



ADVANCES IN ACCOUNTING EDUCATION TEACHING AND CURRICULUM INNOVATIONS

VOLUME 6

BILL N. SCHWARTZ

J. EDWARD KETZ

Editors

**ADVANCES IN
ACCOUNTING EDUCATION
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TEACHING AND CURRICULUM INNOVATIONS

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INCORPORATING ETHICS INTO TAX CLASSES: A THEORETICAL FRAMEWORK

Jack C. Robison, Mary Beth Armstrong and Janice Carr

ABSTRACT

The Enron scandal points out the need for accounting students to have stronger training in ethics. This paper explains how providing a theoretical framework that distinguishes between the ethical underpinning of tax and financial accounting might aid students in resolving ethical issues they encounter in their careers. We propose the use of Rawls' concept of two kinds of rules as an appropriate theoretical framework for this purpose. Rawls' concepts help distinguish between rules used to define a practice, such as Internal Revenue Code rules, and rules used to facilitate an objective, such as the rules known as "Generally Accepted Accounting Principles." This paper explains Rawls' concept of two kinds of rules and why such a theoretical foundation may assist students as they progress in their careers. The paper includes a handout that faculty can use to incorporate Rawls' framework into tax classes, as well as examples that may help students to internalize the concepts. The authors provide these examples not only to help students understand the ethical differences between tax and financial accounting but also to help students understand the interrelationships between tax and financial accounting.

In recent years there has been an increased emphasis on the inclusion of ethics in all accounting classes. Recommendations for more ethics education have come from the American Accounting Association (AAA, 1986, p. 179), the American Institute of CPAs (AICPA, 1988, p. 10), the Accounting Education Change Commission (AECC, 1990, p. 308), the “White Paper” jointly written by the largest accounting firms (Arthur Andersen et al., 1989, p. 6), and others. The AICPA’s recommendation is typical of the recommendations listed above (1988, p. 10): “Fundamental to a profession is the obligation of its members to maintain the highest standards of ethical conduct. A sense of responsibility to society and to one’s own profession should be acquired very early in the educational process and can begin with the nurturing of moral and ethical values.”

Most accounting and tax textbooks now include a discussion of professional ethics as well as some examples and homework problems dealing with ethical issues. However, only auditing textbooks cover ethical issues in depth and that coverage is usually limited to the AICPA’s *Code of Professional Conduct* (2002) and auditing standards.

We do not believe this discussion is sufficient especially in light of the increased scrutiny on the ethics of accounting professionals created by the Enron scandal. The scandal has led to criticism of companies for treating “accounting rules the way they treat tax laws: If it isn’t expressly forbidden, its OK” (Wessel, 2002, p. C-1). In particular, the press recently criticized Enron for using a “3 percent rule” to keep massive amounts of debt and assets off its books (Sloan, 2002, p. 22):

In Congressional testimony . . . [Arthur] Andersen chief executive Joseph Berardino admitted the accounting was wrong, but said it wasn’t Andersen’s fault because no one told his firm about the collateral Enron had provided [causing outside ownership of a special purpose entity, “Chewco,” to fall below a 3 percent rule]. What Berardino didn’t say . . . is that even if Chewco had met the 3 percent rule, the results would still be outrageously misleading.

Our textbooks fail to provide an ethical underpinning for either tax or financial accounting, much less provide students with the means of distinguishing between the two. The lack of a theoretical framework for understanding ethical guidance may hamper students’ ability to resolve ethical issues they encounter in the future and increase the probability of future Enron-type events.

The objectives of this paper are to discuss the theoretical, ethical framework that underlies decision making in tax and financial accounting and to provide examples of how to incorporate this framework into tax classes. The authors assume that the first financial accounting course introduces students to ethical concepts, and when students later take tax courses they perceive a difference in ethical focus. The logical place to discuss the difference between ethics in financial accounting and in tax accounting is the tax accounting courses. This paper highlights how that

discussion might take place. The paper has six parts. First, it reviews the current coverage of ethics in tax textbooks. The next section discusses why a theoretical framework is necessary. The third section presents Rawls' concept of two kinds of rules as a theoretical framework for discussing ethics in tax classes. The fourth section offers examples of how to incorporate this framework into classes. The fifth section discusses the classroom benefits achieved from utilizing the theoretical framework. Finally, a brief summary concludes the paper.

TEXTBOOK COVERAGE OF ETHICS IN TAX

The discussion of ethics in many tax textbooks includes some discussion of tax evasion versus tax avoidance. For example, Murphy and Higgins (2002, pp. 32–33) state the following:

Tax evasion uses fraudulent methods or deceptive behavior to hide the actual tax liability . . . Tax avoidance is the use of legal methods allowed by the tax law to minimize a tax liability . . . However, as future professionals and taxpayers, you should recognize your obligations to your profession and the country when it comes to tax evasion situations.

Similarly, Willis et al. (2002, pp. 28–31) state, “A fine line exists between legal tax planning and illegal tax planning – tax avoidance versus tax evasion.” This ethics discussion also may incorporate the client advocacy role of tax professionals and Judge Learned Hand's famous quote [*Commissioner vs. Newman*, 159 F. 2d 848 (2d Cir. 1947)]:

Over and over again courts have said that there is nothing sinister in so arranging one's affairs as to keep taxes as low as possible. Everybody does so, rich or poor, and all do right, for nobody owes any public duty to pay more than the law demands: taxes are enforced exactions, not voluntary contributions. To demand more in the name of morals is mere cant.

Most tax textbooks usually cover the U.S. Treasury Department's and profession's rules established for tax preparers, such as U.S. *Treasury Department Circular 230* (2002), the AICPA's *Code of Professional Conduct* (2002), and the AICPA's *Statements on Standards for Tax Services* (SSTS, 2000). Most texts include homework problems in ethics, but for the most part these problems deal with compliance with SSTs. For example, Murphy and Higgins (2002) have 16 ethics-related homework problems, of which 13 directly refer to the SSTs. One representative example appears in Exhibit 1 (Murphy & Higgins, 2002, p. 169):

You are a CPA working for a local firm and have been assigned the 2002 tax return of Bobby Corsser. In going over the data that Bobby gave the firm, you are surprised to see that he has reported no dividend income or gains from the sale of stock. You recently prepared the 2002 gift tax return for Bobby's aunt Esther. In that return, Ester reported a gift of stock to Bobby on

January 6, 2002. The stock had a fair market value of \$50,000, and Esther's basis in the stock (which became Bobby's basis) was \$5,000. What are your obligations under the Statement on Standards for Tax Services? In your discussion, state which standard(s) may apply to this situation and what might result from applying the standard(s).

In addition, some authors include ethical dilemmas or examples throughout the remainder of their texts. For example: Prentice Hall's *Federal Taxation 2002* (Pope et al., 2001) includes an "Ethical Point" icon to highlight ethical examples included throughout the text and *West Federal Taxation Individual Income Taxes* (Hoffman et al., 2003) includes "Ethical Considerations" in most of its chapters.

THE PROBLEM WITH CURRENT COVERAGE

Given the coverage discussed above, what is the problem with the current method of incorporating ethics in the major tax textbooks? Students start their accounting career by studying financial accounting. In financial accounting classes they learn about preparing financial statements that "present fairly" financial position, results of operations, and cash flows, or at a minimum to make sure those financial statements are not misleading. Professional requirements do not allow constructing transactions or reporting them in order to mislead the readers of the financial statements. Ethical standards preclude such conduct. We try to teach students the "substance over form" principle and that the AICPA's *Code of Professional Conduct* (2002) considers integrity a key attribute of good accountants. In tax classes we shift the ground rules and talk about the positive goal of constructing business affairs so as to reduce taxes, and praise "tax planning." In financial accounting classes students learn to use professional judgment to report "gray" areas in such a way that the financial statements are not misleading, or in a way that best reflects the economic substance of the events or transactions. In tax accounting classes students often perceive "gray" areas as opportunities for creative, but legal, reductions of the client's tax liability. For some students, the different emphases when preparing financial statements versus giving tax advice may seem like a type of moral schizophrenia.

Judge Hand's famous statement affirming the morality of paying the minimum taxes the law demands lets students know that the difference is not due to tax professors having lower moral character than financial accounting professors. The present ethical coverage in tax textbooks fails to address why the difference exists. Without such guidance the issue of allegiance (Is it to the client? To the tax system? To professional standards?) may sway a tax student's judgment when the law is less than clear-cut. For example, in determining an individual's tax home the law relies on the taxpayer's facts and circumstances and in determining whether an

activity is a hobby or business, common law determines the classification. If we fail to provide students with an underlying theory they can use in applying their knowledge, they have no basis for making decisions when they encounter new ethical dilemmas as they progress in their professional careers.

A THEORETICAL FRAMEWORK WHICH EXPLAINS THE DIFFERENCES BETWEEN ETHICS IN FINANCIAL AND TAX ACCOUNTING

John Rawls, James B. Conant University Professor Emeritus at Harvard University, is one of the most influential political philosophers of the twentieth century. Early in his career, Rawls (1955, pp. 19–29) set forth a framework useful for distinguishing between rules in tax accounting and rules in financial accounting. He bases his framework on Hume's *Treatise of Human Nature* (1951). Rawls points out that there are, in general, two types of rules: those that *define a practice*, and those that *facilitate achieving some objective that exists independent of the rules*.

Rules that define a practice also define right and wrong behavior within that practice. For Rawls (1955, p. 1) a “practice” is a “technical term meaning any form of activity specified by a system of rules which defines offices, roles, moves, penalties, defenses, and so on, and which gives the activity its structure. As examples one may think of games and rituals, trials and parliaments.” Rawls (1955, p. 25) uses the game of baseball as an example. In the game of baseball the game itself is defined by its rules: what constitutes a strike or ball, an out, an inning, a run, a designated hitter, etc. In addition, the rules in baseball define the “morality” (or appropriate behavior) in baseball. An implication of rules that define a practice is that when the rules are silent, one is free to benefit from the silence, or to engage in behavior designed to exploit the “loophole.”

In contrast, rules that facilitate an objective act as *guides* of right behavior, not as *definitions* of right behavior. For example, traffic laws usually exist in order to achieve some objective, namely, public safety. A traffic law that forbids one to cross a double-yellow line is meant not as a definition of right behavior, but as an aid in protecting public safety. Ordinarily it makes good sense and one ought to obey such a rule. If a child should dart into the street, and the only way to avoid hitting the child is to cross a double-yellow line, assuming no on-coming traffic, the only way to achieve the objective of public safety at that moment is to break the traffic rule regarding double-yellow lines. In our example, one not only would be justified in crossing the yellow lines, one would be required to do so to achieve the objective of public safety. Traffic laws are for guidance; they facilitate, but do not

define, the objective of public safety. Ordinarily one must comply with the rules, but one may break the rules in unusual circumstances. Right behavior is that which is consistent with achieving the underlying objective intended by those making the rules. Loopholes simply do not exist when rules facilitate achieving some objective because, even if the rules are silent or seem to contradict, one always must strive to achieve the overarching objective.

In financial accounting, students learn to consider the public interest and to depart from the rules (e.g. FASB statements) when conformity with the rules would result in misleading financial statements. Thus, financial accounting rules are those types of rules which facilitate an objective. Rule 203 of the AICPA's *Code of Professional Conduct* (2002) makes clear that financial reporting and attesting to the fairness of financial statements are examples of rules that *facilitate an objective*. Departure from the rules is warranted when a strict adherence to them would result in misleading financial statements. Rule 203 states:

A member shall not: (1) express an opinion or state affirmatively that the financial statements or other financial data of any entity are presented in conformity with generally accepted accounting principles; or (2) state that he or she is not aware of any material modifications that should be made to such statements or data in order for them to be in conformity with generally accepted accounting principles, if such statements or data contain any departure from an accounting principle promulgated by bodies designated by Council to establish such principles that has a material effect on the statements or data taken as a whole. **If, however, the statements or data contain such departure and the member can demonstrate that due to unusual circumstances the financial statements or data would otherwise have been misleading, the member can comply with the rule [i.e. Rule 203] by describing the departure, its approximate effects, if practicable, and the reasons why compliance with the principle would result in a misleading statement** [Emphasis added].

The financial statement preparer is “entitled to reconsider the correctness of a rule and to question whether or not it is proper to follow it in a particular case . . . rules are formulated to serve as aids in reaching these ideally rational decisions on particular cases” (Rawls, 1955, p. 23).

Not only does Rule 203 allow a departure from professional pronouncements to achieve fair financial statements, but the federal court made this same point clear in the Continental Vending case [*United States vs. Simon*, 425 F 2d 796 (2d Cir. 1969)]. The ruling in this landmark case has been affirmed by a number of other cases; for example, *In Re Crazy Eddie Securities Litigation* (812 F Supp 388 (E.D.N.Y. 1993)), and auditing courses often include coverage of it. Students learn that courts have rejected the notion that conformity to GAAP is a conclusive defense against charges of misrepresentation. The judge in Continental Vending instructed the jury that the critical test was whether the balance sheet fairly presented financial position without reference to GAAP. Hence, following

the accounting rules known as GAAP is inappropriate if it leads to misleading financial statements.

Students also may be cognizant of recent developments in the Enron case and the SEC's affirmation that following GAAP does not necessarily shield a corporation from charges of securities fraud. "It's not enough to check boxes and to do everything that GAAP requires . . . You have to then step back and say that the overall impression created by GAAP fairly portrays the underlying economics" (Liesman, 2002, p. C1).

On the other hand, tax rules usually represent rules that define a practice. As Judge Hand so well articulated, tax laws have no one overarching objective. Instead, the tax law incorporates many objectives such as raising revenue, redistributing wealth, encouraging certain types of behavior, supporting certain industries, etc. Having multiple, often competing objectives, is characteristic of rules that define a practice, rather than those that facilitate achieving some overarching objective. Tax law is not a guide to "help one decide particular cases correctly as judged by some higher ethical principle . . . (a tax practitioner) cannot say of *his* action . . . that he does it rather than some other because he thinks it is best on the whole" (Rawls, 1955, p. 27). In tax we must accept the laws enacted by Congress as givens, and we cannot argue that some other rule would be more just given our situation any more than the baseball player can ask for four strikes rather than three because it would be best given the wind conditions.

Congress could define an overall objective for taxation. For example, Congress could declare that the objective of federal income tax law is "to ensure that all taxpayers pay their fair share of the tax burden." The Internal Revenue Code would have to be completely re-written to try to facilitate that objective. As it stands now, the Internal Revenue Code incorporates multiple objectives, and hence simply defines the amount of taxes owed for different specific situations. It is not unethical or immoral or unlawful to minimize one's taxes within the law, and we call such behavior "tax avoidance." The salient issue is the rules (tax laws) define the tax owed and the IRS or courts serve as umpires when application of the rules to a particular set of circumstances is unclear. Thus, when gray issues emerge, tax practitioners are free to resolve those issues in favor of their client's interests (i.e. "loophole"), so long as they have a good faith belief that there is a realistic possibility that doing so would be upheld by the umpires, if challenged.

Taxes are like a game: the Internal Revenue Code defines the amount of taxes owed, and if the Code is unclear, the IRS or courts are the umpires who supply interpretations and are responsible for enforcement. Tax avoidance becomes an art form in which persons knowledgeable in the tax code advise others on how to arrange their affairs to minimize their taxes under the law (i.e. within the rules of the game) and how to take advantage of loopholes and exceptions. Ethically, the

key is the practitioners' "good faith belief" that there is a "realistic possibility" that the IRS or Tax Court would uphold the tax treatment, if it were challenged by them. Thus tax practitioners must be honest with themselves when assessing the likelihood of their clients' tax positions being upheld.

The framework just described is not absolute. Rawls (1955, p. 29) states, "There will be many border-line cases about which it will be difficult, if not impossible, to decide which [type] of rule is applicable." Occasionally tax laws behave more like rules that facilitate an objective. Examples include circumstances where the tax law refers to congressional "intent," in substance over form issues, and often during the time period between enactment of a new law and release of regulations setting forth the manner in which it will be applied. Also, in some situations, such as the classification of workers as employees or independent contractors, the tax law relies on common law that has arisen over hundreds of years rather than providing specific rules for taxpayers. Similarly, sometimes GAAP appears arbitrary and absolute and takes on the nature of rules that define a practice. An example is expensing research and development costs that clearly have future benefit.

Originally "generally accepted accounting principles" reflected a loose collection of practices adopted by accountants. These principles were all rules intended to facilitate the objective of fair financial reporting. Over time, authoritative bodies began promulgating very specific, detailed rules that conformed more to Rawls' rules that "define a practice." As a result of the Enron scandal, commentators are questioning whether or not the profession should return to a more "principle-based" approach to technical standards (Armstrong, 2002, p. 13; Largay, 2002, p. 154).

In general, the characterization of tax laws as rules that define a practice, and GAAP as rules that facilitate an objective is a valid and useful distinction.

