideal accounting principles courses recommended by the leaders in the profession, but what if all of these innovations were combined into the learning goals and pedagogy of the accounting principles courses? The purpose of this paper is to describe a best practices course entitled “Integrated Accounting Principles” (IAP). This is a six-hour accounting principles course that focuses on accounting knowledge and skills

development in the learning goals, and is taught with an active learning pedagogy.¹ This course draws on many innovative learning strategies from the accounting education literature, as well as a few new and adapted tactics. Each pedagogical element was carefully chosen to serve the goals we identified for the course. The contribution of this paper is not the presentation of a single learning strategy, but rather an innovative combination of learning strategies included in a single course. In the sections that follow, we describe the IAP course and the process used to create it. We conclude the paper with comments on assessment of the learning outcomes and lessons learned from the development and implementation of the course.

THE CREATION AND CONTENT OF THE IAP COURSE

The redesign of the introductory accounting courses began with a challenge from the program coordinator that we “take a look” at the principles classes. At the time, we offered two traditional accounting principles courses. The first semester was an introduction to financial accounting, and the second semester was an introduction to managerial accounting. Our review of the accounting principles offerings began with a series of weekly conversations, and evolved into strategic course design sessions that spanned a full academic year. First, we identified the unique problems that affected the principles courses at our university, and two related issues quickly emerged as the key weaknesses of the courses. While the accounting faculty expressed confidence that the introductory courses adequately prepared our accounting majors for the upper-division courses in the major, we did not believe these courses accurately demonstrated the role of accounting in an organization. Consequently, in this regard, neither accounting majors nor non-accounting majors were well served by the traditional approach.

The second related problem in the principles courses was the pattern of enrollment in the second course. A significant number of non-accounting majors who took the first principles course in their freshman or sophomore years waited until their senior year to take the second principles course. Our interpretation of this pattern, from our experience in teaching the first course, was that the content of the first course seemed irrelevant to non-accounting majors and did not encourage their continued study of accounting. It is easy to dismiss this reaction from non-accounting majors with a simple interpretation that accounting is not for everyone. But the danger in accepting this view is that it provides an excuse for continuing to offer a course that does not demonstrate the relevance of accounting to future business professionals. An alternative interpretation is that there is problem with the content and pedagogy of the accounting principles courses that needs addressing. As the first course is the prerequisite for the second course, the prerequisite value is diminished if the material from the first course is not fresh. Further, if the courses do not accurately present the role accounting plays in business decision-making, the students are not receiving the foundational material to prepare them for their future careers in business.

Having identified the problems in our principles offerings, we began a process to redesign the courses. The key ground rule for our conversations was that the focus of our discussions should be the development of the ideal principles course, without regard to the constraints that might prevent the implementation of this course. If we started with a list of constraints, then we would restrict creativity in the development phase. Therefore, as we developed our learning goals for the ideal class, we agreed that the appropriate time to consider constraints would be at the end of the development phase, not the beginning. Based on our own experiences teaching the principles courses, our conversations with colleagues at our own and other institutions, our reading of the

¹ As we describe below, the six-hour format fits the goals for the redesign of our principles courses. However, we have offered a limited number of sections of the IAP course in two three-hour sections. Our preference, and the preference of our faculty, is the six-hour format, but the course was equally successful in the three-hour format.

TABLE 1
Course Goals and Design Elements for the IAP Course

Course Goals	Design Elements
To more accurately demonstrate the role of accounting in business organizations	Adopt a new sequence for the topics of the course
To disabuse students of their negative preconceptions of accounting as mechanistic and irrelevant as early and often as possible	Incorporate an experiential learning exercise on the first day of class to illustrate the relevance of accounting in business decisions
To practice written communication skills, including the use of financial statements as communication tools	Require students to write ten essays during the semester linking a current article from a business publication to the content of the course
To present accounting concepts in relevant business contexts, and emphasize information development and distribution in economic decision-making	Use an entrepreneurship framework for the course material and appeal to students' business intuition by presenting them with common business dilemmas and challenging them to resolve the dilemmas
To employ effective pedagogies based on research in higher education generally and accounting best practices	Use business simulations and in-class activities to illustrate common accounting topics
To practice critical thinking through developmental activities	Include critical thinking as a learning goal for the course and test this learning goal with a "challenge problem" on each exam

pedagogical literature, and the guidance of the professional accounting community, we developed the IAP course goals and design elements presented in Table 1. In the sections that follow, we describe in more detail each of the design elements.

A New Sequence of Topics

As illustrated in Table 2, the largest major represented in our principles courses is Music Business, and one of the fastest growing majors within our college of business is Entrepreneurship. In addition, whether or not students formally declare a major in Entrepreneurship, the overwhelming majority of students in all majors within our college express an interest in owning their own business in the future. Therefore, we chose an entrepreneurial framework for our redesigned course. Under this framework, the course material emphasizes the use of accounting information to support the creation of a business and the resolution of common business dilemmas.

A significant challenge in implementing structural change in the introductory accounting courses is finding teaching resources that support such innovation (Sundem et al. 1990). To support our desire to use an entrepreneurial framework, we adopted *Accounting: Information for Business Decisions* (Cunningham et al. 2008)² as the textbook for the IAP course. The order of the topics in the textbook is presented in Table 3 and summarized below.