HOW TO INCORPORATE THE DISCUSSION OF A THEORETICAL ETHICAL FRAMEWORK INTO TAX CLASSES

The first step in providing a theoretical framework for students is to explain Rawls' "two types of rules" concept and how it relates to financial and tax accounting. The Appendix includes a handout for this purpose.

If students are going to internalize these concepts it is probably necessary to incorporate additional examples or homework assignments that require students to think about the difference between ethics in financial and tax accounting. Students' understanding of the basic difference between tax laws and GAAP requires that

instructors go beyond a mentality that focuses only on tax rules. Unfortunately, tax textbooks do not provide the types of problems that might help in accomplishing this goal. For example, Murphy and Higgins (2002, p. 45) ask the following question:

Assume that you are the CPA in charge of preparing the tax return for each of the taxpayers in the problem. Based on the Statements on Standards for Tax Services, explain what you should do in each case. Your discussion should indicate which, if any, of the eight statements is applicable and your obligations with regard to each applicable statement. If the facts are not sufficient to determine whether a statement applies to a situation, discuss the circumstances in which the statement would apply.

This question asks students to focus on several tax issues and specific rules within the SSTs. It does not make any reference to GAAP, nor does it contrast tax law and financial accounting rules. The following examples provide an illustration of the types of problems that instructors might utilize to reinforce the learning concepts we present in this paper.

The Implication of Two Types of Rules

Example 1

Facts 1. In tax many deadlines are inflexible. Examples are the 45 day time period for identifying property for a like kind exchange and the rule requiring individuals to file Tax Court petitions within 90 days from the issuance of the Notice of Deficiency.

Facts 2. Companies hold trading securities with the intention of selling them in a short period of time. “The holding period for these securities is generally less than three months” (Kieso et al., 2001, p. 926).

Required.

- (A) Use Rawls’ concept of types of rules to explain why a Tax Court judge cannot override these deadlines in hardship cases.
- (B) Use Rawls’ concept of types of rules to explain why a corporation might make an argument for classifying a security as a trading security, even though management intends to hold the security 100 days.

Issues for class discussion.

- (A) Tax has rules of practice that are hard and fast and do not allow discretion. This type of rule does not have an objective such as treating taxpayers fairly;

therefore one cannot argue for an exception to the rule on the basis of fairness or some other stated objective. To do so would be equivalent to arguing for a fourth strike in baseball because the wind was blowing. The rules exist in and of themselves.

- (B) In financial reporting there is an overall objective function: fairly presenting financial information. One can argue for an exception to a rule if one can argue that without the exception the financial statements are likely to be misleading. If management buys and holds securities principally for the purpose of selling them in the near future, and management typically trades actively and frequently in order to generate profits on short-term differences in price, then readers of the financial statements expect unrealized trading gains and losses to appear in the income statement. If the company does not treat a particular investment as a trading security because it will be held more than 90 days, even though all other characteristics of trading securities are met, readers will be misled (assuming the transaction is material).

Instructors might use this problem right after the initial ethics discussion to insure that the students understand what is meant by two types of rules.

When Financial and Tax Rules Differ

Example 2

Facts. ABC Company purchased 90% of the voting common stock of XYZ Corporation in January, 2002. Management of ABC Company estimated that \$4,000,000 of the purchase price is attributable to goodwill and wishes to amortize the goodwill, for both financial reporting and tax purposes, over the 15-year life permitted by tax law.

Required. Discuss the appropriateness of their proposed treatment for financial and tax purposes.

Issues for class discussion. The tax law (IRC Sec. 197) provides for the amortization of purchased goodwill over 15 years. Before July, 2001 Generally Accepted Accounting Principles also required the amortization of goodwill over its estimated useful life, not to exceed 40 years. The Financial Accounting Standards Board determined that amortization of goodwill distorts reported earnings and in 2001 it issued *Statements of Financial Accounting Standards 141 and 142*. Current accounting standards forbid the amortization of goodwill, but require parent companies to periodically test for impairment of goodwill and to write

down recorded goodwill if they determine its value has been impaired. Examples of this type allow the instructor to discuss the concept of objective functions. It is the objective function of financial accounting that requires that income fairly represent the actual economics of transactions and events whereas the lack of an objective function in the tax arena allows the taxpayer to seek out allowable methods, such as amortization, to lower taxes.

When Financial and Tax Rules are the Same

Example 3

Facts. Startup, Inc. has a major contract with a customer to supply 1000 “putits” by December 31st. The putits are 90% completed at year-end and would have been fully completed and shipped if completion had not been delayed due to a subcontractor’s failure to provide a small necessary component. Because this contract was a key element in their revenue projections for the year Startup decided to record 90% of their expected income from the contract.

Required. Discuss the appropriateness of this treatment for financial and tax purposes.

Issues for class discussion. Although it is clear this contract is a key revenue source for Startup, the facts of the case do not meet the requirements for Startup to record the related income for financial or tax purposes. Therefore, it would be unethical to do so just because Startup needs to report the income to meet goals. The instructor needs to stress that although there is a difference between the ethical considerations in the tax and financial accounting arenas there are many situations when actions will be unethical in both areas.

When Issues are “Gray”

Example 4

Facts. Lessor Co. negotiated with Lessee Co. to re-negotiate a lease with 10 remaining years. Lessee was responsible for making certain personal property capital improvements and increased future rent payments. Lessor paid Lessee a substantial sum for agreeing to the terms of the new lease and canceling the old. After deducting the costs of capital improvements, the lump sum paid by Lessor exceeded the present value of the increase in rent payments by a material amount, \$1,000,000. Lessee expects to increase future revenues and profits substantially

as a result of the capital improvements, and to be in a higher tax bracket in future years. Also, the current year's profits (before the lease re-negotiation) are less than they would like to report. Therefore, Lessee Co. wishes to record the entire \$1,000,000 in the present year, both for tax and financial reporting purposes.

Required. Discuss the appropriateness of Lessee Co.'s proposed treatment for financial and tax purposes. Is the \$1,000,000 a revenue item or a reduction of lease expense?

Issues for class discussion. A tax practitioner would be justified in allowing the client's proposed treatment of the \$1,000,000, in order to reduce future taxes, if the tax practitioner has a good faith belief that there is a realistic possibility (defined by the Treasury Department as a 1-in-3 likelihood) that the IRS or courts would concur with the treatment. Such a belief seems reasonable in this case. Although Treas. Reg. § 1.110-1(b)(3) provides specific treatment for real property improvements, with respect to personal property improvements the IRS generally applies a "benefits and burdens of ownership" test to determine whether a lessee must include a construction allowance in income.

For financial reporting purposes the accounting professional must use professional judgment to determine the nature of this unusual transaction. Is it a revenue-type item? If so, revenue recognition rules would call for immediate recognition of the entire \$1,000,000 immediately since it requires no future performance and the company has received cash. Is it a contra-expense? If so, the matching principle would require the company to amortize the item over the remaining ten years of the lease as a reduction of rent expense. Since the transaction is intimately tied to the lease re-negotiation, the item appears to be rent reduction, rather than revenue, and the accounting professional should insist that the client record the item in the way that will best reflect its economic substance, in order to present its financial statements fairly.

Limitations on Tax Gamesmanship

Example 5

Facts. Jane recently hired several workers for her business. Jane requires that they record the hours they work by using her time clock, work in her business location and follow her work procedures. Because the workers bring some of their own tools Jane feels she can classify them as independent contractors. She realizes the probability of that classification being sustained upon an IRS audit is very small but because she does not expect to be audited she feels it is worth the risk.

Required. As Jane's tax adviser can you support her classification?

Issues for class discussion. Although there is no stand-alone objective in the tax area, that fact does not imply that a tax practitioner's advocacy position is boundless. This example should provide the opportunity to discuss the standards set forth in U.S. *Treasury Department Circular 230* and the SSTS (AICPA, 2000). These, as well as the guidance from the American Bar Association, essentially require the same standard: If the practitioner does not have a "good faith belief" that the item in question has a "realistic possibility" of being sustained on its merits then they can not take that position on a tax return. It is important to emphasize to students that although there is no objective function (e.g. one's "fair share" of the tax burden) there is guidance that prevents practitioners from being taxpayer advocates without limits.

The purpose of these and other ethical examples should be to compare and contrast the ethical rules in the tax and financial accounting areas as well as to emphasize that although tax minimization may have some aspects of a game it is not a game without rules.

In addition to these types of examples that deal specifically with ethical issues, instructors can easily reemphasize Rawls' concept of rules as they cover topics throughout their classes. Tax instructors discuss tax planning situations in just about every session of tax classes. These discussions provide an ideal opportunity to reiterate that tax lacks an objective function. During these discussions, instructors can ask why it is acceptable for taxpayers to have a goal of staying within the law while minimizing their tax burden rather than trying to pay their "fair share" of tax. When students ask those "how will the IRS know?" kind of questions, instructors should mention that lack of an over-arching objective does not mean that tax is a game without rules. Instructors should emphasize that Congress passes laws that are in turn interpreted by the IRS and the courts that define the practice of taxation. There is a difference between acceptable behavior in areas where the rules are silent (loopholing or tax avoidance) and areas where you are overlooking or ignoring the rules (negligence or fraud).

CLASSROOM OUTCOMES USING THE THEORETICAL FRAMEWORK

We have utilized the ethics handout (Appendix) and many of the examples contained in this paper in our introductory and advanced tax classes. Classroom discussions and student comments have revealed two significant benefits.

Prior to the utilization of Rawls' types of rules, the discussion of ethics in the classroom tended to center around the understanding and application of the specific ethical rules provided by the AICPA and the IRS. Many students categorized ethics as just one more set of rules they needed to memorize. The use of the framework has changed the focus of ethics to the discussion of theoretical concepts. Students are trying to master a concept and this effort leads to more discussion of ethics and how to make decisions in difficult situations. Therefore, it potentially contributes to the students' ethical growth. It also is easier to integrate the discussion of the ethical framework throughout the class, because the discussion is not limited to a set of rules that appears in only a single chapter. Classroom discussions more frequently focus on ethical issues, and instructors can reinforce ethical concepts throughout the course.

The second benefit was an unexpected one. Understanding the ethical framework requires the comparison of underlying concepts of tax and financial accounting. This comparison has allowed us more opportunities to compare and contrast financial and tax accounting. We are able to integrate the topics rather than treat tax as a discipline that is distinct from financial accounting. As we have moved the focus of our introductory tax class from the taxation of individuals to a business entities approach we have found this enhanced integration to be extremely beneficial. Increased integration also may be beneficial for students when they sit for the new computerized Uniform CPA Exam, which will include integrative simulations.

CONCLUSION

In this paper we have attempted to provide a supplement to the existing methods of teaching ethics in tax classes. The current coverage of ethics in tax texts fails to explain why the ethical rules differ between tax and financial accounting. This failure may confuse students and does not help them draw critical distinctions among situations they will encounter in their careers. Instructors can utilize Rawls' concept of two kinds of rules to provide a theoretical understanding of the reason for these differences. When rules facilitate an objective, as they do in the financial reporting arena, there are two implications: (1) Sometimes breaking the rule may be necessary in order to achieve the objective; and (2) One is not free to do whatever one wants when the rules are silent, nor may one morally seek out loopholes if doing so thwarts achieving the objective. When rules define a practice, as in the tax arena, and there is no overarching objective function, seeking loopholes and exceptions is "fair game," not an example of an immoral action.

Class discussions of the theoretical underpinning for the differences between financial and tax accounting ethics should assist students in developing an ethical decision model that will aid them in dealing with the many professional challenges they will face as they progress in their careers and potentially decrease the likelihood of future Enron type scandals. The resulting discussions also help to integrate knowledge from tax and financial accounting. Although we recognize that all tax classes are already highly impacted with technical material, we hope that tax professors will find providing an ethical decision framework a high priority for future professionals.

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APPENDIX: SAMPLE ETHICS AND TAXATION HANDOUT

Philosophers describe *two types of rules*

- Those which *facilitate an objective*. Rules that act as *guides* to right and wrong behavior, but do not define it.
 - Implication #1: Sometimes it is necessary to break the rules to achieve the objective.
 - Implication #2: No loopholing is allowed. One must always try to achieve the objective.
- Those which *define a practice*. Rules that act as *definitions* of right and wrong behavior.
 - Implication #1: Benefiting from areas of silence in the rules (loopholing) is ethical.
 - Implication #2: Breaking the rules is never allowed.

Examples of rules that *facilitate an objective* would be:

- Traffic laws whose goal is to promote public safety.
 - Example: If a child runs in front of your car, you are justified in crossing the double yellow line to avoid hitting him/her.
- Financial accounting practice rules create the expectation of professional behavior.
 - Example: Rules might be broken if strictly following them results in misleading financial statements because strict adherence does not achieve the goal of “fair presentation.”
 - Example: If there is no rule you are not free to do whatever you wish, you must instead look to the appropriate accounting principle for guidance (such as consistency, matching, etc.).

Examples of rules which *define a practice* would be:

- The rules of baseball define a strike, an out, an inning, a run, a designated hitter, etc.

- The rules of *taxation*. Perhaps Judge Learned Hand expressed it best when he wrote:

Over and over again courts have said that there is nothing sinister in so arranging one's affairs as to keep taxes as low as possible. Everybody does so, rich or poor, and all do right, for nobody owes any public duty to pay more than the law demands: taxes are enforced exactions, not voluntary contributions. To demand more in the name of morals is mere cant [*Commissioner vs. Newman*, 159 F. 2d 848 (2d Cir. 1947)].

- The IRC defines the rules and the courts and the IRS act as umpires when application of the rules is unclear (gray areas).
- The goal is thus to arrange one's affairs to minimize taxes under the law (within the rules). There is nothing unethical in taking advantage of loopholes and exceptions if one honestly believes there is a realistic possibility the "umpire" (i.e. Tax Court or IRS) would concur.

EXPERIENTIAL LEARNING IN AUDITING: FOUR EXPERIMENTS FOR THE CLASSROOM

Steven T. Schwartz, Eric E. Spires
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ABSTRACT

This paper provides detailed descriptions of four economics experiments intended as instructional tools for auditing courses. The first two experiments involve asset markets under asymmetric information. They demonstrate that investment and productive inefficiencies result from information asymmetries and can serve as a basis for discussing the societal benefits of auditing. The third experiment concerns new client acquisition by auditors and the potential incentives for auditors to make a bid below cost in the initial year of the engagement. This experiment can serve as a basis for discussing the relationship between lowballing and auditor independence. The final experiment relates to the threat of litigation faced by auditors and can serve as a basis for discussing the need for a long-term strategy to manage this threat. Our experience from conducting these experiments is that students' participation allows them to more easily apply economic concepts and to obtain a better understanding of various phenomena that affect the auditing profession.

In this paper we describe four classroom experiments that instructors can use to effectively and efficiently present the economics of auditing to undergraduate and graduate students. Our experience in administering these experiments is that the typical auditing student, who often has had only a small amount of prior exposure to economics, can greatly increase his or her understanding of the economics of auditing by participation. Further, these experiments are designed to be easily integrated into existing course structures (typical administration time is 20–25 minutes) and to be enjoyable for the students.

Auditing is performed in a rich economic environment. Ricchiute (1998) discusses the auditor's role in reducing information risk to investors (p. 9) as well as the costly liability exposure faced by auditors (pp. 130–161). A thorough understanding of auditing's economic context requires familiarity with topics such as incomplete markets and moral hazard. Auditing students often have not had prior exposure to these topics and instructors are likely to find it impracticable to devote classroom time to describing abstract economic theories and then relating them to auditing problems. The classroom experiments described herein provide for both needs: student exposure to the economics of auditing and manageable implementation by the instructor.

Before we proceed further, it is important to make the distinction between economics experiments performed for instructional purposes and economics experiments performed for scientific purposes. The purpose of economics experiments in scientific investigation is to test theoretical predictions, observe markets that do not naturally occur, or discern the cause of empirical regularities from several alternatives. In contrast, the purpose of economics experiments in the classroom is to expose students to well known and understood economic phenomena so as to increase the students' understanding of these topics. Berg et al. (1995) and Boylan (2000) are examples of economic experiments designed for instructional use in accounting courses. Gremmen and Potters (1997) and Holt (1999) provide evidence of the effectiveness of classroom experiments in achieving the goals of increasing student interest and comprehension.

In keeping with these educational goals, we present detailed descriptions of four classroom experiments that relate to topics typically included in undergraduate or graduate auditing courses. In each experiment, students assume the role of an auditor or an investor. In their roles, students interact in structured yet simple environments designed to capture important economic aspects of the auditing setting under consideration. At the conclusion of each experiment, the instructor can use class time to summarize the results of the experiment and to discuss how the experimental setting provides insight into the relevant auditing issue.

The first two experiments demonstrate the potential value of an independent audit under different settings. In both experiments, information asymmetry creates

a demand for auditing services. In the first experiment, a student acts as an owner of a firm. The firm's value would increase if the owner were to transfer firm ownership to a potential buyer. The owner has private information about the value of the firm to the potential buyer. As a result of the owner's inability to credibly disclose her private information, only the lowest quality firms tend to trade. This experiment demonstrates that socially beneficial trades might not occur unless an assurance service is available.

The second experiment is more complicated than the first but provides additional educational benefit because it takes place in a much richer economic setting. In particular, it involves a student acting as a firm manager who can make a potentially profitable investment in his or her firm. This investment is personally costly to the manager and is unobservable to potential investors. The student-manager issues a report regarding whether she made the investment. Subsequent to the issuance of the report, student-investors bid for ownership of the firm. This experiment demonstrates that if the manager's report is unaudited, managers might forego investments that would increase both owner and manager welfare.

The two experiments together illustrate different ways that auditing can increase economic efficiency. They are similar to those described by Boylan (2000), but are much simpler and specially designed so the instructor can integrate them more easily into a regular classroom setting.

The third experiment involves audit firms bidding for clients in a competitive market. We include in this experiment the presence of startup costs in the initial year of the engagement. With this feature, we would expect student-auditors competing for clients to bid below their first-year costs. The profession has conjectured that this bidding practice, commonly referred to as lowballing, could give audit firms additional incentives to retain clients in order to recapture their first-year losses (DeAngelo, 1981, p. 113). This experiment illustrates the cause of lowballing and promotes discussion of whether it will impair auditor independence or impair judgment regarding the level of testing to perform.

The fourth experiment relates to an audit firm's reaction to the threat of litigation. In the experiment, a student-auditor encounters a series of student-investors who can potentially bring forth a lawsuit. This experiment demonstrates that auditors might find it beneficial to develop a reputation for resisting out-of-court settlement offers in order to deter future potential litigants from filing non-meritorious suits.

Sections 1–4 describe each experiment. Each section presents results from actual experiments performed at two major public universities, as well as discussion of classroom use. We include selected student feedback data related to the final experiment. Section 5 discusses the ethical issues of student anonymity and remuneration, and the importance of students' degree of participation in the experiments. Section 6 concludes the paper.

1. VALUE OF AUDITING IN FACILITATING TRADE

1.1. Learning Objectives and Introduction

The primary learning objective of this experiment is to demonstrate that, due to an absence of a credible assurance service, two parties who would mutually benefit from trade may not do so. Importantly, the conditions necessary for this undesirable result to occur are not uncommon in existing equity markets. A secondary learning objective is that students gain experience in anticipating the actions of those who possess different levels of information than their own.

The experiment we present is very simple. The owner of a firm possesses superior information regarding the firm's value relative to potential buyers and the owner wishes to sell a share in the firm. Given only these two attributes, this experiment demonstrates that if the informational advantage held by the owner is sufficiently strong, the owner may not be able to sell a share in the firm *for any price*, even if potential buyers value shares in the firm more than the owner. The intuition for this is as follows. For a given price, some owners might not be willing to put their shares up for sale. Presumably, these are the owners whose private information indicates their firm's value is high. Potential buyers anticipate this and adjust the price they are willing to pay downward, which in turn discourages more owners from selling their shares. If owners cannot credibly communicate their private information the market might collapse completely. This general phenomenon is referred to as *adverse selection* in the economics literature (Akerlof, 1970; Kreps, 1990, pp. 625–660).

The instructor can use the market for initial public offerings (IPOs) to illustrate the relation between the above-described scenario and real world markets with which students may be familiar. Entrepreneurs (sellers) in the IPO market sometimes sell ownership shares in order to improve diversification or liquidity, and therefore might value the residual claims on their firms less than potential buyers. In general, one would expect that IPO sellers are better informed of the value of their firms than are potential buyers. If sellers cannot credibly signal the value of their firms, investors will rationally offer prices equal to the expected value of the assets that remain in the market, which will drive higher quality firms out of the IPO market. Auditing is a mechanism that enables sellers to credibly signal their firms' value (Hogan, 1997), which facilitates efficient trade between buyers and sellers.

In the experiment below, students act as either buyers or sellers in a market where only the sellers know the true value of the assets they are selling. Buyers announce prices at which they are willing to buy and sellers announce prices at

which they are willing to sell. Buyers learn not to bid too high, or else they will bring assets into the market whose value is less than the price. In response, sellers of the superior assets refuse to enter the market and so retain assets that are worth less to them than to a buyer. As a result, both buyer and seller are worse off due to the absence of a credible assurance service. This experiment illustrates that audits, because they reduce the level of information asymmetry, have potential value to society.

1.2. Procedures

1.2.1. Materials

For each market, the instructor should prepare in advance six index cards, one for each seller. Theory dictates that the buyer should be uncertain of the particular value of the object. Therefore, one from among three possible value-pairs is randomly assigned to each of the six cards. The random assignment should be performed “with replacement.” Each possible value pair should have the property that buyer value exceeds seller value, to guarantee that a trade would benefit both buyer and seller. The three possible value-pairs we have used are: {Buyer value = 100, Seller value = 80}, {Buyer value = 50, Seller value = 40}, and {Buyer value = 25, Seller value = 20}.

The instructor should prepare materials in advance for as many markets as he or she plans to conduct. We suggest conducting at least three markets, because it often takes buyers three markets to learn how to make reasonable bids (see discussion in Section 1.3). Some instructors might want all students to participate as both buyers and sellers. Each market involves six sellers, with the rest of the class acting as buyers. For smaller classes – fewer than 36 students – instructors can conduct up to six markets in a relatively short period of time. For larger classes, students can form two-person teams.

1.2.2. Participants

The instructor randomly distributes one index card, face down, to each of six different students from the class. These students act as potential sellers of an asset. Sellers should inspect the values written on their cards, but should not show them to any other students and should not communicate to any other student the values contained on their cards.

The remaining students act as potential buyers of the asset. The instructor informs the students of the following: (1) their roles; (2) the three possible buyer value/seller value combinations found on the index cards; and (3) that each

combination is equally likely. The instructor tells the class how to calculate profits, as shown below.

$$\text{Seller Profit} = \text{Price Paid for Asset} - \text{Seller Value}$$

$$\text{Buyer Profit} = \text{Buyer Value} - \text{Price Paid for Asset}$$

1.2.3. Asset Market

The instructor then conducts a market for the assets. Each seller has only one asset for sale, whereas buyers are free to purchase as many assets as they choose. The choice of market institution is somewhat arbitrary; however, we suggest a double oral auction. Below we include a brief description of the “pit-boss” version of the double oral auction. See Wells (1991) and DeYoung (1993) for further discussion.

All six assets are put up for sale simultaneously in one market. Buyers wishing to bid for an asset raise their hands. Once recognized by the instructor, a buyer publicly announces a bid to the class, and the instructor records the bid on the chalkboard or some other publicly viewable medium. This procedure is repeated for all subsequent bids. For expediency, each bid is required to exceed all previous bids. The bids apply to any of the assets, because of the random, independent assignment procedure. For the same reason, any seller may accept any buyer’s bid. Simultaneously, sellers are announcing ask prices (offers to sell at a given price) in a similar manner. Each ask price should be lower than any previous ask price. Buyers and sellers wishing to accept a bid or ask raise their hands and announce their intentions when called upon. Both buyer and seller record the transaction price and with whom the transaction was completed. The instructor then clears the chalkboard of all previous bids and asks, and begins accepting new bids and asks. Figure 1 illustrates how the instructor may present bids and asks.

After the sale of the six assets, or when students cease to volunteer bids and asks, the instructor should report to the class the sales price and the buyer and seller value of each asset sold. After completion of the first market, the instructor

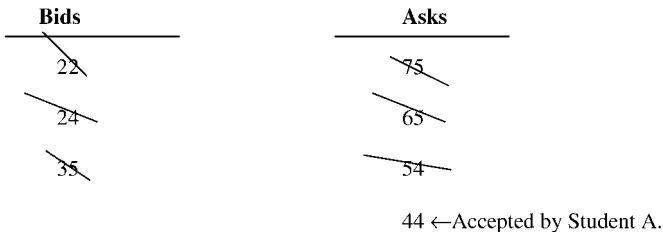


Fig. 1. Presentation of Bids and Asks. *Note:* The instructor records Bids and Asks as they occur in the market. Superseded bids and asks are crossed out.

Table 1. Presentation of Results of Facilitation of Trade Experiment (Based on an Actual Classroom Experiment).

	Asset 1	Asset 2	Asset 3	Asset 4	Asset 5	Asset 6
Buyer value	50	25	50	100	50	25
Seller value	<u>40</u>	<u>20</u>	<u>40</u>	<u>80</u>	<u>40</u>	<u>20</u>
Available surplus	10	5	10	20	10	5
Sales price	(Not sold)	41	42	(Not sold)	(Not sold)	42
Seller profit		21	2			22
Buyer profit		<u>-16</u>	<u>8</u>			<u>-17</u>
Realized surplus		5	10			5
Total available surplus = 10 + 5 + 10 + 20 + 10 + 5 = 60						
Total realized surplus = 5 + 10 + 5 = 20						

Notes: Seller profit = Sales price – Seller value; Buyer profit = Buyer value – Sales price.

distributes a new set of index cards to six different sellers and conducts another market. Table 1 shows the results from a classroom experiment conducted at a major public university.

1.3. Discussion

Under the buyer and seller values in Section 1.2.1., any bid above 25 would bring assets into the market with an expected value of less than the bid. For example, if a buyer bids 50, only sellers with values of 20 or 40 could earn a non-negative profit by entering the market. Because each value is by design equally likely, the conditional expected value to a buyer of assets in the market given a bid of 50 is equal to $(25 + 50)/2 = 37.5$. Note that 25 and 50 are the buyer values associated with the seller values 20 and 40, respectively. Therefore, an accepted buyer bid of 50 results in an expected loss of $37.5 - 50 = -12.5$ for the buyer.

We expect that buyers eventually will learn not to bid too high. Students begin to appreciate that without a credible method for disclosing asset values, sellers of higher value assets are unable to differentiate themselves from sellers of lower value assets. Without differentiation, buyers will bid only high enough to obtain the lowest value assets. We have found that sellers with the higher asset values often express their desire to turn over their card and reveal its contents to the class. If no students indicate this desire, we try to induce them to do so via class discussion. The instructor may point out that turning over one’s card, or otherwise credibly revealing the value of one’s asset, is comparable to the role auditors serve in financial markets.

This experiment is useful in facilitating discussion of several aspects of auditing. The first is that auditing is useful not only to those being audited, but also to the economy as a whole. To illustrate, consider the data in Table 1. The available surplus for each asset is the difference between seller and buyer value. The total available surplus for the six assets in this market was $1(20) + 3(10) + 2(5) = 60$. Because not all assets were sold, total realized surplus was only $0(20) + 1(10) + 2(5) = 20$. However, if every asset were sold the students would have earned a total of 60, regardless of the assets' selling prices.

Another aspect of auditing that the instructor may choose to discuss is the need for auditing itself to be credible. If the market participants did not believe the auditors' announcements, auditing would not ameliorate the adverse selection problem that the experiment illustrated. At this point, it can be useful to emphasize the importance of auditor independence in both fact and appearance. By highlighting the need for auditor credibility, this experiment also provides an opportunity to discuss the effects of audit failures such as Enron and Sunbeam on audit firms, the accounting profession, and the investment community.

Because the students so easily discover the potential role of auditing and readily determine the effects auditing would have on the buyers' behavior, we do not recommend taking class time to run a market with auditing present. However, if the instructor desires to run such a market, the instructor can introduce auditing by having some student-auditors examine the sellers' cards and "certify" the value to the market. If auditing were introduced in this fashion, buyers would bid for specific audited assets. The instructor can introduce imperfect auditing by having the student-auditor privately roll a die, reporting accurately only if the numbers two through six are rolled.

2. VALUE OF AUDITING IN FACILITATING INVESTMENT

2.1. Learning Objectives and Introduction

This experiment illustrates the role of auditing in promoting efficient decision-making by firm managers. The experiment demonstrates that without auditing, managers within the firm have incentives to misallocate resources.

Managers of a firm often take actions that affect themselves as well as the current or potential investors in the firm. Without reliable auditing, the nature of the actions taken may remain hidden from investors for a lengthy period of time. This information asymmetry can create an incentive for managers to act in a way that is consistent with their self-interest, but conflicts with the

interests of the stakeholders. By increasing the reliability of financial disclosures, auditing increases the visibility of actions, including those that stakeholders do not want. This increase in the visibility of actions should help stakeholders provide incentives for managers to make investments that increase the value of the firm. The problem of lack of visibility of agents' actions is referred to as *moral hazard* in the economics and accounting literature (Antle & Demski, 1988, p. 703; Baiman & Demski, 1980, p. 187; Holmstrom, 1979, p. 74). Several experiments have studied the effectiveness of audits in mitigating management control issues arising due to the presence of moral hazard (e.g. Dopuch et al., 1989; Kachelmeier, 1991).

In the experiment presented below, students, acting as firm managers, choose whether to invest in a project. If they make the investment, their firm becomes a "high type"; otherwise, their firm remains a "low type." The expected liquidating dividend paid by a high type firm is larger than that paid by a low type firm, but the realized amount of the dividend is also affected by chance. After making their investment decisions, student-managers issue a disclosure to potential student-investors regarding their firm's type. The disclosures need not be truthful. The instructor then conducts a market for each firm. If a sale occurs, the buyer receives a claim to the firm's liquidating dividend. As explained below, we choose parameters so that the expected increase in the dividend associated with the investment exceeds the manager's private cost of investing. Therefore, the investment has social value. However, the manager alone bears the cost of the investment and cannot credibly signal whether he or she has made the investment. This experiment illustrates that the inability to observe the manager's investment leads to underinvestment relative to the socially optimal level.

2.2. Procedures

2.2.1. Materials

In this subsection we describe the materials necessary for one market. The instructor inserts one index card into each of four unsealed envelopes. In addition, the instructor keeps six more index cards on hand. The instructor marks the four envelopes containing the index cards A through D, and marks the additional index cards one through six. The instructor prepares a set of random numbers ranging from zero to nine. The set of random numbers should contain at least four numbers for each market the instructor plans to conduct. We suggest conducting at least two markets. Each market involves four sellers and six buyers, so it is usually feasible for instructors to conduct enough markets to allow all class members to actively participate, if so desired.

2.2.2. *Participants*

Preserving student anonymity is important when conducting this experiment, because students might attach a cost to having been discovered as an untruthful discloser. For control reasons, we do not want this cost to affect student behavior. The instructor distributes one envelope, identification down, to each of four students. These four students are sellers of their firm's liquidating dividend. The instructor then distributes one index card, identification-down, to each of six other students. These six students are potential buyers of the firm's liquidating dividend.

The instructor informs the students as follows. Each seller must decide whether or not to make an investment in a firm project. The cost of the investment is 20. If the seller makes the investment, the firm becomes the high type; otherwise, it remains a low type. The high type yields a dividend of 100 with probability 0.9 and 0 with probability 0.1. The low type yields a dividend of 100 with probability 0.1 and 0 with probability 0.9.

Sellers mark down an investment choice on their index card. They each place the index card back in the envelope and seal it. Subsequent to sealing the envelopes, the sellers make disclosures to potential investors regarding their firm type, which the sellers alone now know with certainty. Sellers may disclose their firm's type as high or low, regardless of their investment choice – that is, the disclosures need not be truthful. Sellers mark their disclosures on the outside of the envelope on the same side as the letter identification. The instructor collects the envelopes from the sellers and randomizes their order to preserve anonymity. At this point, the buyers and sellers are uncertain of the amount of a firm's liquidating dividend.

2.2.3. *Asset Market*

A market for the assets then takes place using a first-price, sealed-bid mechanism. The instructor announces a seller identification letter and its corresponding disclosure for the first asset. Buyers write their bids on their index cards for that asset. The instructor repeats the procedure for each asset. After completing the bids for the fourth asset, the instructor collects the six index cards from the buyers and randomizes their order. At this time, the instructor alone opens and inspects the seller envelopes, and calculates the dividend values contingent on asset type and a draw from the table of random numbers that the instructor prepared in advance. That is, for high-type firms, a random number of zero yields a dividend of 0 and a random number between one and nine yields a dividend of 100. Thus, for a high-type firm, there is a 90% chance that the dividend will be 100. For low-type firms, a random number between zero and eight yields a dividend of 0 and a random number of nine yields a dividend of 100. The instructor should

Table 2. Presentation of Results of Facilitation of Investment Experiment
(Based on an Actual Classroom Experiment).

Asset A	Asset B	Asset C	Asset D
Disclosure: High	Disclosure: Low	Disclosure: High	Disclosure: High
Sale Price: 85	Sale price: 30	Sale price: 80	Sale price: 70
Dividend: 0	Dividend: 0	Dividend: 100	Dividend: 0
Total number of investments made = 2			
Total expected surplus if seller made investment for all assets: $4(70) = 280$			
Total expected surplus given the actual number of investments made: $2(70) + 2(10) = 160$			

draw a different random number for each asset. The instructor announces to the class the winning (highest) bids for each asset, as well as the dividend amount.