The starting point for the semester is a discussion of the creation of a new business. The material for the first unit of the course includes the development of a business plan, cost-volume-profit (CVP) analysis, the preparation of budgets for service and retail businesses, a discussion of

² This textbook is available as a custom print through Cengage Learning. The third edition was published in Fall 2011.

TABLE 2
Description of Student Population Taking Accounting Principles

	2006–2007		2007–2008		2008–2009		2009–2010	
	Number of Students	Percent of Students	Number of Students	Percent of Students	Number of Students	Percent of Students	Number of Students	Percent of Students
Accounting	29	7.86%	32	8.31%	24	5.84%	26	7.22%
Business Administration	32	8.67%	38	9.87%	44	10.71%	44	12.22%
Economics	1	0.27%	4	1.04%	3	0.73%	2	0.56%
Entrepreneurship	22	5.96%	22	5.71%	25	6.08%	25	6.94%
Finance	11	2.98%	15	3.90%	14	3.41%	11	3.06%
Information Systems Management	1	0.27%	1	0.26%	2	0.49%	2	0.56%
International Business Management	1	0.27%	8	2.08%	2	0.49%	6	1.67%
Marketing	10	2.71%	15	3.90%	8	1.94%	11	3.05%
Music Business	22	5.97%	20	5.19%	23	5.59%	19	5.28%
	240	65.04%	230	59.74%	266	64.72%	214	59.44%

All students seeking the Bachelor of Business Administration degree, regardless of major, are required to take two semesters (six credit hours) of accounting principles.

the different legal forms of business, and an explanation of the four financial statements. In addition, budgets are presented as the organizing tool for the strategy of the company, and students learn to evaluate business decisions through the lens of the budget.

This theme is continued throughout the semester. The material for the second unit includes the creation of an accounting system. Unlike the traditional financial accounting course, the emphasis is not on the mastery of debits and credits at this point in the semester. Rather, the accounting system is created using a spreadsheet, with each column representing an account. Double-entry accounting is illustrated by recording transactions with increases or decreases to the accounts (columns). The column totals represent ending account balances, and these balances are then used to prepare the four financial statements. In our traditional financial accounting principles course, the accounting cycle was presented as the process of preparing financial statements, and the steps of the cycle began with recording transactions and ended with closing the books. However, this presentation implies that the preparation of financial statements is independent of the goals managers articulated in the budget. In the IAP course, the preparation of financial statements is presented as an integral part of the budgeting process; that is, the purpose of the monthly financial statements is to track how closely actual results match the expectations presented in the budget. Further, the end of the accounting cycle is not the preparation of a post-closing trial balance; rather, it is the calculation of actual-to-budget variances and an evaluation of prior decisions.

The focus of the material for the first two units is accounting concepts related to service and retail businesses. The material for the third and fourth units illustrates the same concepts for manufacturing businesses. In this part of the semester, the students take familiar concepts from the material in the first two units and extend them to a new business setting. In addition, this is an opportunity for students to use the feedback from the first part of the semester to correct the mistakes in their understanding of these concepts. The topics for the third unit include the

TABLE 3
Overview of Integrated Accounting Principles Course

Panel A: Unit 1—Starting a Business

Topics	Projects	In-Class Activities
<ul style="list-style-type: none"> • Plan-to-plan business cycle • Using accounting information in business decisions • Ownership structures (private versus corporate forms) • Business models • Cost behavior patterns • CVP analysis for retailer • Budget for retailer 	<ul style="list-style-type: none"> • Business plan for retail business • Business Links (ongoing) 	<ul style="list-style-type: none"> • Video with students listing business decisions (Day 1) • Treasure hunt through financial statements (Day 2) • Excel check-up

Panel B: Unit 2—Operating a Business

Topics	Projects	In-Class Activities
<ul style="list-style-type: none"> • Simple accounting system using a spreadsheet • The accounting equation and its elements • Recording transactions • Accrual accounting • Revenue recognition and matching • Classified financial statement preparation for sole proprietorship/retailer • Financial and operating ratios • Working capital management • Internal controls 	<ul style="list-style-type: none"> • Monopoly round 1 financial statements • Monopoly budget for round 2 • Monopoly round 2 with variance analysis • Business Links (ongoing) 	<ul style="list-style-type: none"> • Monopoly round 1 play—manual recording of transactions • Monopoly round 2 play—transactions recorded in Excel • Developmental practice with spreadsheet accounting system

Panel C: Unit 3—Manufacturing Product

Topics	Projects	In-Class Activities
<ul style="list-style-type: none"> • Manufacturing costs • CVP analysis for a manufacturing entity • Overhead allocation • Job-order costing (with the spreadsheet system) • Master budget for a manufacturer • Activity-based costing • Inventory management • Balanced scorecard 	<ul style="list-style-type: none"> • Financial statement analysis project comparing some company to Treasure Hunt company • Ratio analysis highlighting differences between these companies • Business Links (ongoing) 	<ul style="list-style-type: none"> • Video of manufacturing business with students listing “new” business decisions and “new” costs • Manufacturing motorcycles with intuitive allocation of overhead

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TABLE 3 (continued)

Panel D: Unit 4—Complications

Topics	Projects	In-Class Activities
<ul style="list-style-type: none"> • Advanced issues related to revenues and expenses including accruals, allowances, etc. • Advanced issues related to property, plant and equipment • Decision-making based on relevant cost and revenues • Flexible budgets, standard costs and variance analysis • Corporate stock • Reporting earnings in the corporate form 	<ul style="list-style-type: none"> • Master budget for manufacturing business • Decision-making extension of business plan with make versus buy decision • Business Links (ongoing) 	<ul style="list-style-type: none"> • Excel check-up • Decision-making scenario problems

Panel E: Unit 5—The Accounting Cycle

Topics	Projects	In-Class Activities
<ul style="list-style-type: none"> • Debits and credits 		<ul style="list-style-type: none"> • Developmental practice of accounting cycle problems, starting with problems already completed using the spreadsheet system

preparation of a master budget for a manufacturer, calculating the breakeven point with multiple products, recording transactions using job-order costing, and calculating cost of goods sold and ending inventory using various inventory cost flow assumptions. The topics for the fourth unit include using relevant costing for decision-making, applying standard costing concepts for calculating variances, and recording and analyzing transactions involving property, plant, and equipment and stockholders’ equity.