The instructor should display to the class each asset-specific disclosure, sale price, and dividend outcome, as well as buyer and seller identity (using the letter and number codes). The instructor then reveals the *total* number of investments to the class, taking care not to reveal the *individual* seller’s investment decisions and whether their disclosures were truthful.

Table 2 displays the results of an actual classroom experiment performed at a major public university. It reveals that two investments were made but three sellers disclosed their asset type as being high. This indicates that one seller did not disclose truthfully. Note that the instructor in this case did not indicate which of the three sellers who reported a high type firm was dishonest. Students calculate profits as shown below:

$$\begin{aligned} \text{Seller Profit} &= \text{Price Paid for Asset} - \text{Cost of Investment Made} \\ \text{Buyer Profit} &= \text{Dividend} - \text{Price Paid for Asset} \end{aligned}$$

Thus the seller’s profit, if he or she made the investment in Asset A, would be $85 - 20 = 65$ (numbers are from Table 2). The seller’s profit if he or she did not make the investment in Asset A would be 85. The buyer of Asset A realized a loss of 85, because the dividend turned out to be zero. The instructor should not reveal the seller’s level of profit, because the seller’s actions may be inferred from their profit. Students should keep track of their earnings privately.

2.3. Discussion

We chose parameters so that the investment would yield an incremental increase in expected surplus to the economy. Without investment, each asset contributes

an expected surplus of 10, which is the expected value of the dividend for a low-type asset = $0.90(0) + 0.10(100)$. If the seller makes an investment, the expected surplus is 70, calculated as the expected value of the dividend for a high-type asset of $0.10(0) + 0.90(100)$ minus the 20 cost of investment.

To illustrate the loss to the economy due to non-investment, instructors can use the results from the in-class markets. For example, the first calculation in the bottom panel of Table 2 shows the expected surplus if all four sellers invested in their assets, which is equal to 280 (four assets at an expected surplus of 70 each). The second calculation shows the expected surplus given the investments actually made in the market. Two sellers invested, so the expected surplus is $2(10)$ for the two low-type assets plus $2(70)$ for the two high-type assets, for a total expected surplus of 160. Thus, non-investment caused a reduction in expected surplus of 120 for this actual in-class market.

Class discussion should focus on why sellers might choose not to invest, to the detriment of the economy as a whole. Sellers can increase the value of their assets by 60 by making the investment. Buyers would be willing to pay more for a high type firm. However, given that even sellers who do not make the investment can claim their firms are the high type, the disclosures are not useful. Therefore, buyers should pay the same amount for all firms regardless of the disclosure. Sellers realize that even though the investment increases the value of the firm (net of investment), the buyers will not pay any more for a firm that has chosen the investment, because buyers do not know whether the investment has been chosen. Therefore, investing causes the seller to lose 20 relative to not investing. In response, sellers do not invest. The buyers realize that sellers will not invest and appropriately bid an amount for each firm that assumes the seller has not made the investment.¹ This analysis indicates that, in equilibrium, the loss in expected surplus is 240, which is the total available surplus of 280 minus the expected surplus if no sellers invest of $40 = 4(10)$.

One risk of using actual in-class market data is that the data might depart significantly from equilibrium predictions. Sometimes students invest because they perceive an obligation to help the class in general. This may be especially likely when students are accustomed to working in teams. The instructor should discuss with the class why actual market participants might not be guided by the same "benevolence." However, in our experience it is unlikely that such benevolence would occur in all markets, even in a classroom setting.

In this experiment, as in the trade-facilitation experiment, a demand for assurance services arises. If sellers could credibly signal the expected value of their asset, it would be worthwhile for them to make the investment. Another similarity with the trade-facilitation experiment is that usually students readily see the potential role of an assurance service, and we therefore find no need to conduct

a market with auditing present. If instructors desire to demonstrate the role of auditing, the instructor can conduct a market with auditing present. To demonstrate the benefits of perfect auditing, before collecting the bids some student-auditors can examine sellers' cards and report whether a seller's disclosure appropriately reflects the investment decision. To demonstrate imperfect auditing, the student-auditor could privately roll a die, reporting accurately for high-type disclosures only if the die roll is two through six. For low-type disclosures, the student-auditor would always report accurately. The class can compare the number of investments made in the non-auditing market (as in Table 2) with the number made in the auditing market as another measure of the value of auditing.

In contrast to the trade-facilitation experiment, whose best analog is the IPO market, this experiment focuses on established entities where there is separation between management and ownership. The separation between ownership and management, which decreases the visibility of management actions, provided the rationale for auditing in its earliest phases (Pany & Whittington, 1997, pp. 9–10). The instructor can use the experiment to facilitate the discussion of the role of an independent auditor in promoting the efficient use of economic resources.

3. AUDITOR BIDDING

3.1. Learning Objectives and Introduction

This experiment illustrates conditions that induce auditors to intentionally underbid for new audit clients. Given the difficulty of including a meaningful audit task, the experiment simply focuses on the bidding process. We leave the potential effects of auditor underbidding on audit quality and independence for post-experiment classroom discussion.

Researchers agree that intentional auditor underbidding, referred to as lowballing, can and does occur. However, its prevalence and implications are less agreed upon. For this reason, we provide a brief review of the literature below.

Lowballing has been examined through theoretical analysis (DeAngelo, 1981; Dye, 1991; Kanodia & Mukherji, 1994), experimental markets (Dopuch & King, 1996; Schatzberg, 1990, 1994) and archival data (Ettredge & Greenberg, 1990; Palmrose, 1986; Simunic, 1980). These studies generally assume that auditor switching involves transaction costs, such as start-up costs in the initial year of an engagement and search costs for a client seeking to hire a new auditor. In theory auditors foresee that, due to the presence of such transactions costs, if they become an incumbent auditor they can extract economic rents from a client subsequent to the initial year of the engagement. Therefore, in a competitive market for audit

services, the equilibrium bid is below the expected cost of the audit for the initial year of an engagement.

The chief concern of audit regulators and researchers regarding lowballing is its effect on auditor independence. The quasi-rents to be collected by the incumbent auditor in years subsequent to the initial year may be thought of as an implicit receivable from the client. The ability to collect this receivable is contingent on retaining the client. Auditors, fearing dismissal by the client, might be more willing to issue reports favorable to the client in the first year of an audit, thus compromising audit quality.

The experiment illustrates lowballing that occurs from underbidding on initial audit engagements to extract rents from auditing the client in future years. It does not address underbidding on the audit to obtain or retain consulting engagements. Prohibitions on auditors performing consulting services, such as in the Sarbanes-Oxley Act of 2002, will likely deter underbidding to obtain consulting services. However, this Act will have little effect on lowballing that occurs, because startup and other transactions costs allow auditors to set audit fees so as to extract economic rents in subsequent years.

Given the lack of available archival data, empirical studies of the effect of lowballing on auditor independence have been conducted primarily within the laboratory. The results thus far are inconclusive. Schatzberg and Sevcik (1994) report impaired independence when the expected benefits of such impairment exceed the expected costs. Dopuch and King (1996) report a reduction in audit quality when lowballing is imposed on auditors, but not when lowballing emerges from market activity. Davis (1987) also reports a mild impairment of independence associated with lowballing. Given the restrictions used in both the Schatzberg and Sevcik and the Dopuch and King studies, and the lack of conclusive evidence found in the Davis study, the ability to generalize from these results remains in question. As mentioned, the experiment described below only addresses the issue of why lowballing occurs and leaves the effects of lowballing to classroom discussion.

3.2. Procedures

3.2.1. Materials

For each market, the instructor prepares three index cards numbered from one to three.

3.2.2. Participants

The instructor should choose three students to play the role of a potential auditor and distribute to each of them one index card. In order to include more students,

the instructor may form teams. The instructor should tell the students that a client has asked several auditors to submit bids for an audit engagement. The cost of the audit is 50, and this cost is identical for each auditor. However, in the first year of the engagement, the auditor will incur an additional 50 as a start-up cost. The bidding takes place in two-year rounds. In year one, there is assumed to be no incumbent auditor. Therefore, in the first year of the engagement the auditor will incur a cost of 100. In the second year the incumbent auditor, if re-hired, will incur a cost of 50, whereas any of the non-incumbent auditors will incur a cost of 100.

3.2.3. Market

Each year the three potential student-auditors submit bids for the audit engagement. At the beginning of year one, the instructor requests that each auditor write down a bid on the index card. The potential auditors should write down their bids simultaneously and privately. The instructor then collects the index cards and informs the class of the winning (lowest) bid and the auditor number. In the case of ties, the instructor randomly chooses one auditor from among those tied. The first year profit for the chosen auditor is $Bid-100$. All other auditors earn zero for the period.

The instructor begins the second year by re-distributing the index cards to the auditors and requesting the submission of second-year bids. The same procedure that was used for the first year is used to record the second-year bids. The instructor collects the cards and informs the class of the winning bid and auditor. In the case of ties involving the incumbent auditor, the incumbent auditor retains the engagement. Auditor profits in the second year are $Bid-50$ if the client rehires the incumbent auditor or $Bid-100$ if the client hires a non-incumbent.

We have found that it sometimes takes more than one round for lowballing to occur, so we suggest conducting several two-period rounds with the same student-auditors. If desired, the instructor may conduct another market with different student-auditors. Table 3 presents results from an actual classroom experiment run at a major public university.

3.3. Discussion

In this experiment we expect that lowballing will emerge, as it is part of equilibrium behavior. The intuition, which the instructor should explain in class, is as follows. In year two, the incumbent auditor should bid 100 – any bid below 100 will unnecessarily reduce second year profits, and any bid above 100 would allow non-incumbent auditors to undercut the incumbent auditor's bid at a profit. Therefore, the expected profit to the incumbent auditor in year two is 50. Given that the value of incumbency in the second year is 50, an auditor should be willing to incur up to

Table 3. Presentation of Results of Auditor Bidding Experiment (Based on an Actual Classroom Experiment).

	Auditor–Bidder 1	Auditor–Bidder 2	Auditor–Bidder 3
Round 1			
Year 1 Bids	85	120	80 Profit: –20
Year 2 Bids	101	110	85 Profit: 35
Round 2			
Year 1 Bids	75	52 Profit: –48	90
Year 2 Bids	120	99 Profit: 49	100
Round 3			
Year 1 Bids	54	55	52 Profit: –48
Year 2 Bids	100	100	99 Profit: 49

Note: First-year audit cost is 100; Second-year audit cost is 50.

a 50 loss in the first year in order to gain the second-year incumbency. A potential auditor cannot bid less than 51 in the first year and expect to earn a positive two-year profit, so the equilibrium first-year bid is 51. To summarize, we expect a first-year winning bid of 51 and a second-year winning bid by the incumbent auditor of 100, yielding a two-year profit of 1. The results in Table 3 for rounds 2 and 3 are close to theoretical expectations.

In the experiment, we have limited the role of the auditor to bidding. Further, we did not design the experiment to illustrate an impairment of auditor independence, in part because no research has provided convincing evidence that lowballing leads to impaired independence. However, instructors should ask students to discuss the possible effects of underbidding on the rendering of audit opinions and the level of audit testing.

4. AUDITOR RESPONSE TO LITIGATION

4.1. Learning Objectives and Introduction

This experiment exposes students to the tradeoffs faced by audit firms when formulating a strategy to deal with legal liability. Students learn that the long-term

cost of having acquired a reputation as a quick settler might exceed the short-term benefit of having obtained a quick settlement.

Despite important legal victories gained by the auditing industry in recent years (Cloyd et al., 1998), audit firms maintain that the cost of defending themselves against meritless suits is exorbitant. Audit firms often find themselves facing a situation where it is less costly in the short run to settle legal claims quickly than to vigorously defend themselves, even if they are reasonably confident of a successful defense. However, audit firms must balance the short-run cost savings from quick settlements against reputation effects, such as an increased belief by potential litigants that audit firms are easy targets (Alexander, 1991). In some instances, auditors may find that the short-run costs of vigorous legal defense are more than compensated for by the decreased likelihood of facing frivolous litigation in the future.

The game shown in Fig. 2 parsimoniously captures the liability situation described above. Given these payoffs, it is equilibrium behavior to establish a reputation as one who will fight rather than settle potential lawsuits. This game was originally formulated to describe the behavior of a monopolist in several different markets and was hence dubbed the “chain-store” game (Selten, 1978). The game consists of two persons, a plaintiff and an auditor-defendant. The plaintiff, who is assumed to have a weak case, moves first. The plaintiff must decide whether to sue the auditor-defendant; if the plaintiff chooses not to sue (option *B*), the plaintiff receives a payoff of eight and the auditor receives a payoff of four. If the plaintiff chooses to sue (option *A*), the payoff is contingent on what the auditor chooses to

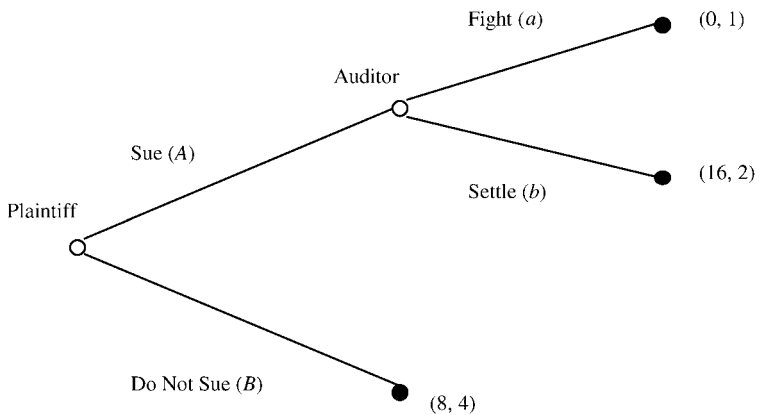


Fig. 2. Auditor Litigation Game. *Note:* Parentheses contain plaintiff’s payoff and auditor’s payoff, respectively, for the given nodes. Open circles represent decision nodes; filled-in circles represent end-of-round nodes.

do. If the auditor chooses to fight (option *a*), the plaintiff receives nothing and the auditor receives a payoff of one. The plaintiff's payoff is zero, because the case is weak and so the plaintiff would lose the suit; the auditor's payoff is relatively low, because the auditor incurs costs in defending the case. If the auditor decides to settle (option *b*), the plaintiff receives 16 and the auditor receives two. The plaintiff receives a payoff greater than eight, because the weak case is not brought to trial and thus the plaintiff receives the settlement amount. The auditor receives a payoff of more than one because the auditor incurs no legal costs, but less than four because the auditor has paid a settlement.

Often auditors might be able to minimize their expected losses to a single litigant by quickly settling cases with the plaintiff, regardless of the merits of the case. This would appear to be the optimal solution if the auditor-defendant faced this situation only once. However, auditors face the continual threat of litigation. Therefore, a strategy of always settling might encourage the initiation of additional litigation against the auditor. Instead, audit firms may choose to pursue a long-run strategy of vigorously defending themselves against litigation in order to discourage less meritorious suits from being initiated. This experiment captures the auditor's tradeoff between short-term loss minimization and investing in a reputation for refusing to settle lawsuits out of court by having students act in the role of the auditor-defendant who faces a series of potential plaintiffs.

4.2. Procedures

4.2.1. Materials

No specific materials are required for this experiment. The instructor can simply present Fig. 3 to the class and explain the payoff structure. Figure 3 is similar to Fig. 2, with the labels changed.

4.2.2. Participants

The instructor selects one student to be the *Y* player (*Auditor-defendant*). The student remains in this role until the game ends. The remaining students in the class are *X* players (*Plaintiffs*). If desired, the instructor may use teams of students as the *Y* player and each *X* player. In this experiment we believe it is important to avoid role-playing, so we recommend that the players be abstractly referred to by the letters *Y* and *X*. Only after all rounds of all the auditor-litigation games should *Y* be equated with auditors and *X* with plaintiffs.

4.2.3. Game

Play proceeds as follows. At the start of each round, the instructor matches *Y* with a different *X* player. The instructor asks *X* whether *X* wants to choose option A or

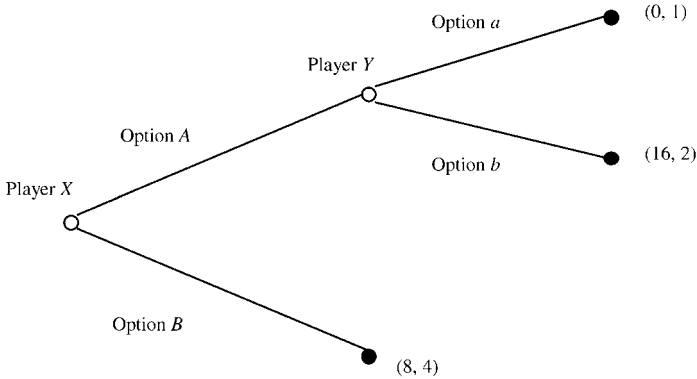


Fig. 3. Payoff Structure for Use in Class. *Note:* Parentheses contain Player X's payoff and Player Y's payoff, respectively, for the given nodes. Open circles represent decision nodes; filled-in circles represent end-of-round nodes.