The last unit of the semester before the comprehensive final exam is the debit-credit unit. The formal process of recording transactions is important prerequisite knowledge for accounting majors to take into their upper-division accounting courses, and it is important business language that non-accounting majors need to know. In creating the IAP course, the goal was not to remove debits and credits from the course, but rather to give this material its proper place and emphasis. The benefit of teaching this material at the end of the course is that students have already mastered recording transactions using a spreadsheet, have practiced preparing financial statements from account balances, and they have seen how the financial statements facilitate management decisions. With this context, the formal process of recording transactions is a minor adjustment to an accounting system with which they are already familiar. The debit-credit unit includes a full practice set in which students record journal entries into a general journal, post the entries to a general ledger, prepare a trial balance, record adjusting entries in the general journal, post them to the general ledger, prepare an adjusted trial balance, prepare the four financial statements, prepare closing journal entries, post the entries to the general ledger, and prepare a post-closing trial balance. An added benefit of placing the debit-credit material at the end of the IAP course is that this material is

fresh for accounting majors when they enter the first Intermediate Accounting course in the following semester.

In Table 4, we map the topics included in our traditional principles courses to the content of the new IAP course. With this table, we were able to demonstrate to our accounting faculty that the same content that was taught in the traditional format would carry over to the new course, and the accounting majors would receive the same prerequisite knowledge for the upper-division accounting courses.

While merely changing the textbook and adopting a new sequence for the topics of the principles courses would have improved the introductory courses for our audience, this change alone would not have addressed all of the goals that we set for the ideal course. In the following sections, we describe the other equally important design elements of the structure, pedagogy, and requirements of the IAP course.

IAP Pedagogical Design Elements

The traditional approach to accounting principles is often a knowledge delivery model that relies almost exclusively on lecture and demonstrating the solutions to problems on the board. In this model, the focus is merely covering the material, and alternative pedagogies are often rejected because there is too much material to cover and there is not time to try a new approach. However, education literature suggests that alternative pedagogies can increase the efficiency of content coverage and lead to deeper approaches to learning. Based on our reading of this literature, we chose to experiment with the following approaches for the IAP course: [Mladenovic's \(2000\)](#) alignment, an active learning environment, and a developmental model for learning.

As we approached the redesign of our accounting principles courses, we intentionally wanted to ensure that the course had integrity. [Mladenovic \(2000\)](#) refers to this as alignment; that is, course objectives, pedagogy, and assessment all work together to achieve the course goals. In pursuit of this objective, we chose to wipe the slate clean and start our redesign from scratch ([Biggs 1996](#)). With this approach, we eliminated all the artifacts of the prior courses and evaluated each design element based on its fit within the broader goals of the course. Each of the design elements was chosen and developed to specifically serve the course goals.

We chose active learning strategies because we believe the premise that content delivery and active learning pedagogies are mutually exclusive is false. Numerous studies demonstrate the efficacy of active learning in helping students build their own knowledge ([Graeff 2010](#); [Smart and Csapo 2007](#); [House 2002](#); [Bonwell and Eison 1991](#)), in facilitating the development of lifelong learning skills, and in discouraging memorization of rules ([AECC 1990](#), Position Statement Number One; [Albrecht and Sack 2000](#); [Choi 1993](#)). We intentionally and carefully designed active learning activities for the IAP course to deliver content and help students to construct a mental framework to organize the details of accounting principles. As the mental frame is built by the student and is unique to each individual, the use of active learning strategies allows students to use their experience in the exercises to learn in their own way and not be locked into one method (i.e., listening to a lecture).

We chose a developmental approach so that we could explore the key concepts of the introductory accounting principles courses with more depth than our former traditional approach. The developmental approach is not specifically defined in the educational literature, but we are using this term to refer to a repetitive learning strategy. For example, in the traditional introductory managerial course, we covered CVP analysis in class, we assigned some related homework problems, and we assessed mastery of this concept on an examination. Then, we marked that topic as complete and moved on with similar treatment of another issue. Often, the distinct topics of the traditional accounting principles courses were covered only once during the semester, at the level of