B. If X chooses option B the round ends, and players X and Y receive their payoffs (eight and four, respectively). However, if X chooses A, then Y chooses either *a* or *b*. The round then ends, with players receiving their payoffs.

The instructor then initiates another round. Students know in advance that there will be at least three rounds; that is, in each game, the Y player will encounter three X players with certainty. This gives the Y player a chance to develop a reputation for fighting, if Y desires. After Y has met three different X players, the instructor flips a coin. If heads occurs, the game continues to the next round with Y and the next X player; if tails, the game ends. This procedure continues until the coin flip turns up as tails.

We implemented this classroom experiment at a major public university. We conducted five games. In order to involve the entire class, we formed a group of four students who acted as the Y player and collectively decided upon a strategy. Each X player was a single student. In two of the five games, the Y players succeeded in establishing a reputation for playing *a* given a choice of A by the X players. In these two games, X players chose not to sue (B) in subsequent rounds. In the other three games, the Y players made no attempt to establish a reputation, repeatedly choosing to settle (*b*) after a choice of A by the X players. One might consider this particular set of results as typical, because it is consistent with laboratory experiments on reputation formation (King, 1996).

After administering the experiment, we distributed a short questionnaire designed to gauge the effectiveness of the experiment in illuminating certain aspects of the underlying economic context of auditor litigation. We chose this particular experiment to administer the questionnaire, because it was the only one

of the four in which every member of the class made at least one payoff-relevant decision. In addition, the game is the most abstract of the four experiments. This class contained 32 sophomores in the accounting honors program. More than 90% answered that: (1) they had not given any thought to the issue of auditor litigation prior to participating in the experiment; (2) participating in the experiment changed their view of how to play the game (relative to having the game described to them); and (3) participating in the experiment helped them formulate a view on how auditors should respond to litigation. Four of the students indicated they did not fully understand the payoff implications or long-term aspects of the game before they were asked to make decisions. Sixteen expressed confidence that auditors should establish a reputation for fighting to ward off future lawsuits.

4.3. Discussion

The instructor should focus class discussion on the role of reputation formation by comparing the single-round scenario with a repeated-round scenario. For the single round, the payoff structure in Figs 2 and 3 indicates that the auditor is best off if the plaintiff chooses not to sue (auditor payoff = 4). The plaintiff, however, is better off suing if he or she could be sure that the auditor would settle. The plaintiff knows that if a lawsuit is initiated the auditor has a higher payoff from settling, so the plaintiff is likely to sue. This analysis assumes that there is only one round; i.e. the auditor has no opportunity to develop a reputation for fighting.

If the auditor has a chance to develop a reputation for fighting, a different equilibrium (self-enforcing solution) may exist. For example, an equilibrium exists in which it is credible that the auditor would choose to fight (option *a*) every lawsuit and, in anticipation, plaintiffs never sue (always choose option *B*).² The payoffs in Fig. 3 give rise to this equilibrium, assuming that there is a sufficient likelihood of reaching the next round and the auditor's history of decisions is known to all future plaintiffs.

The payoffs in Fig. 3 are all non-negative; that is, students can incur no losses. Some instructors may believe that this is not reflective of the litigation environment, and may wish to change the payoffs to incorporate losses. To the extent that humans react differently to losses than to gains, this may a worthwhile modification (Kahneman & Tversky, 1979). However, if the payoffs are changed, the instructor should ensure that an appropriate equilibrium exists. Also, incorporating losses may be problematic if extra credit points are used as compensation (see Section 5.2).

If one considers a lawsuit against an audit firm in isolation, without taking into consideration the effect on future litigation, auditors face considerable pressure to

settle a case. First, attorney fees for even a successful defense are exorbitant (Pany & Whittington, 1997, p. 135). Second, the perceived quality of that firm's audits might be diminished by a highly visible trial. Third, liability coverage is structured such that firms have an incentive to settle class-action suits (Alexander, 1991). Finally, auditors may be concerned that juries will not understand the intricacies of the auditing environment. The threat of litigation is ongoing, and, owing to their size, quick settlements made by audit firms are likely to be publicized within the legal community. Hence, the auditor faces a conflict between early settlement of litigation and the detriment of future legal actions from potential claimants. This experiment is designed to capture the essence of this conflict.

5. ADDITIONAL CONSIDERATIONS

5.1. Anonymity

Experiments conducted by Hoffman et al. (1996) and Bohnet and Frey (1999), among others, have shown that the perceived degree of anonymity might affect participant behavior. These studies focus on settings wherein specific allowable behaviors are considered unethical. When experiments are ethically neutral, preserving anonymity might not be important. Classroom experiments investigating ethically neutral market behavior have been conducted without consideration of student anonymity as far back as Smith (1962).

Of the four experiments we describe, only the investment-facilitation experiment appears to involve unethical behavior by the participants. Therefore, we developed the experiment in such a manner as to preserve participant anonymity to the greatest extent possible. Preserving anonymity in the other three experiments was not considered necessary.

5.2. Compensation

When conducting economics experiments for scientific purposes, participant remuneration should be both salient to the decisions being studied and dominant when compared to other incentives present (Davis & Holt, 1993, pp. 24–26). Within reasonable bounds, classroom incentives should also satisfy these conditions. In general, instructors may choose from three forms of compensation for classroom experiments: monetary, extra credit, or hypothetical.

Recommendations in the literature regarding the use of monetary incentives in classroom experiments are not uniform. DeYoung (1993) points out that

monetary compensation for in-class experiments can be considerably less than for experiments run outside the classroom, because participants in classroom experiments do not have to be compensated for the opportunity cost of their time. Moreover, Holt (1999) argues that explicit payments might not be necessary at all in the classroom. He purports that during classroom experiments students tend to act rivalistically with their classmates, perhaps even more so than in an isolated laboratory environment. Holt suggests that, if monetary incentives are used, the instructor should choose a single student at random subsequent to running the experiment, who would be paid a percentage of his or her experimental points.

The use of extra credit points as compensation might be more problematic. Although DeYoung (1993, p. 341) states that “extra-credit points might also be an adequate incentive,” Holt (1999, p. 606) points out that, “The use of extra credit points as incentives becomes much more controversial because fairness becomes a constraint.” He goes on to add that “the instructor might not want to base grade increments on trading skills or the cooperativeness of trading partners . . .”

Given these concerns over the use of monetary and extra credit rewards, and the apparent efficacy of hypothetical incentives in most circumstances, we recommend eschewing the use of explicit incentives in all but the auditor litigation setting. In the first three settings, our experience is that hypothetical payments are sufficient to induce conscientious play. In the litigation setting, we have found that if the experiment is administered using small amounts of compensation, play by both *Y* players and *X* players is over-aggressive. When using small amounts of compensation, our experience is that often the *Y* player tries to establish a reputation for fighting, but the *X* players continue to sue.³ However, when we used extra credit points, if the *Y* players established a reputation for fighting, the *X* players would not sue.

5.3. Level of Student Participation

If possible, all students in the classroom should participate in the experiments. We observed that students put greater thought into the discussion when they had been participating actively in the experiments, consistent with the value offered by experiential learning. Sometimes time constraints will not permit enough games to be played, and some students will act only as observers. We have noticed that these students still derive benefit by witnessing the market behavior, and some of the observers are important contributors to the class discussion following the experiments. Based on our experience, all students, even those acting only as observers, can potentially benefit from these experiments.

5.4. Relation to other Classroom Auditing Experiments

Boylan (2000) has developed classroom experiments related to trade and investment facilitation. Although the first two experiments illustrate the same points as Boylan, we designed them so that the instructor can integrate them into the classroom more efficiently. For example, to conduct markets to illustrate trade facilitation using the Boylan trading markets (2000, pp. 56–57), both with and without auditing, takes two full class periods. Further, even after two class periods of markets, some students would never play the role of seller. Boylan's production markets, which illustrate investment facilitation, would take another two full class periods. In addition, the instructor set-up is much more time-consuming for Boylan's experiments. Finally, Boylan's experiments require the instructor to analyze the results outside class, prepare exhibits, and report the results during a subsequent class meeting. With the experiments described in the current paper, results are available immediately after the experiment has been conducted and can be discussed in class while the students are still engaged.

6. CONCLUSION

This paper presents four classroom experiments designed to enhance students' learning experience in auditing courses. Our goal in presenting these experiments is to increase student interest and understanding of the audit environment. The experiments presented herein may be used to introduce such topics as the social value of auditing, auditor liability, new client acquisition, and the importance of auditor independence.

NOTES

1. In the market described in Table 2, bids for high disclosure indicated that buyers generally believed the sellers' disclosures. As described earlier, one of the disclosures was false. The bids for high disclosures and low disclosures tend to converge after several markets.
2. The authors can provide a proof of the existence of this type of equilibrium upon request.
3. We also have used payment in the form of nickels as an incentive.

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ANTI-FRAUD EDUCATION IN ACADEMIA

Bonita K. Peterson and Thomas A. Buckhoff

ABSTRACT

Leaders in the accounting profession are calling for more anti-fraud education of accounting students, due in large part to the recent spate of corporate scandals involving accounting frauds. Prior research indicates that very few universities offer significant fraud-related education in their accounting curriculum. Accordingly, accounting academics should revise the curriculum to include a mandatory course in fraud examination. Those educators who fail to adopt such a course will continue to graduate students who are ill prepared to meet the challenges of an increasingly unethical business world. To assist instructors committed to offering a dedicated course in fraud examination, this paper examines a comprehensive fraud examination course that has evolved and matured over the past several years. We describe the course enrollments, objectives, content, assignments, and grading. Specific course materials, such as PowerPoint slides and a comprehensive final exam, are available from the second author upon request.

Recent accounting frauds such as those involving Adelphia, Enron, Global Crossing, Tyco, WorldCom, and Xerox have wiped out tens of billions of dollars in shareholder value and have created a major crisis of confidence in the accuracy and reliability of financial reporting. In addition, thousands of people have become

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unemployed and/or were left with little or no retirement money. Although a complex combination of factors has contributed to this increasingly volatile situation, a large part of the responsibility belongs to the accounting profession for its ineffectiveness in recognizing fraudulent financial reporting. Unfortunately, these corporate scandals may constitute a trend rather than an anomaly (Albrecht & Searcy, 2001, p. 58). The Association of Certified Fraud Examiners (ACFE) estimates the cost of fraud to be \$600 billion in the United States alone or 6% of total revenues (ACFE, 2002, p. 4).

REASONS TO OFFER A DEDICATED COURSE IN FRAUD EXAMINATION

In recognition of the gravity of the fraud problem presently facing the profession, Barry Melancon – the President and CEO of the American Institute of Certified Public Accountants – called upon accounting educators to provide students with “the knowledge and skills to understand the fundamental characteristics of fraud, identify factors that may indicate it exists, and acquire enhanced interviewing techniques” (Melancon, 2002, p. 30). In addition, Joseph T. Wells, Chairman and Founder of the ACFE, recently implemented the ACFE’s Higher Education Program. Under this program, the Association offers numerous anti-fraud training materials free of charge to instructors who agree to teach a three-credit fraud examination course (Carozza, 2002, pp. 32–33). We believe that accounting programs should add a dedicated course in fraud examination to the accounting curriculum for three reasons.

Prepare Students Effectively for Accounting Careers

As accounting educators we have a fiduciary duty to educate and prepare accounting students for the profession they will soon enter. The seemingly endless stream of accounting frauds has exposed the profession’s ineffectiveness in detecting, investigating, and preventing fraud in today’s increasingly unethical business environment. Prominent business journalists have questioned the accounting profession’s ability to ensure the accuracy and reliability of financial reporting. Consider the following quotes from the *Wall Street Journal*, historically an avid supporter of the accounting industry:

- In order to boost revenues from consulting services, “the ancient profession sacrificed the public confidence that underpinned its reputation. Now,

accountants wallow at the bottom among professions in public-opinion polls they topped 20 years ago” (Dugan, 2002, 1).

- “The issue is whether the accounting industry has learned anything from its recent travails. One of its venerable giants is out of business, and PricewaterhouseCoopers is being investigated as the auditor for the ‘criminal enterprise’ that prosecutors now say Tyco has become” (*Wall Street Journal*, 2002).

To win back public confidence, educators need to make dramatic changes. Given the current state of the profession, they must include in the required accounting curriculum at least one course examining the detection, investigation, and prevention of fraud. The topic is too important and too extensive to ignore or to include as a part of another course. If they fail to provide future accountants with anti-fraud knowledge and skills, auditors and accountants may be replaced by other professionals, such as certified fraud examiners, who do have the knowledge and skills to combat fraud.

Improve Curriculum

Second, academic institutions increase the quality and breadth of their curriculum by adding a course dedicated to fraud examination (Buckhoff & Schrader, 2000, p. 139). Fraud examination requires a diverse combination of skills that are consistent with recommendations by both the Accounting Education Change Commission (AECC, 1990, pp. 311–312) and the Association to Advance Collegiate Schools of Business (AACSB, 2002, p. 17). Students will develop quantitative skills (e.g. financial expertise), qualitative skills (e.g. report writing, testifying, interviewing, considering ethical issues), and critical thinking skills. Finally, a fraud examination course can help accounting programs satisfy the 150-hour requirement.

Better Employment Opportunities

Third, students armed with anti-fraud knowledge and skills enhance their employment opportunities after graduation. A recent cover story in *U.S. News & World Reports* listed “forensic accountant” as one of the eight most secure career tracks in the country (Levine, 2002, p. 46). The article reported that nearly 40% of the top 100 accounting firms are expanding their fraud-related consulting services. Employment opportunities outside of public accounting

include loss prevention/security, internal audit, law enforcement, and a number of federal agencies including the Federal Bureau of Investigation (FBI), Internal Revenue Service Criminal Investigation Division (IRS-CID), Bureau of Alcohol, Tobacco and Firearms (ATF), Drug Enforcement Agency (DEA), and Secret Service (SS). Even if students do not choose a “forensic accountant” career path, those who can combat fraud effectively will become better professionals in any number of business-related career paths. A fraud examination course teaches techniques in interviewing, examining documents, searching public records, and using technology. These skills will help students become auditors, managers, tax professionals, or consultants.

We have organized the remainder of this paper as follows. First, we review prior research that explores the extent to which anti-fraud education has permeated the accounting curriculum. Second, we discuss in detail a fraud examination course that has evolved and matured over several years. Finally, we present conclusions and recommendations regarding anti-fraud education in academia.

PRIOR RESEARCH

Researchers have studied various fraud-related issues that affect auditors (AAA, 2001, pp. 3–5; Nieschwietz et al., 2000, p. 190) and we present a summary of many of these empirical studies in Table 1.

The teaching of fraud examination is a subject that researchers have not extensively studied (Rebele et al., 1998, p. 37). Prior research indicates that the extent of anti-fraud education offered in accounting curricula across the country is extremely limited. Groomer and Heintz (1994, p. 103) discovered that six of 19 internal auditing courses surveyed include coverage on employee and management fraud. However, the coverage was limited, averaging 8.2% of the total class time. Rezaee et al. (1996, p. 151) found four universities that offered a separate forensic accounting course, and described those courses in detail.

A more recent national survey found that most respondents indicated that they include fraud topics to some extent in their accounting curricula (Peterson & Reider, 1999, p. 24). Of the accounting programs that included fraud-related education, most programs covered fraud subjects in a first auditing course or an advanced auditing course. However, these courses spent only an average of 6.7 hours per term on fraud topics. This study did report that 13 universities had developed a specific course on fraud. Buckhoff and Schrader (2000, p. 140) also identified 13 universities with a specific fraud examination course. Not all of these universities were identical in both studies, resulting in a total of 19 accounting programs identified as offering a specific fraud course.

Table 1. Summary of the Academic Fraud-Related Literature.