TABLE 4
Topic Mapping to Traditional Accounting Principles Format

Topics in Traditional Accounting Principles	IAP Unit Coverage	Project or Activity
Introduction and Overview —Forms of business organization	1	
Introduction to financial statements	1 and 2	Treasure Hunt
Professional ethics	1 and 2	
Revenue recognition	2 and 3	Monopoly
Valuation	1, 2, 3, and 4	
Basic Mechanics —Basic method of double-entry system	5	Unit 5 in-class problems
Trial balance, general journal, and general ledger	5	Unit 5 in-class problems
Net Income —Accrual accounting and adjustments	2, 3, and 5	Monopoly
Income statement for a merchandiser	2 and 5	Business Plan
Perpetual and periodic inventory	2 and 3	Challenge 3
Accounting for discounts	3	
Closing Entries	5	Unit 5 in-class problems
Accounting Conventions	1	Treasure Hunt
Classified Balance Sheet	2, 3, and 4	Unit 5 in-class problems
Ratio Analysis —Liquidity, profitability, and operating ratios	2	Financial Statement Analysis
Internal Control —Bank reconciliation	2	
Petty cash	2	
Cash controls	2	Challenge 2
Short-Term Assets —Cash management	2 and 3	Business Plan and Master Budget
Accounts receivable	2 and 3	
Inventory —Inventory accounting methods	3	Challenge 3
Lower of cost or market	3	
Gross profit method of inventory valuation	3	
Long-Term Assets —Accounting for intangible assets	4	
Acquisition and disposition of property, plant, and equipment	4	
Accounting for depreciation	4	
Accounting for natural resources	4	
Liabilities —Liquidity and cash flows	2 and 3	
Payroll accounting	3	
Long-term debt	2 and 3	
Accounting for Corporations —Stockholders' equity	1 and 4	
Corporate income statement	4	
Common stock accounting	4	
Dividend accounting	4	
Statement of Cash Flows	2	
CVP —Cost behavior	1 and 3	Challenge 1, Business Plan
CVP, single product and multi-product	1 and 3	Challenges 1 and 3, Business Plan and Master Budget
Mixed costs	3	Master Budget

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TABLE 4 (continued)

Topics in Traditional Accounting Principles	IAP Unit Coverage	Project or Activity
Product Costing —Overhead allocation	3	Motorcycles and Challenge 3
Job-order costing	3	Challenge 3
Normal costing	3	Challenge 3
Activity-based costing	3	
Relevant Costs and Revenues for Decision-Making —Joint costs	4	
Special sales order	4	
Add or delete product, service, or department	4	
Use of constrained resources	4	Challenge 4
Make versus buy	4	Challenge 4, Master Budget II
Budgeting —Merchandising organizations	1	Business Plan, Monopoly
Manufacturing organizations	3	Master Budget
Variance Analysis —Flexible budgets	4	
Variance computations	4	Monopoly
Management Control and Responsibility Accounting		
Centralization versus decentralization	3	
Goal congruence, effort, and motivation	3	

complexity that was appropriate for the timing and placement of the topic within the course. Certainly, there is some efficiency in this approach. However, this tactic also presents some challenges. Basic CVP analysis is a topic that is accessible to first-course students. The ideas are intuitive and the decision context is one that students find relevant. Such arguments suggest that this concept should be introduced early in the course. However, at this point, students have not mastered the concept of variable and fixed overhead that complicates the CVP analysis. If CVP analysis is marked as a completed topic early in the semester and there is no follow-up on this topic when more complex issues are introduced in the course, then the students only receive surface coverage of many of the key topics within the principles courses. In the IAP course and in the [Cunningham et al. \(2008\)](#) text, concepts are developed over multiple exposures. In the sections that follow, we describe the specific pedagogical design elements of the IAP course, and in Table 5, we present the components and point allocations for the course requirements.

An Experiential Learning Exercise on the First Day of Class

After a brief introduction to the course and an overview of the syllabus, students are asked to take out a piece of paper. For the next 20 minutes, the students watch an excerpt from a documentary about the development of a business. There are many news stories and documentaries available to use for this exercise; however, a good example is an excerpt from the CNBC series *American Made* that chronicles the history of Starbucks through interviews with the company's CEO, Howard Schultz. While watching the excerpt, the students are asked to make the following lists: (1) a list of business decisions that have confronted the management of Starbucks, (2) a list of factors that have contributed to the success of Starbucks, (3) a list of qualities that have contributed to the success of Howard Schultz, and (4) a list of unfamiliar business terms. At the end of the video, the students are asked to share the items from their lists. For each of the business decisions from their first list, the students are asked to speculate about the information they would need to make that decision. Their wish list for information always includes accounting information, and this

TABLE 5
Components and Weighting of Grade

Grade Component	Points Available
Five exams	525
Four challenge problems	100
Comprehensive final exam (includes challenge problem)	200
Budget project	
Business plan for retailer	100
Manufacturer with make/buy	200
Simulation	
Round 1	100
Round 2 with variance analysis	100
Financial statement analysis	125
In-class assignments, including motorcyles	50
Business links (10 @ 10 points)	100
Total Points	1,600

discussion sets the stage for the consistent demonstration of the relevance of accounting to business decisions that will occur throughout the semester. The students' exploration of the company's success factors appeals to their intuition and interest in business. The qualities that they identify that have led to Howard Schultz's success provide a basis for a discussion of what it will take to be successful in the IAP course. The final list, the list of unfamiliar terms, is intended to pique the students' interest in learning more about business and accounting. Some of the terms on the students' lists can be explained on the first day. Other, more complicated terms will be explained later in the semester, in the context of a chapter discussion of related material. Following the discussion of the lists, the students are introduced to a semester-long writing assignment.

Essays that Link a Current Article from a Business Publication to the IAP Course Content

The American Institute of Certified Public Accountants (AICPA) includes communication as one of the personal competencies needed by those entering the accounting profession, specifically describing "skills necessary to give and exchange information within a meaningful context and with appropriate delivery" (AICPA 2002). In addition, regardless of a student's major within the business school, staying current with developments in the business community is a requirement for building a successful career. Indeed, in the Starbucks *American Made* video, Howard Schultz says that he begins each day by reading three newspapers. To help students improve their communication skills and develop the habit of reading the current business press, one of the IAP course requirements is to complete ten essays. Each essay connects one article from the current edition of a business publication to the course material.³ To illustrate this assignment on the first day of class, each student is given a recent edition of a business publication and asked to find an article that is related to the discussion of the Starbucks video. After ten to 15 minutes of scanning

³ Initially, we required students to find their articles in *Bloomberg Business Week*. This publication includes a number of relatively brief articles that are well suited to our needs. However, colleagues have expanded the menu to the broader business press (e.g., the *Wall Street Journal* and *Fortune Magazine*) with great success.

the business publication, the students are asked to briefly share the articles and possible links they found. This discussion allows the students to hear the links the other students found and ensures that everyone understands the assignment. The due date for the first essay is the second-class meeting.

The due dates for the remaining nine essays are spread throughout the semester. The format for each 200–300 word essay is a very brief summary of the article, followed by a detailed description of how the content of the article relates to the course material. To receive full credit, the essay must be free of typos and grammatical errors, and the essay must explicitly link the content of the article to the content of the class.⁴ Students may draw only one link from a single edition of a publication. That is, students may not turn in two (or more) essays for the same edition. This restriction encourages the students to become regular consumers of the latest business news throughout the semester.

The Business Plan Project

The theme of relevance of accounting information for decision-making that is demonstrated in the first day of class exercise and the business press essay assignments is continued throughout the semester in the discussion of the course content and with additional course assignments. For example, the topics of the first unit of the course include: the development of a business plan, CVP analysis, the preparation of a budget for a retail business, a discussion of the different legal forms of business, and an explanation of the four financial statements. These topics are illustrated with a Business Plan Project. The purpose of this assignment is to simulate the process that an entrepreneur would complete to launch a new merchandising business venture. In this project, students develop a business plan including four sections: (1) a description of the company, (2) a marketing plan, (3) a description of operations, and (4) a financial plan. The students are given a spreadsheet template for the financial plan that includes an assumptions page, blank budgets (sales, purchases, operating expenses, and cash), and a blank projected income statement. To prepare the financial plan, the students complete the budgets and projected income statement by writing formulas based on the amounts included in the assumptions page. To ensure that each student's plan is unique, key assumptions are tied to the student's university identification number. After completing the financial plan, the students must use their projected income statement to calculate the breakeven point for their new business venture.

A key requirement of the assignment is that the projected income statement that results from the financial plan must show a profit. This requirement forces the students to engage in what-if analysis to develop reasonable assumptions for the budget. As every student's business plan is unique, each student faces different challenges in producing a profitable business plan. This common experience in determining the sales price, exploring the cost structure, and developing the assumptions provides the basis for a very rich, and often entertaining, discussion of the business plan assignments.

The Annual Report Treasure Hunt

As stated above, the material in the first unit includes an introduction to financial statements. In the second week of class, the students are given an in-class assignment, the Annual Report Treasure

⁴ Each essay is worth ten points and is graded using the following scale (Walvoord 2005): 10/10 points if the essay fully meets the requirements and is free of grammatical mistakes; 7/10 points if the essay meets most of the requirements and/or includes minor grammatical mistakes; 3/10 points if the essay is a reasonable attempt, but fails to meet the requirements and/or includes multiple grammatical mistakes; and 0/10 points if the essay merely summarizes the article and fails to link the article material to the course material, or the essay is submitted after the beginning of class on the due date.

Hunt, in which they are asked to locate key financial information in the annual report of a publicly traded company. For this exercise, students have access to the Internet using laptops (their own or one from the computer lab). This exercise teaches students how to access financial information on the websites of publicly traded companies, and demonstrates the context in which financial statements are reported. In some semesters, the Starbucks annual report is used for this assignment as a continuation of the first day's discussion. In this exercise, the students locate the following information in an annual report: a description of the business, the company's risk factors, the company's legal proceedings, the elements of the four financial statements, the notes to the financial statements, the company's high and low stock price during the past 12 months, and the executive compensation disclosure. The assignment is used in conjunction with the presentation of the basic formulas and elements of the four financial statements.

The Monopoly Projects

The focus of the material for the second unit is the preparation of financial statements. Having completed a business plan including budgets for a new business, we present the creation of an accounting system and the financial statements it generates as the logical progression in the formation of a business. Students are introduced to a simple accounting spreadsheet system that focuses on the fundamental accounting equation: $\text{Assets} = \text{Liabilities} + \text{Equity}$. Columns in the spreadsheet represent accounts. Accounts increase with additions and decrease with subtractions. In this unit, transactions are recorded without the debit-credit vocabulary. To illustrate the process of the creation of an accounting system for a new business, we adapted [Knechel's \(1989\)](#) Monopoly simulation exercise to the course material. In this exercise, the students play two rounds of the board game Monopoly in class. In the first round, the students create a spreadsheet to record the business transactions for the first accounting period for a rental real estate business. At the end of the first round, the students are asked to prepare financial statements for the first accounting period, and to use their experience during the first round to prepare a budget for the second accounting period. A couple of weeks after the first round, the students play the second round of the simulation. This round is a continuation of the first round, and all properties purchased during the first round carry over to the second round. In addition, the students have received their graded assignments from the first round. The requirements for the second round include: correcting the mistakes from the first round, closing the books from the first round, recording the business transactions from the second round (the second accounting period), preparing financial statements for the second accounting period, and preparing an actual-to-budget variance report for the second accounting period. The purpose of this simulation is to demonstrate an accounting cycle where business managers: plan-manage-report-analyze-plan.