Issue	Studies
Do auditors pay only lip service to fraud detection?	Cullinan and Sutton (2002)
What audit procedures and training should auditors implement to prevent fraudulent financial reporting?	Erickson et al. (2000)
Is the concept of a separate fraud risk evaluation appropriate?	Zimbelman (1997), Knapp and Knapp (2001)
What are the most important factors that may be indicative of fraud?	Albrecht and Romney (1986), Loebbecke et al. (1989), Pincus (1989), Hackenbrack (1993), Dechow et al. (1996), Summers and Sweeney (1998), Hansen et al. (1996)
Can auditors weight the identified fraud indicators or put them into a model?	Hackenbrack (1993), Bell and Carcello (2000)
Should auditors rely on controls when risk factors are present?	Matsumura and Tucker (1992), Bloomfield (1997), Caplan (1999)
What “lessons” for auditors have researchers identified by examining data on prior fraud litigation and SEC enforcement actions?	Palmrose (1987), Bonner et al. (1998), Erickson et al. (2000)
How can the profession promote more “professional skepticism” among auditors?	Bernardi (1994), Hoffman and Patton (1997)
Would a requirement for management reports on controls or an auditor opinion on controls provide an effective deterrent to fraud?	Hermanson (2000)
Can auditors use new technologies to improve fraud detection?	Eining et al. (1997), Green and Choi (1997)
Can decision aids assist in fraud risk assessments?	Boatsman et al. (1997), Pincus (1989)
Are communication “hot lines” an effective deterrent to fraud?	Hooks et al. (1994), Schultz and Hooks (1998)
Can auditors use analytical procedures better to detect fraud warning signals?	Calderon and Green (1994), Summers and Sweeney (1998), Church et al. (2001)
How do time pressures affect auditors’ ability to detect fraud?	Braun, 2000
Is there a significant relationship between corporate governance and fraud?	Beasley (1996), McMullen (1996)
What individual differences affect auditors’ judgments about fraud?	Bernardi (1994), Pincus (1990)

Subsequent research examined the content and learning activities used in these fraud examination courses (Peterson & Reider, 2001, p. 28). Sixteen of these 19 institutions responded to a request for syllabi. A review of this information revealed that the fraud examination course offered at North Dakota State University had the

most detailed and comprehensive syllabus. Consequently, we examine this course in detail in the following section.

FRAUD EXAMINATION COURSE AT NORTH DAKOTA STATE UNIVERSITY

The fraud examination course at North Dakota State University (NDSU) has evolved and matured over several years. We have organized this section as follows. First, we discuss course enrollments and placement in the curriculum. Second, we provide the course objectives and discuss the course content. Third, we examine assignments and other learning activities, along with how the instructor measures students' mastery of the course objectives. Finally, we present and discuss students' reactions and evaluations of the course.

Enrollments and Placement in the Curriculum

In the summer of 1997, NDSU offered for the first time a course entitled "Forensic Accounting." During 2001 the instructor re-named the course "Fraud Examination" because the latter term more accurately reflects the course content and appeals more to criminal justice majors, who tend to be intimidated by the word "accounting." Many people incorrectly use the terms "forensic accounting" and "fraud examination" interchangeably. Forensic accounting includes the application of accounting principles, theories, and discipline to facts or hypotheses at issue in a legal dispute and encompasses every branch of accounting knowledge. The Association of Certified Fraud Examiners (ACFE), which compiled the body of knowledge encompassed by fraud examination, defines occupational fraud and abuse as "the use of one's occupation for personal enrichment through the deliberate misuse or misappropriation of the employing organization's resources or assets" (ACFE, 2002, p. 2). Forensic accounting typically comprises any accounting work done in anticipation of litigation (e.g. bankruptcies, marital disputes, business valuations/interruptions, civil lawsuits, criminal prosecutions, etc.), whereas fraud examination is a subset of forensic accounting specifically concerned with the detection, investigation, and prevention of occupational fraud and abuse.

As evident in Table 2, student interest in this elective course has been strong. From 1997–2003, 217 students completed the course, with an average class size of 31 students. Based on average class size, the course is by far the most popular elective in the accounting curriculum. During that period, the instructor made

Table 2. Enrollment Trends in ACCT 410/610 – Fraud Examination.^a

Major	Su97	S98	F98	F99	F00	F01	F02	Total	%
Accounting	12	16	15	21	15	28	23	130	59.9
MIS	2	2	2	3	2	4	4	19	8.8
Business administration	2	3	3	4	3	5	4	24	11.0
University studies	1	2	1	0	1	1	1	7	3.2
Agricultural economics	1	1	1	2	1	2	2	10	4.6
Criminal justice	0	1	2	3	2	2	4	14	6.5
MBA	2	1	2	2	3	2	1	13	6.0
Total enrollments	20	26	26	35	27	44	39	217	100.0

^aBeginning in the 2002–2003 academic year, the instructor teaches an additional section every spring to accommodate the enrollment increase due to the requirement that criminal justice majors take the course.

numerous efforts to bring the fraud examination course to the attention of the criminal justice faculty. After becoming familiar with the course content, the criminal justice faculty unanimously decided to require the fraud examination course for their criminal justice majors.

Beginning with the 2002–2003 academic year, the instructor began to teach a second section of the course during the spring in order to accommodate the 40–50 additional criminal justice students expected to enroll in the course each year. Since the fraud examination course originates in the accounting department, total student credit hours delivered by the accounting faculty has significantly increased, due to the fact that it attracts so many non-accounting majors and does not “cannibalize” other accounting electives. As a direct result, the accounting department’s share of the university budget has proportionately increased. To encourage the accounting department to create and deliver a fraud examination minor, the university provost authorized the hiring of an additional professor in fraud examination. After the accounting department filled this position, the accounting faculty revised their curriculum to require the fraud examination course for all accounting majors.

At present, ACCT 410/610 – Fraud Examination is a senior-level elective for undergraduate accounting students and a graduate-level elective for MBA students. As pre-requisites, students must complete the first principles of accounting course and possess basic computer proficiency. Computer proficiency comprises familiarity with word processing, spreadsheets, the Internet and e-mail. Such minimal prerequisites make it possible for criminal justice majors and other non-accounting majors to enroll in the course.

Course Objectives

The course has three specific objectives: (1) to educate the student about both the pervasiveness of and the causes of fraud and white-collar crime in our society; (2) to explore in detail methods of fraud detection, investigation, and prevention; and (3) to increase the student's ability to detect material financial statement fraud. In addition, the course has the broader objective of contributing to students' professional development by increasing competencies in both written and oral communications, logical reasoning, problem solving, critical thinking, and computer skills. The course objectives are achieved through the use of reading materials, instructional videos, exercises, written assignments, and two team projects.

Course Content

The instructor teaches the class as a 15-week course, covering the topics listed in Table 3. Fraud research advocates the inclusion of many of these topics. For example, Luizzo (2000, p. 28) explains why a fraud examiner should be familiar with the criminal justice system, and several studies discuss the importance of accountants recognizing the symptoms of fraud (e.g. Albrecht, 1996, p. 26; Albrecht & Romney, 1986, p. 331; Pincus, 1989, p. 155).

Table 3. Fraud Examination Course Content.

Week	Topic
1	Introduction to course
	Extent and nature of fraud
2	Investigation of financial crimes and legal elements
3	Fraud perpetrators and their motivations: Fraud triangle
4	Accounting systems and the detection of fraud
5	Fraud symptoms
6	Evidence gathering: Sources of information
7	Theft act investigative methods
8	Concealment investigative methods/money laundering
9	Conversion investigative methods
10	Inquiry investigative methods: Interviewing skills
11	Other investigative methods
12	Concluding the investigation
13	Criminal justice system/White-collar crime
14	The prevention of fraud/A comprehensive fraud policy
15	Mock trial

To reinforce students' understanding of fraud examination, the instructor uses PowerPoint slides to organize and present lectures, which include the frequent use of case studies drawn from the instructor's personal experiences as a fraud investigator. The instructor created hundreds of PowerPoint slides for the course, which the second author is willing to make available to others upon request.

Interspersed throughout the course are reading assignments, instructional videos, exercises, and written assignments. Two team projects are due by the end of the semester. First, students complete a fraud examination project of their choice. Second, students participate in a "mock trial" held one evening in the local county courthouse. To receive graduate-level credit for the course, MBA students also must prepare a comprehensive fraud policy for a business of their choice. Guest speakers from the FBI, Drug Enforcement Agency, IRS Criminal Investigation Division, and the Bureau of Alcohol, Tobacco and Firearms are frequently used to share their professional experiences with the class.

Reading Assignments

The required course materials include two textbooks: (1) "Fraud: Bringing Light to the Dark Side of Business" (Albrecht et al., 1995); and (2) "Financial Investigations: A Forensic Accounting Approach to Detecting and Resolving Crimes" (Internal Revenue Service, 2002). The IRS also produces a Facilitator's Guide, an instructor resource with restricted access available for purchase upon proof of university affiliation. Educators can find further information about these products at www.gpo.gov (click on "On-Line Government Bookstore"). Students are required to read each of the 17 chapters in the Albrecht text, as well the 11 chapters in the IRS textbook.

Instructional Videos

The instructor includes in the course seven videos on fraud (see Table 4), although more are available on the market. Most of the videos are produced by the Association of Certified Fraud Examiners.¹

As most of the videos average 50–60 minutes in length, the instructor schedules the class time to meet either once or twice a week. To accommodate the full-time CPA practitioners wanting to take the course, the class typically meets in the late afternoons to early evening.

Table 4. Description of Fraud Examination Course’s Instructional Videos.

Week	Video Title and Description ^a
1	<p><i>“The Certified Fraud Examiner”</i>^b</p> <ul style="list-style-type: none"> • Discusses and illustrates the types of services offered by Certified Fraud Examiners; also reviews the requirements for becoming a CFE.
3	<p><i>“The Corporate Con: Internal Fraud and the Auditor”</i></p> <ul style="list-style-type: none"> • Illustrates common financial frauds committed by employees and managers within business and government; interviews with criminals, many taped in prison, are featured.
5	<p><i>“Cooking the Books: What Every Accountant Should Know About Fraud”</i></p> <ul style="list-style-type: none"> • Designed to educate the external auditor about fraud detection; highlights three of the largest financial statement frauds of the 20th century, taped on location with the actual people involved.
10	<p><i>“Beyond the Numbers: Professional Interview Techniques”</i></p> <ul style="list-style-type: none"> • Examines professional interviewing techniques; consists of three hidden camera interviews conducted by a CFE investigating cases of possible missing assets and embezzled funds.
12	<p><i>“How to Steal \$500 Million”</i></p> <ul style="list-style-type: none"> • Highlights the massive financial statement fraud that happened at PharMor, a deep-discount retail chain.
13	<p><i>“Little Favor, Big Mistake”</i>^b</p> <ul style="list-style-type: none"> • Reenacts the modus operandi for a \$15 million credit card fraud ring.
14	<p><i>“The Fraud Trial”</i></p> <ul style="list-style-type: none"> • Examines the legal process involved in trying someone suspected of fraud; contains actual footage of the trial of an assistant police chief suspected of embezzling money from the police department.

^aThe Association of Certified Fraud Examiners produces all videos except for *“Little Favor, Big Mistake,”* produced by the U.S. Postal Inspectors Office, and *“How to Steal \$500 Million,”* produced by PBS Frontline.

^bThese videos are approximately 15–20 minutes in length, while the rest are approximately 55 minutes each.

Exercises and Written Assignments

The Albrecht text includes no homework assignments since it is a comprehensive trade book on fraud.² However, questions and exercises follow each chapter in the IRS text. The IRS student workbook contains additional exercises and documents such as warranty deeds, mortgages, invoices, bank statements, and tax returns, which are needed to complete particular assignments. The Facilitator’s Guide for the IRS text contains lecture outlines, PowerPoint slides, solutions to exercises and cases, and a test bank.

Students must complete all end-of-chapter “Questions and Exercises” in the IRS book. The IRS text includes correct responses to these questions at the end of the text. Consequently, the instructor requires students to grade their own responses

using the detailed grading criteria that appear in the course syllabus. The instructor created additional written assignments over time, or they come from the student workbook. As Table 5 illustrates, the nature of the course material is conducive to a variety of meaningful assignments.

In addition, students must interview, either in person or over the telephone, at least two individuals from the following list: IRS Criminal Investigation Division; FBI; U.S. or State Attorney's Office; Bureau of Alcohol, Tobacco and Firearms; a Certified Fraud Examiner; or other law enforcement agencies responsible for

Table 5. Examples of Written Assignments in Fraud Examination Course.

Week	Description
3	Search for a fraud/financial crime with sufficient detail to provide: (1) information about the perpetrator; (2) motivations for the fraud (e.g. opportunity, pressure, and rationalization); (3) which law enforcement agency conducted the investigation; (4) amount of loss; (5) criminal statute(s) violated; (6) the results of the investigation and the charges; (7) convictions obtained and sentences; and (8) other interesting facts. Since most articles only have brief descriptions, you may have to look at numerous articles to find one or more that contain ALL of the requisite information. Write a two-page paper containing a description of the fraud, all of the above-requested information, and the references used.
7	Using the fraud you described above, make a list of at least 30 fraud symptoms that were probably present that could have revealed the fraud. Classify the symptoms as: (1) accounting/analytic symptoms; (2) internal control weaknesses; (3) personality symptoms; (4) lifestyle symptoms; or (5) tips and complaints.
8	Select a company that had a major financial statement fraud. Then choose a comparable company in the same industry. Using a spreadsheet such as Excel, prepare a horizontal and vertical analysis of the income statements and balance sheets of the two companies. The years analyzed should correspond to the years the fraud was being perpetrated. Write a two-page summary commenting on the results of your analysis and submit along with the supporting spreadsheet analysis. ^a
12	In 1997, the Auditing Standards Board issued Statement on Auditing Standards (SAS) No. 82, "Consideration of Fraud in a Financial Statement Audit." Using the Internet, search for information on SAS No. 82. Read the standard in its entirety. Then, submit a two-page paper that: (1) briefly summarizes the standard; (2) compares and contrasts the new standard to SAS No. 53 – the superseded standard on fraud; and (3) critiques the standard. Do you think auditors should be held liable for not detecting fraud during a financial statement audit? Explain.
13	After completing the reading assignment, write a two-page paper describing: (1) why a forensic accountant should be familiar with the criminal justice system; and (2) your reactions to the information contained in the reading.

^aA major objective of this assignment is to help students develop their skills as investigators, which includes being able to find information. Therefore, students are not allowed to ask the instructor to provide them with financial statements or tell them where to find financial statements.

prosecuting and/or investigating financial crimes. Students must prepare a concise summary of the interviewees' responses to questions covering the following topics:

- (1) What types of financial crime cases do you frequently investigate/prosecute?
- (2) How big a problem is "white-collar crime" in your area and what is the expected trend in the future?
- (3) How are accounting skills used in investigating financial crime cases?
- (4) What job opportunities are available for those with an interest in forensic accounting?

The objectives of these interviews are to: (1) reinforce students' skills in interviewing and memo writing; and (2) help them create a network of prospective employers.

Comprehensive Assignment #1: Fraud Examination Project

Students must complete a fraud examination project of their choice, which is typically completed by teams of three to five students. The purpose of this assignment is to provide students with some "hands-on" experience in fraud detection, investigation, and/or prevention, and to provide a service to a local business. Examples of fraud examination projects completed by students in the past are contained in Table 6.

This assignment enables students to participate in a service-learning project. The project facilitates students' development of intellectual and personal skills, such as knowledge of textbook content, understanding the relationship of accounting knowledge to the business world, critical-thinking skills, leadership abilities, and communication skills (Rama et al., 2000, pp. 660–672).

Student-teams must write a fraud examination report upon completion of their project. An acceptable report should include, if applicable:

- (1) A detailed description of how any or all of the three elements of the fraud triangle indicated a high fraud risk situation. If appropriate, describe any evidence that provides sufficient predication to conduct a "full-blown" fraud investigation.
- (2) "Red flags" that indicate a fraud might exist or may have been perpetrated.
- (3) The relevant criminal statutes that are being or may have been violated.
- (4) Memo format summaries of people interviewed in connection with the examination.
- (5) A summary of any searches involving public records, the Internet, etc.

Table 6. Examples of Comprehensive Fraud Examination Projects Students Have Completed.