The Financial Statement Analysis Project

To reinforce the material from the Monopoly simulation and the in-class annual report exercise, the students are assigned a financial statement analysis project as part of the material for the second unit. The purpose of this project is to apply the financial accounting course material to the financial statement disclosures of two publicly traded companies, and use the information to evaluate their operating results. In the project, students identify the similarities and differences between the two companies revealed in the financial statements and the related disclosures, locate key financial information in the two sets of financial statements, and perform ratio analysis to compare the operations of the two companies. Students must identify specific financial ratios from those calculated as requirements for the project that would highlight the differences between the two companies. By requiring students to use the ratios to document the differences, the statistics become

more than calculations where the end result is simply an amount to be evaluated as correct or incorrect. Rather, ratios are analytical tools that support or refute theories advanced by the student.

The Motorcycle Manufacturing Simulation

In the material for the third unit, students are introduced to manufacturing concepts. As most students have never observed manufacturing operations, the accounting concepts for manufacturing ventures can often be abstract for students. We developed an in-class exercise to illustrate the accounting challenges in a manufacturing environment. Students are divided into teams of four and are given a prototype and a cost sheet for a motorcycle. The direct materials to manufacture the motorcycle are in bins placed in various locations around the classroom. Each team member has a unique role to play in the exercise. One member is responsible for the transportation of direct materials to the assembly line and the delivery of finished goods to the customer, another member is responsible for the assembly of the motorcycles, another member is responsible for inspection of the finished goods, and the fourth member is the timekeeper for direct labor and transportation. The exercise is divided into three 20-minute production runs, and the teams are challenged to make as many motorcycles as they can during each production run. Every ten minutes during the production runs, the team members must switch roles, so that by the end of the second run, each of the four team members has performed each role.

At the end of the first production run, the teams complete their cost sheet and calculate their cost per motorcycle. In the first run, the teams only have information regarding direct materials and direct labor. Each team reports its cost per motorcycle to the class, and these amounts are written on the board. These results provide the basis for investigating the cost differences among the teams in the motorcycle manufacturing industry. At the end of this discussion, the teams are given information about overhead costs for the manufacturing plant, and are challenged to develop a method for allocating overhead to the motorcycles for the purpose of determining an accurate price to charge the customer. This exercise precedes the class discussion of overhead allocation, so the students must use their intuition to solve this dilemma. Once the teams formulate their overhead allocation method, then the teams complete the second 20-minute production run. At the end of the run, the teams once again calculate their product cost. In this run, the product cost is the sum of direct materials, direct labor, and allocated factory overhead. Following the second production run, the new industry cost amounts are reported and analyzed by the class. Even if the teams do not formulate a valid overhead allocation method, this exercise illuminates the need for a predetermined overhead rate and provides a good introduction to this course material. In the third round of the motorcycle manufacturing exercise, we incorporate the concepts of activity-based costing and inventory management.

The Master Budget Project for a Manufacturer

In conjunction with the material for the third unit, the students are given a master budget project for a new manufacturing venture. This project is a continuation of the business plan assignment, and the context is that the original business plan must be altered to consider the viability of making the product instead of buying it for resale. The students are given a spreadsheet template that includes an assumption page, and blank worksheets for: a sales budget, a production budget, a direct materials budget, a direct labor budget, variable and fixed overhead budgets, variable and fixed selling expense budgets, a general and administrative expense budget, a cash budget, and a projected income statement. Having completed the in-class motorcycle manufacturing exercise, the students can bring some experience to the completion of this master budget project. Similar to the business plan assignment, the students must complete the template by writing formulas that are tied to the assumptions page, and some of the key assumptions are tied to their

university student identification number. At the end of the assignment, the students must determine if it is more cost effective to make or buy the product.

The Challenge Problem

The last design element is the Challenge Problem, a problem included on each exam to test the students' critical thinking abilities. There is widespread agreement that critical thinking skills are essential for successful careers in business and accounting; however, there is not an official generally accepted definition of critical thinking. The AICPA defines critical thinking as "the ability to link data, knowledge, and insight together from various disciplines to provide information for decision-making" (AICPA 2002). We used this description as our definition of critical thinking for the IAP course.

As critical thinking is not a "unit" that can be delivered, examined, and then marked off the list of course requirements, we incorporate critical thinking opportunities throughout the course to allow the students' skills to be cultivated and honed throughout the course. Examples of these opportunities are presented in the previous sections. Beyond the in-class activities and course assignments described above, we reinforce the importance of the development of critical thinking skills by including it as a component of the examination process in the IAP class. Each exam is divided into two parts. The first part of the exam is worth 100 points and consists of multiple choice questions and objective problems. The first part of the exam is timed, and all students complete the first part of the exam before the second part begins. In the second part of the exam, the students receive a challenge problem that is worth 25 points. The challenge problem represents a common real-world business application for the material included on the first part of the exam. The students have not seen the challenge problem, or an example like it, prior to the exam. Therefore, they must employ critical thinking skills to formulate a solution to the problem. We write the challenge problems and tailor the problems specifically to the course material for each exam.

The Six-Hour Format

Although not absolutely necessary to the success of this design, at our university, we offer the IAP course as a six-credit-hour course taken in a single semester. The class meets for two back-to-back periods on the prescribed days. A section offered on Tuesdays and Thursdays would meet for two hours and 45 minutes twice a week (e.g., 9:30am–12:15pm on Tuesdays and Thursdays). A section offered on Mondays, Wednesdays, and Fridays would meet for one hour and 50 minutes three days per week (e.g., 8:00–9:50am on Mondays, Wednesdays, and Fridays). The longer class period significantly enhances the learning environment, and carries the practical benefit that students are unable to create a chronological gap between the Principles I and Principles II courses.⁵

One of the primary benefits of the longer class period is that it allows us to engage in an activity, discuss the activity, and practice the learning. There is increased efficiency to this format, as we spend much less time starting and stopping and reminding students of where we left off in the last class period, or preparing for our next meeting. Absence is costly in this model, so attendance is generally good. Even the uniqueness works to the advantage of the learning. It is the only class that students take that counts for six credit hours, suggesting it is somehow special. The increased weight in the student grade point average also ensures added attention to the class. Students should, in fact, be working twice as hard for accounting as for any other class. In addition, because we are

⁵ As described above, this was a significant problem at our university. Students would take Principles I, perhaps not do well, or maybe just not enjoy it, and then postpone taking Principles II. The result was that Principles II instructors could not rely on the recall of Principles I learning.

spending twice as much time with the students, the longer class period fosters a stronger relationship between the professor and the students.

ASSESSMENT AND LIMITATIONS

The IAP course was introduced five years ago, and from its introduction, we have gathered data and built an assessment program to measure learning outcomes. While the data analysis and assessment results are useful for program management, they are not the outcome of scientific experiments. Therefore, our assessment results do not provide the basis for broad generalizations relative to the effectiveness of the course or its design elements. Nonetheless, through our assessment program, we have found evidence of learning outcomes in the IAP course that are equal to or greater than the outcomes of our former traditional courses. Specifically, we have found that accounting majors who took the IAP course performed significantly better in their first Intermediate Accounting course than their counterparts who took the traditional principles course. These results suggest that the redesigned class meets the needs of our majors. In addition, the introduction of an array of elements designed to develop personal and professional competencies did not hamper the coverage of the material required to support sequential accounting courses. That is, we did not sacrifice essential content to achieve the objectives of the class.

Another piece of the assessment program was the evaluation of two common requirements between the IAP course and our traditional courses. In the IAP course and our former Principles I course, students were required to complete a practice set exam in which they were given a set of transactions and must record journal entries in a general journal (using debits and credits), post entries to the general ledger, prepare trial balances (unadjusted, adjusted, and post-closing), make adjusting entries, prepare financial statements, and prepare closing entries. For the practice set exam, students in the IAP course performed significantly better than students in the traditional class. Similarly, in both the IAP course and the former Principles II course, students were required to complete a master budget assignment for a manufacturing company. However, this project is more complicated and challenging in the IAP course. On the budget assignment, scores for students in the IAP class are not significantly different from those for students in the traditional class. Thus, the IAP students performed as well as students in the traditional class on a much harder assignment.

Finally, our college uses the Educational Testing Service (ETS) Major Field Tests for program assessment. Students take the exam in their final semester as part of the Strategic Management class. For most students, this is two or more years after they complete the accounting principles course. Obviously, during the two years following the completion of the IAP course, there are many factors that can influence the students' performance on the accounting questions of the ETS exam. However, since the introduction of the IAP course, the average score on the accounting questions of the ETS exam has improved from the 30th percentile five years ago to the 65th percentile in the most recent year. We do not claim that the IAP course is directly responsible for this improvement; we have merely used this result in our assessment program to demonstrate that we have not harmed the business core curriculum with our redesigned course.

These conventional attempts to assess the effectiveness of the IAP course have provided encouraging results, but these findings are incomplete. As we described above, we have gathered and analyzed the data for the only two common assignments that were part of both the traditional principles offerings and the new IAP course. Future attempts to develop this assessment approach are complicated by two factors. First, while we cover the same topics in the IAP course as the former traditional courses, we have added so many new elements to the IAP course that head-to-head comparisons of the new course to our former traditional courses would produce results that would be somewhat meaningless, as it would be impossible to isolate the factor(s) that contribute to differences in student performance. That is, if we found significant improvements in

the performance of our IAP students, would we attribute the improvement to the six-hour format, the order of the topics, the active learning strategies, or an interaction of some or all of these elements? The second complicating factor is availability of data. As we no longer offer the traditional principles courses, we no longer have the ability to gather data to make head-to-head comparisons with our students, and comparing learning outcomes with principles courses in other university settings introduces many institutional variables that make interpreting the results of such comparisons problematic. Consequently, we are focused on developing an assessment program to evaluate the effectiveness of the individual elements within the IAP class. For example, we are gathering data to measure the improvement of the students' communication skills using various methods of feedback. In addition, we are investigating methods of measuring critical thinking skills so that we can identify which exercises and assignments included in the course have the most significant impact on critical thinking.

LESSONS LEARNED

The IAP course described above is a radical departure from our prior traditional accounting principles courses. We spent a full year in the course development process, and then we spent an academic year piloting the course before we broadly introduced the course in our curriculum. The entire process was an incredibly rewarding experience, from which we learned the following lessons.