- One student noticed that the dining center at a local university did not have good controls in place to ensure that those purchasing food paid for it. It was easy to bypass cash registers and sit down or exit without paying. The student brought this situation to the attention of the dining center manager who did not think it was a serious problem. Consequently, the student received permission to conduct a surveillance to determine the extent of the problem. During a two-hour surveillance, 28 students purchased food and then either sat down or exited without paying for their meals. The findings motivated the dining center manager to implement many of the student's recommendations.
 - A group of students reviewed the cash receipts internal controls at a fast-food establishment in the local mall. They found the controls to be inadequate to ensure that all of the cash received during a day was deposited in the bank. The students reconciled two years worth of cash register tapes to the corresponding bank statements and found a \$40,000 shortage. One of the students confronted the manager (the most likely suspect) with the evidence and the manager refused to answer questions and promptly resigned his position. The owner chose not to prosecute the manager but did implement most of the students' recommendations for improving controls. The profits of the business have more than tripled since the manager's resignation.
 - A group of students received permission from the business owner to see how easy it would be to shoplift merchandise from a mall-based, collectibles store. The students were able to easily shoplift the small high-priced merchandise without being detected. Moreover, they were also able to return the items – without receipts – and receive cash refunds. The business owner implemented many of the students' recommendations for improving internal controls.
 - A certified public accountant (CPA) was under investigation for an audit of a bankrupt local business college. Working in conjunction with a local law firm engaged in a civil action against the college, a group of students reviewed the working papers of the CPA and found them to be incomplete and inconsistent with generally accepted auditing standards. The plaintiffs' attorney sent a report citing the deficiencies to the CPA's attorney who responded by saying, "My client admits she was in over her head on this audit." Consequently, the plaintiffs are suing the CPA as a "deep pocket" to help compensate all students who suffered economic damages while attending the now-bankrupt business college.
 - A group of students conducted an undercover surveillance at a local "Gentlemen's Club" to determine if servers and bartenders recorded in the cash register all money collected from customers. The students' surveillance revealed that about three-fourths of the employees were pocketing cash receipts from customers. Consequently, the business owner agreed to a one week "invigilation" in which the students, supervised by two certified fraud examiners, monitored all cash flows. Since the employees knew trained fraud investigators were watching and closely monitoring their activities, they refrained from stealing during the week. The resulting record-breaking increase in cash flows for those seven days allowed the fraud examiners to estimate the losses incurred as a result of employee theft to be \$871,000 per year or 20% of gross revenues.
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- (6) A description of the evidence collected that supports the allegation and the investigative methods used during the examination.
- (7) Lessons learned from the examination, including how the fraud could have been prevented and changes the victimized business intends to make or has made as a result of the examination.

Comprehensive Assignment #2: Mock Trial

The mock trial has been another popular aspect of the course. One evening late in the semester, the instructor reserves the local county courthouse for students to carry out a mock trial. The question before the court is whether a CPA firm (the defendant) was professionally negligent in its audit of Brodnax Minerals Company.

The mock trial is an innovative role-playing technique that both familiarizes students with the criminal justice system and elucidates the auditors' responsibility for detecting fraud (Bonk & Smith, 1998, p. 283). Since the student-participants are allowed to "object" to evidence presented or arguments made by the opposing side, the mock trial fosters critical thinking skills by forcing students to "think on their feet" and offer counter-arguments to overcome objections.

The facts and evidence underlying the mock trial derive from a case written by John T. Reisch (1999) about actual events that occurred through the end of 1997 at Bre-X Minerals, Ltd., a Canadian mining company. Exploratory mining companies, such as Brodnax, search geographical regions for mineral deposits. These companies often sell successful finds to larger mining entities that have resources and equipment necessary for the development of the mine and extraction of the minerals. Unbeknownst to outsiders, top management within Brodnax was "spiking" the core samples with gold that local prospectors had "panned" from rivers. A CPA firm gave an unqualified opinion on the 1996 Brodnax financial statements and shareholders lost billions of dollars once an independent mining laboratory revealed the fraud in 1997.

The mock trial is structured as indicated in Table 7. The plaintiffs allege that the defendant (i.e. the auditing firm) violated a civil statute relating to professional negligence. Students divide into three teams: (1) the plaintiff team representing Brodnax shareholders who lost their entire investments; (2) the defendant team representing the CPA firm that conducted the independent audit of Brodnax; and (3) a small team of two–three students to organize the jury. Students from other classes and majors have eagerly volunteered to serve as jurors for the mock trial. In fact, team leaders for the defense and the plaintiff simulate the jury selection process known as *voir dire* by interviewing prospective jurors to reduce the number of jurors to fourteen, twelve plus two alternates. The jury, often comprised of

Table 7. Suggested Time Allotments for Mock Trial in Fraud Examination Course.

Time	Activity	Participants ^a
5 minutes each	Opening statements	Plaintiff’s attorney (P1) Defendant’s attorney (D1)
	Expert witness testimony	Plaintiff’s first witness (P2)
5 minutes	Direct examination	Plaintiff’s attorney (P3)
5 minutes	Cross examination	Defendant’s attorney (D2)
20 minutes	Repeat: Two more witnesses	P4, P5, D3, P6, P7, D4 Defendant’s first witness (D5)
5 minutes	Direct examination	Defendant’s attorney (D6)
5 minutes	Cross examination	Plaintiff’s attorney (P8)
20 minutes	Repeat: Two more witnesses	D7, D8, P9, D9, D10, P10
10 minutes each	Closing statements	Plaintiff’s attorney (P1) Defendant’s attorney (D1)
5 minutes	Jury instructions	Judge
10 minutes	Deliberations and verdict	Jury
20 minutes	Recesses, if needed	
125 minutes (total estimated time)		

^aPn (Dn) etc. refers to the nth member of the plaintiff’s (defendant’s) legal team.

students who have little or no background in accounting, must reach a verdict based on the facts presented by the two sides. If at least nine of the twelve jurors agree that the CPA firm was professionally negligent, they must also decide the amount of damages to award the plaintiff.

A local judge enhances the authenticity of the experience by volunteering his time to preside over the mock trial. The instructor has had no difficulty in getting local judges or attorneys to volunteer their time to this project. His experience is that, if asked, these legal experts are happy to share their expertise in an educational environment and help students to learn.

Each team divides assignments among the members. Some students act as attorneys, others as expert witnesses, and others as paralegals who research standards and relevant statutes to develop responses to the arguments and rebuttals used during the mock trial. Representatives from each of the two legal teams meet prior to the trial to discuss and agree upon any assumptions that they wish to make. During the mock trial, student-attorneys may ask the judge for a short recess in order to confer with members of their team. Each team is limited to a total of ten minutes of recess time. The instructor provides the questions in Table 8 to help the students focus on several relevant issues regarding the dispute.

Each team must develop and submit a consensus response to each question in Table 8. For team projects such as the mock trial, each student evaluates the

Table 8. Questions Considered During the Fraud Examination Course's Mock Trial.

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1. *The Auditors' Responsibility to the Public*
 - a. Do you think Brodnax's financial statements "present fairly" its financial position "in conformity with generally accepted accounting principles?" Explain and defend. If necessary, prepare and submit adjusted financial statements that do present fairly Brodnax's financial position and are in conformity with GAAP.
 - b. What responsibility does an auditor have with respect to specialists regarding matters that are material to the financial statements?
 - c. Did the CPA firm have a responsibility to report on matters beyond the financial statements (for example, the lack of controls over custody of the core samples that allowed the bags to be "spiked")? Explain and defend.
 - d. Did the CPA firm perform its audit of Brodnax's financial statements in accordance with generally accepted auditing standards? Explain and defend.
 2. *Auditors and the Detection of Fraud*
 - a. What "red flags" – if any – should have been noticed by the auditors?
 - b. In terms of the fraud triangle, discuss the CEO's motivation for perpetrating this fraud. Do you think he had knowledge of and/or condoned the fraud? Explain.
 - c. What internal control(s) would have prevented the Brodnax fraud from taking place?
 3. *The Auditors' Liability for Losses Incurred Due to Fraud*
 - a. Was the unqualified audit opinion issued by the CPA firm for the 1996 engagement justified under the circumstances? Explain and defend. If no, what opinion should have been rendered and why?
 - b. Does receiving an unqualified opinion add credibility to a company? Explain.
 - c. Should the CPA firm be held liable for not detecting the fraud perpetrated by top management at Brodnax? Explain and defend your answer. Who, if anyone, should be held liable?
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contributions of fellow team members by dividing 100 points amongst the team members. For example, if one member of a team with five members feels that each member contributed equally to the project, then s/he would award 20 points to each team member. However, if some team members contributed more and others less, then those contributing more would receive more than 20 points and those contributing less would receive less than 20 points. Accordingly, those team members with total points of 100 or more have contributed their "fair share" to the completion of the project and receive as an individual grade the grade assigned to the project. Those team members with less than 100 points will receive a lower grade than the team project was assigned.

Graduate Students: Comprehensive Fraud Policy

This assignment requires graduate students taking the course to create a customized, comprehensive fraud policy for a business of the student's choice.

The policy must follow the format given in the Albrecht text (pp. 282–286), covering topics such as prevention programs to be implemented, options available to individuals to report suspected incidents of fraud, investigation procedures when a report is received, action to be taken when sufficient evidence shows a violation of law has occurred, and the publication policy of fraud incidents. Upon completion, the student submits written copies of the policy to the business and to the instructor for grading purposes.

Comprehensive Final Exam

The final exam comprises 150 multiple-choice and true-false questions. The questions come from the following sources: 20% from the IRS text test bank, 30% from the Certified Fraud Examiner test bank, 30% directly from Dr. W. Steve Albrecht, and 20% from the course instructor.

Semester Grading

Because the instructor requires the comprehensive fraud policy only of the graduate students, the total points available differ depending upon whether the individual is an undergraduate or graduate student. Consequently, the weights differ to some extent as shown in Table 9.

Student Response

The student response to the course has been very positive. As indicated in Table 2, enrollment in the course has been strong. In terms of student evaluations, the course

Table 9. Weighting of Semester Assignments for Fraud Examination Course.

	Undergraduates (%)	Graduates (%)
Questions and exercises from the IRS text	14.4	11.8
Additional written assignments (see Table 5)	30.0	24.6
This amount includes the questions answered for the mock trial (see Table 8)		
Interview	5.6	4.6
Fraud examination project	16.7	13.6
Comprehensive fraud policy	N/A	18.1
Comprehensive final exam	33.3	27.3
Total	100.0	100.0

has a rating average of 4.76 on a 5-point scale, where 1 = poor and 5 = excellent. By comparison, the average department rating is 4.07. Typical examples of written student reactions to the course include:

- “Many times in auditing, I would think of material covered in forensic accounting that complemented the material covered in auditing. Forensic accounting helped develop my professional skepticism and I believe I have a much deeper understanding of how to look past the documents and be aware of ‘red flags’ that indicate fraud. I expect that the material learned on fraud symptoms will be valuable in my position as an internal auditor with X Company.”
- “This newly developed course, overall, is a positive addition for both accounting and criminal justice students. It really seems to fill a void for criminal justice studies by focusing exclusively on the white collar criminal as opposed to mostly the common street criminal as I’ve learned about in other classes.”
- “Comparing this course with the accounting classes I attended during college, I would say that this was by far my favorite accounting class. It allows students to put on their ‘detective hats’ and play the role of investigator for a semester. I believe that every auditor should be required to take this type of course at some point in their career” (this student was a practicing CPA who took the course as a first step toward becoming a Certified Fraud Examiner).
- “I learned a lot of new and exciting information. This class has shown me that public accounting is not the only way to go with my accounting degree.”

This positive student response to the course is consistent with what the earlier studies found. Faculty who teach the few fraud examination courses available frequently remark on how the class is the most popular elective in their accounting curriculum (Peterson & Reider, 2001, p. 39). Similarly, Buckhoff and Schrader (2000, p. 140) found that the student reaction to the fraud examination course was extremely favorable (mean rating = 9.14 on a 10-point scale, where 1 = extremely unfavorable and 10 = extremely favorable, $n = 13$).

Further, one accounting graduate who had completed the course recently accepted an offer with PricewaterhouseCooper’s fraud investigation division, receiving an above-average starting salary along with a \$5,000 signing bonus. This success is consistent with some preliminary empirical evidence recently reported that indicates the successful completion of a specific fraud course does have a positive effect on the hiring potential of a candidate applying for the position of assistant controller (Mounce & Frazier, 2002, p. 98).

CONCLUSIONS AND RECOMMENDATIONS

Academic institutions increase both the quality and breadth of the accounting curriculum by offering a course dedicated to fraud examination. Students acquire and enhance a diverse set of skills that are consistent with recommendations by both the Accounting Education Change Commission (AECC, 1990, pp. 311–312) and the Association to Advance Collegiate Schools of Business (AACSB, 2002, p. 17), as illustrated in Table 10.

As can be seen in Table 10, most of the course assignments facilitate the development of knowledge and skills that enhance the students’ ability to pursue a wide variety of career paths. The course is especially effective in fostering a high level of professional skepticism, which is sorely needed by independent auditors working in today’s increasingly unethical business environment.

Future of the Course

Due the success of the course and to the breadth of topics encompassed by fraud examination, the instructor has created a sequel course titled ACCT 499/696:

Table 10. Relationship of Skills Developed from Fraud Examination Course Assignments to AECC and AACSB Recommendations.

<i>AECC (AACSB) Recommendation</i>
Communication skills, including effective reading (Communication abilities):
● Reading assignments in textbooks; questions and exercises from the IRS text; additional written assignments (refer to Table 5); mock trial; interview; fraud examination project; comprehensive fraud policy
Intellectual skills, including the ability to solve unstructured problems (Reflective thinking skills):
● Additional written assignments; mock trial; fraud examination project; comprehensive fraud policy
Work effectively in groups:
● Mock trial; fraud examination project
Information technology skills:
● Use of the Internet, e-mail, and spreadsheets for the additional written assignments
Analytical and conceptual thinking skills (Analytic skills):
● Additional written assignments; mock trial; fraud examination project; comprehensive fraud policy; comprehensive final exam
Understand ethics of the profession (Ethical understanding and reasoning abilities):
● Fraud examination project; comprehensive fraud policy
Active participants in the learning process:
● Additional written assignments; mock trial; interview; fraud examination project; comprehensive fraud policy

Advanced Fraud Examination. He teaches the course once a year in the spring, beginning in 2003. Whereas Fraud Examination takes a macro look at the basic principles and concepts underlying fraud examination, Advanced Fraud Examination takes a micro look at fraud examination. Specifically, the advanced course explores, in great depth, 44 of the most common fraud schemes along with effective methods for detecting, investigating, and preventing such schemes. The addition of a second course in fraud examination prompted the instructor to move a major time-consuming assignment, the fraud examination project, into the advanced course.

The instructor recently implemented other changes in the Fraud Examination course regarding the mock trial and the final exam. The current mock trial involving Brodnax requires extensive knowledge of accounting principles and auditing standards, which puts the non-accounting majors at a disadvantage in the course. Accordingly, future mock trials will involve a criminal, rather than civil, asset-theft fraud. Also, the final exam will constitute 50% rather than 33% of the student's final grade. The instructor made this change to create a wider distribution of final grades, which had been fairly narrow due to the substantial portion of the final grade based on team assignments.

Future of Anti-Fraud Education

"With the profession facing a credibility crisis, a wide array of critics... have begun calling for a major overhaul of the accounting system" (Liesman et al., 2002). Given the gravity of the fraud problem facing the profession, accounting academics must revise the curriculum to include a mandatory course in fraud examination. To date, the greatest barrier to offering such a course has been the lack of academic textbooks on fraud, along with accompanying instructor's resources. However, one academic textbook is now available and the Association of Certified Fraud Examiners has generously offered to provide – free of charge – anti-fraud educational resources to those institutions wishing to adopt such a course. Educators who fail to adopt a fraud examination course will continue to graduate students who are ill prepared to meet the challenges of an increasingly unethical business world.

NOTES

1. For a current catalog, contact the ACFE at 716 West Avenue, Austin, TX 78701; 1-800-245-3321; or <http://www.cfenet.com>.

2. Other options for fraud texts exist. For example, the Association of Certified Fraud Examiners is revising the trade book *Occupational Fraud and Abuse* (Wells, 1997) for the college market.

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THE PAUSE METHOD IN UNDERGRADUATE AUDITING: AN ANALYSIS OF STUDENT ASSESSMENTS AND RELATIVE EFFECTIVENESS

Robert L. Braun and William R. Simpson

ABSTRACT

While prior research has presented results indicating the effectiveness of both small group discussion activities and in-class writing activities, a discussion of the relative effectiveness of the two methods appears absent from the literature. This paper extends the learning style literature by comparing two different methods of creating an active learning environment in undergraduate auditing classes. Specifically, we report the results of student assessments and exam performance relative to small group discussion sessions and in-class writing assignments.

This study employed a within-subjects design in which each student participated in both types of assignments. The teacher periodically paused the lecture-based instruction throughout the semester when the instructor deemed coverage of the topic suitable for the types of cognitive elaboration activities discussed above. Results indicate that students assessed the pause sessions as beneficial to the learning process and enjoyable. These assessments

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were significantly higher for their preferred type of activity (i.e. either discussion or writing) than the other type of activity. Students' exam scores were higher on the exam following their preferred method. The results of this study add to the learning style literature and are consistent with the conclusions of other research calling upon educators to respect diverse ways of learning.

INTRODUCTION

"Students must be active participants in the learning process, not passive recipients of information" (AECC, 1990, p. 309). For more than a decade, this imperative has prompted accounting educators to rethink the traditional model of the classroom dynamic and has served as a catalyst for the examination of pedagogical methods for effecting a more proactive learning process. The result has been the advancement of active learning pedagogies in the classroom and the accounting education literature.