First, we were able to develop and implement the IAP course with a surprisingly small investment of institutional resources. During the development phase, we received financial support from the college in the form of a course development grant. We secured this grant through a competitive application process and it provided financial support for the summer term. As these grants are offered every summer and are part of the annual college budget, no new financial resources were required for the development. In addition, during the pilot year, our college administration agreed to set the maximum enrollment for the IAP sections at 25 students so that these sections would be smaller and more manageable. When the IAP course was broadly introduced into the college curriculum the following year, the course enrollment caps were lifted so that the IAP sections would be subject to the same maximum course enrollments as other core business classes (approximately 30–35 students per section).

The second and related lesson learned was that the six-hour format created both institutional costs and benefits. As our university is a private liberal arts college that emphasizes teaching in its mission, our administration is very accommodating to faculty who want to pilot new approaches in the classroom. In this regard, our administration was more receptive to the six-hour format than perhaps administrations in other university settings. While the six-hour format requires some additional time for scheduling each semester, we have found efficiencies to the new structure that we did not expect. Specifically, we can teach the same number of students with fewer sections in the six-hour IAP course. The reduced number of sections has allowed us to reduce the number of adjuncts that we need for the principles course. Consequently, the increased investment of time needed to schedule the IAP course has been more than offset by the reduction in the number of sections and adjuncts.

Our third lesson is confirmation of the active learning literature. We found that active learning exercises did not displace the key content of the accounting principles courses. Indeed, the active learning exercises, combined with the developmental approach to learning, allowed us to cover the same topics as our former traditional accounting courses with more depth. Even though our IAP sections have relatively small enrollments when compared to some other university settings, many of our active learning exercises can be adapted to a larger class size. For example, the first day experience could be used for a class of any size. In addition, the Treasure Hunt for the Annual

Report could be adapted so that groups of students use a single laptop computer or, alternatively, the instructor can demonstrate the information accessed for the Treasure Hunt if laptops are not available. In larger university settings, where students are required to attend a lecture and a lab for accounting principles, many of the active learning strategies may not be appropriate for the lecture, but they would be appropriate in the lab. For example, students could perform the Monopoly simulations and the Motorcycle Manufacturing exercise in the smaller group lab setting.

The final lesson is that communication assignments can be incorporated into the principles courses without adding significant grading time. The 200–300 word Business Press links can be graded very quickly using the 10-7-3-0 grading scale (Walvoord 2005). These essays provide an interesting spark to the class as students share the current news stories they found to link to the course content. In larger university settings, in which doctoral students are teaching principles sections, these essays can enhance this class and can be easily graded by the instructor.

CONCLUSIONS

The success of our course redesign process was largely attributable to our ground rule that we not focus on constraints at the beginning of the development phase. We faced a common set of institutional, college, and department-level challenges for the introduction of a significant change to the business core curriculum. Because we consciously chose not to start the development phase with a list of constraints, we were able to develop a well-thought-out plan that created a compelling reason for our administrators and colleagues to be willing to work around the constraints. Indeed, if we had started with a list of constraints, the result of our redesign would have likely been two three-hour courses that looked remarkably like our original courses.

When we first introduced our plan to our fellow accounting faculty colleagues, we were well aware that we were asking them to change their teaching approach, textbook, sequence of topics, examinations, and pedagogy in the most basic accounting class. While we were wholly committed to the new ideas, our colleagues were justifiably skeptical. To convince them, we started with a forthright presentation of the class we envisioned. We asked our colleagues to listen to our ideas without asking the “how will that work” question initially. We mapped the content of the new course to the courses with which they were familiar. Once we convinced them of the value of the possibilities, we asked them to help us address the challenges. Collectively, the department approved each of the design elements, including the six-hour format. In return, we accumulated, developed, and organized course materials that we could share with our faculty colleagues. By the end of the pilot year, we had a test bank, a challenge problem bank, and a project bank for the budget, Monopoly, and financial statement analysis requirements.

As we have moved through the transition phase to implement the IAP course into the curriculum, the common sentiment among our accounting faculty colleagues is that they are unwilling to return to the traditional format for principles. The six-hour format, combined with active learning strategies and the developmental approach to learning, creates a classroom environment that encourages a much higher level of student engagement than the traditional courses we offered in the past. Before we piloted the course, we hoped this would occur, but we were unsure that the students would rise to the challenge. We have found that a more rigorous course that the students find relevant to their future career goals is more appealing than the less rigorous traditional courses that the students largely found irrelevant.

Our experience in redesigning our principles courses has taught us that there is not a single best way to teach introductory principles. As we developed the IAP course, we were addressing the unique weaknesses that existed in our traditional principles courses, and we wanted to design an ideal principles course that would be appropriate for our business curriculum and university environment. We read many articles in the accounting and education literature, searching for

learning strategies and pedagogies to incorporate in our best practices course. There is no shortage of good ideas and there are many articles on effective pedagogies in the literature. However, not every learning strategy was appropriate for our unique circumstances. Consequently, we do not presume that we have designed a course that would be wholly appropriate in every university setting. What we can offer from our experience is the value of starting from scratch, discarding all of the artifacts of an existing, familiar course and designing a course that is a better fit for the student population. We found this process to be a very rewarding and worthwhile professional development exercise. The result of our process is a best practices course that is aligned with the goals outlined by the accounting profession, encourages a high level of student engagement, and has fostered an impressive level of commitment among our accounting faculty.

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