Having been advanced as a relatively simple method of actively engaging students in the learning process, the method of periodically pausing (or taking a time-out) during lectures is among the pedagogies faculty employ in the classroom and discussed in the literature. Bryant and Hunton (2000, p. 148) conclude that the pause method is effective because students are both cognitively and physically engaged in a task, thus enhancing the level of learner control over a pure lecture environment. Researchers have suggested two different types of pause method activities, writing activities and discussing activities. Although the literature contains endorsements of each of these two types of pause method activities, a comparison of their relative effectiveness appears absent from the literature. This study extends the literature by providing additional support for the application of the pause method and by examining student assessments and exam performance data relative to each of the activities of writing and discussing during pause sessions.

In 10 sections of an undergraduate auditing course spanning seven semesters, we exposed 206 students to discussion-based and writing-based pause sessions and then asked the students to assess the effectiveness of the pause methods. A number of findings resulted from the student completion of this assessment instrument. Among the most important are the following: (1) the pause approach itself was found to be beneficial in the development of several core competencies that are currently deemed to be critically important ones by accounting educators and by members of the accounting profession (e.g. oral communication skills, written communication skills, and interpersonal skills); (2) the pause approach

was beneficial to the learning process; (3) the pause approach was enjoyable; (4) a significant number of students preferred each type of activity (i.e. writing and discussing); (5) significant differences exist in students' assessments of the relative effectiveness of the activities depending on their choice; and (6) exam results were positively related to the pause activity choice.

The authors organize the remainder of the paper as follows. The next section discusses the literature on the pause method and learning styles. It also develops research hypotheses. The third section describes the research methodology used. The fourth section presents the results of the experiment. The fifth section presents a discussion of these results. Finally, the last section presents our conclusions.

THEORY AND HYPOTHESIS DEVELOPMENT

The AECC's charge to accounting educators arose from a wave of calls for reform of higher education sweeping the nation during the 1980s. Preceding the AECC and broader in its focus, the American Association for Higher Education appointed a task force with the charge "to identify key principles which characterize the practices of educationally successful undergraduate institutions" (Gamson, 1991, p. 7). The primary output of the task force was the publication of "Seven Principles for Good Practice in Higher Education" (Chickering & Gamson, 1987). The seven principles assert that good practice in higher education: (1) encourages student-faculty contact; (2) encourages cooperation among students; (3) encourages active learning; (4) gives prompt feedback; (5) emphasizes time on task; (6) communicates high expectations; and (7) respects diverse ways of learning. The AECC's charge to accounting educators is, in large part, consistent with these principles.

Benefits of the Pause Method

A pedagogical method that has the potential to facilitate the achievement of at least the first four of the seven principles and the AECC's stated goal of an increased focus on intellectual, communication, and interpersonal skills within an active learning environment is based on the pausing principle. Rowe (1976, p. 258) suggests that the lecture format does not provide sufficient time for most students to process, organize, and then store information into short-term and long-term memory. Pausing during the lecture allows students to mitigate this problem by allowing more time for assimilation of the information set presented during the lecture through individual written assignments and/or cooperative

learning in small group discussions. Johnson, Johnson and Smith (1990), who reviewed 137 studies involving cooperative learning, concluded that the body of research supports the idea that cooperative learning can result in increased productivity, increased social-support, and enhanced self-esteem. In addition, pausing allows the instructor to establish more personal contact and provide immediate feedback by listening-in and working with discussion groups and writers. Several studies have established the positive effects of student-faculty contact (Cohen, 1981, p. 297; Feldman, 1976; Marsh, 1984, p. 712). In addition, Sorcinelli (1991, p. 18) reports that prompt feedback is positively related to student satisfaction.

By pausing periodically during lecture to allow students to become actively involved with the material, the teacher may enhance the learning process. These enhancements to the learning process should improve student assessments regarding the extent to which a given course facilitates the attainment of important educational objectives. As a result, the study focuses on the following hypotheses (in alternate form):

H_{1a}. Students will assess that the lecture method interspersed with pauses is more effective than a lecture-only method in developing oral communication skills.

H_{1b}. Students will assess that the lecture method interspersed with pauses is more effective than a lecture-only method in developing written communication skills.

H_{1c}. Students will assess that the lecture method interspersed with pauses is more effective than a lecture-only method in developing interpersonal communication skills.

H_{2a}. Students will assess that the lecture method interspersed with pauses is more beneficial to the learning process than the lecture-only method.

H_{2b}. Students will assess that the lecture method interspersed with pauses is more enjoyable than the lecture-only method.

Preference for and Relative Assessment of Pause Method Activity

One pedagogical method receiving a great deal of emphasis in the recent accounting literature is that of "writing to learn." Several recent studies have discussed the advantages of using writing assignments in the accounting curriculum (Almer et al., 1998, p. 487; Baird et al., 1998, p. 269; Stocks et al., 1992, pp. 194–195). While

written assignments are one means of incorporating the pause method, instructors can also apply cooperative learning or small group discussion as a pause method activity.¹ Several studies have discussed the merits of a variety of cooperative learning techniques (Nastasi & Clements, 1991, p. 111; Qin et al., 1995, p. 134). Cottell and Millis (1993, p. 41) suggest that cooperative learning groups are more effective when they are used to meet specific educational objectives. This approach is consistent with the specific, directed types of tasks most suitable for the application of the pause method.

Preference for a particular type of pause method activity may be related to the particular learning style of the student. Faculty members have harnessed Canfield's (1994) *Learning Styles Inventory* (LSI) and Kolb's (1984) Experiential Learning Model (ELM) to assess the learning style preferences of students in a variety of disciplines. Kolb's ELM suggests four dominant learning styles based on a student's preferred method of perceiving and processing information – divergers, convergers, assimilators, and accommodators. Canfield's LSI is multi-faceted and broader in scope, although not as frequently applied in accounting education research. Some have utilized Kolb's model to classify the information processing behavior of accounting students and professionals (Baker et al., 1986, p. 9; Baldwin & Reckers, 1984; Collins & Milliron, 1987, p. 199; Geiger, 1992, p. 22). These studies have demonstrated that convergent learning styles are most prevalent among accounting majors and professionals but that all learning styles are present. Although Kolb's and Canfield's models have received considerable criticism regarding psychometric properties (Eide et al., 2001, p. 362; Stout & Ruble, 1994, p. 102), it is apparent that there is considerable diversity in student learning styles. As a result, it would appear that an instructor may need to include several different methods to meet the learning needs of all students.

One of the ways in which this research attempts to extend the literature is by comparing the relative assessments of the two types of pause methods (writing and discussing). Because of the importance of learning styles, as discussed above, it is predicted that each method will be judged as more beneficial to the learning process and enjoyable by those students indicating a preference for that particular method.

H_{3a}. Assessments of the extent to which activities are beneficial to the learning process will be higher for the type of activity that is consistent with the student's preferred pause method activity.

H_{3b}. Assessments of the extent to which activities are enjoyable will be higher for the type of activity that is consistent with the student's preferred pause method activity.

Relative Performance Associated with Pause Method Activity

The pause method is a specific example of a broader class of pedagogical tools identified as cognitive elaboration activities. Cognitive elaboration is defined as any activity that supports, specifies, or clarifies the information to be learned. Activities involving cognitive elaboration would include both written and oral assignments that focus students' attention on the information set to be learned as a means of achieving a more active learning environment Reder et al. (1986, p. 64).

An elaboration activity may result in improved student recall for several reasons. First, involvement in the activity should itself be motivational to the student. Second, involvement in the activity should help to focus the student's attention on the relevant information set. Third, the student has the opportunity to engage the instructor in the activity thereby receiving more immediate feedback. Finally, the activity should facilitate a more in-depth understanding of the information set because of the integration of the current information set with other information already in the possession of the student (Hamilton, 1989, p. 205; Mayer, 1980, p. 782). These elaboration activities have proved effective as pedagogical tools, as examined and reported in the accounting education literature (Bradford & Peck, 1997, p. 366; Choo & Tan, 1995, p. 41; Hermanson, 1994, pp. 315–316; Schadewald & Limberg, 1990, pp. 36–37).

Researchers have demonstrated the effectiveness of pause method activities, as a specific example of cognitive elaboration activities. DiVesta and Smith (1979, p. 294) report results from an introductory psychology course indicating that interspersed pauses coupled with group discussion were correlated with superior student recall (both free and cued recall) of material both immediately following the lecture and two weeks following the lecture. Almer et al. (1998, p. 491) report that setting aside time at the end of a class period for students to complete a "one-minute paper" activity increases recall by students in an introductory accounting class.²

Both discussion and writing-based pause activities have been shown to improve student learning. Baker et al. (1986, p. 11) suggest that because of learning-style differences, "... what may be an optimal teaching method for one student may discourage another student." As a result, the benefits associated with cognitive-elaboration activities, in general, and pause method activities in particular, may not accrue equally across all students for all activities. This study extends the research by examining the relative effectiveness of discussion-based versus writing-based pause method activities. Based upon their review of learning styles research, Claxton and Murrell (1987, p. 51) note that matching instructional methods to students' learning style can lead to improved learning. We propose the following

hypothesis based on the potential for different methods to appeal to different learning styles:

H₄. Students will score higher on the exam that follows their preferred pause method activity.

METHODOLOGY

Although most researchers agree that individual differences in the ways in which students learn exist, learning-styles research has not produced a clear definition of these styles and has experienced difficulty in assessing them (Sorcinelli, 1991, p. 22). Three prominent methods of assessing learning styles focus on the cognitive processes involved in learning, student preferences toward teaching methods, and outcomes-based assessments of learning. Research on cognitive processes involved in learning has employed methodologies aimed at discovering individual differences in the processing and assimilation of information (Baker et al., 1987, p. 2; Gregore, 1979, p. 20; Kolb, 1984; Stewart & Felicetti, 1992, p. 19). Research on student preferences toward teaching methods has relied upon student assessments of pedagogical approaches and measures of overall satisfaction (Davis et al., 2000, p. 148). Outcomes-based assessments of learning rely upon objective measures of learning such as exams and memory tests to measure relative levels of performance when exposed to different pedagogies (Almer et al., 1998, p. 487; DiVesta & Smith, 1979, p. 289). This research employs outcomes-based assessments (i.e. exam scores) and student preference assessments to draw conclusions regarding the overall effectiveness of the pause method and relative effectiveness of each of the pause method activities of writing and discussing.

To gather data on the student preferences and outcomes-based assessments of the relative effectiveness of the small group discussions and writing assignments, this study employed a within-subjects design in which each student participated in both types of assignments. The teacher paused lecture-based instruction periodically throughout the semester when coverage of the topic was thought suitable for the types of cognitive elaboration activities discussed above. Appendix A details examples of the types of topics covered during pause sessions in undergraduate auditing. During each of these pauses, the instructor required half of the class to complete a written assignment on the pause session topic and the other half of the class to discuss the same topic in small groups.

We established the groups by ranking the students in three categories based upon overall grade-point average. We formed groups of three members each by

selecting one student from each of the three GPA categories and placed the groups in random order.

We assigned alternate groups “writers” and “discussants” for all of the pause sessions until the first exam. That is, those in the discussing condition were in that condition for all pause sessions up until the first exam. All of those in the writing condition had to write (individually) until the first exam. We reversed the assignment to treatment groups for all of the pause sessions related to material on the second exam. That is, all those who were discussants became writers. All those who were writers became members of discussion groups. This method facilitated a within subjects design in which all students received both treatments.

After returning the second exam, we asked students to select the method that they preferred for the completion of pause sessions relating to the third and fourth exams. In addition to selecting their preferred method, they responded to a questionnaire containing several questions regarding the effectiveness of pause sessions. Appendix B displays the method selection and evaluation form.

The design should limit the potential threats to internal validity that are common in classroom testing of pedagogical methods. By simultaneously involving both treatment groups, using a within-subjects design, and randomly assigning students to initial treatment groups, the design minimizes the opportunity for instruction-related bias. Although students were aware that two different activities were being used and compared to each other, there was no reason for students to infer instructor preference for one activity over the other. Furthermore, since they knew that they would each be receiving both treatments, there was no feeling of inequity among students.

Over the course of seven semesters, 206 undergraduate auditing students participated in the experiment and responded to the questionnaire. The experiment manipulated the independent variables of discussion-based pausing and writing-based pausing. The focus of the study is on outcomes-based assessments and student preferences regarding each of the two types of pause method activities.

RESULTS

Results are generally consistent with the hypotheses. To test the first set of hypotheses (H_{1a} , H_{1b} & H_{1c}), we compared student responses regarding each of the three communication skills (i.e. oral, written, and interpersonal communication skills) to the midpoint (indicating neutrality) on the Likert scale. In each case, the

mean response was significantly greater than the midpoint of four. The mean response regarding student agreement with the statement that the pause sessions were beneficial in developing oral communication skills was 4.55. This was significantly higher than the response indicating neutrality with respect to this statement ($t = 5.29$, $df = 205$, $p < 0.001$). The mean response regarding student agreement with the statement that the pause sessions were beneficial in developing written communication skills was 4.37. This, too, was significantly higher than the response indicating neutrality ($t = 3.62$, $df = 205$, $p < 0.001$). The mean response regarding student agreement with the statement that the pause sessions were beneficial in developing interpersonal communication skills was 4.82. Again, this was significantly higher than the response indicating neutrality with respect to this statement ($t = 8.36$, $df = 205$, $p < 0.001$). Similar tests were conducted on students' agreement with statements relating to whether they found the pause sessions to be beneficial to the learning process and enjoyable (H_{2a} & H_{2b}). The mean responses to these items were 5.79 and 5.56, respectively. These were both significantly higher than the midpoint of the scale ($t = 21.3$, $df = 204$, $p < 0.001$ and $t = 16.8$, $df = 205$, $p < 0.001$, respectively). Table 1 reports the results of these and all other hypothesis tests.

The prediction associated with the distribution of preferences for writing and discussing lends itself more to intuitive analysis rather than statistical testing. The results indicated that 117 students chose to discuss in future pause sessions while 85 students chose to write. These results are consistent with the prediction that neither method would dominate the other.

To test H_{3a} and H_{3b} , we conducted a paired difference t -test in which each individual student's assessment of the extent to which his or her preferred activity was beneficial to the learning process was compared to that same student's assessment relative to the non-preferred activity. That is, for a student choosing to discuss, that student's assessment of the extent to which the discussion sessions were beneficial to the learning process was compared to the same student's assessment of the extent to which the writing sessions were beneficial to the learning process. The mean of the assessed level of agreement with the "beneficial to the learning process" statement for the activity that was consistent with the choice for each student was 5.74. The mean of the assessed level of agreement with the "beneficial to the learning process" statement for the activity that was different than the choice was 4.68. The paired difference t -statistic comparing the difference between each student's assessment of effectiveness of the two types of activities was $t = 9.56$, $df = 199$, significant at the $p < 0.001$ level. Similar results were obtained regarding the level of enjoyment means = 5.36 and 4.34 for the activity consistent with preference and different than preference, respectively, $t = 9.30$, $df = 198$, $p < 0.001$.³

Table 1. Hypotheses and Results.

Hypothesis	Results
H _{1a} : Students will assess that the lecture method interspersed with pauses is more effective than a lecture-only method in developing oral communication skills.	Mean = 4.55, $t = 5.29$, $df = 205$, $p < 0.001$
H _{1b} : Students will assess that the lecture method interspersed with pauses is more effective than a lecture-only method in developing written communication skills.	Mean = 4.37, $t = 3.62$, $df = 205$, $p < 0.001$
H _{1c} : Students will assess that the lecture method interspersed with pauses is more effective than a lecture-only method in developing interpersonal communication skills.	Mean = 4.82, $t = 8.36$, $df = 205$, $p < 0.001$
H _{2a} : Students will assess that the lecture method interspersed with pauses is more beneficial to the learning process than the lecture-only method.	Mean = 5.79, $t = 21.3$, $df = 204$, $p < 0.001$
H _{2b} : Students will assess that the lecture method interspersed with pauses is more enjoyable than the lecture-only method.	Mean = 5.56, $t = 16.8$, $df = 205$, $p < 0.001$
H _{3a} : Assessments of the extent to which activities are beneficial to the learning process will be higher for the type of activity that is consistent with the student's preferred pause method activity.	Consistent Mean = 5.74, Inconsistent Mean = 4.68, $t = 9.56$, $df = 199$, $p < 0.001$
H _{3b} : Assessments of the extent to which activities are enjoyable will be higher for the type of activity that is consistent with the student's preferred pause method activity.	Consistent Mean = 5.36, Inconsistent Mean = 4.34, $t = 9.30$, $df = 198$, $p < 0.001$
H ₄ : Students will score higher on the exam that follows their preferred pause method activity.	Preferred Mean Score = 79.11, Non-preferred Mean Score = 76.21, $t = 3.61$, $df = 189$, $p < 0.001$

The final hypothesis H₄ predicted that exam scores would be higher for the exam associated with the preferred method. As with the tests of H_{3a} and H_{3b}, we examined paired difference scores to test this hypothesis. We compared each student's score on the exam associated with the preferred type of pause activity to his or her score on the exam associated with the activity that was not preferred. That is, for a student preferring to write, the score on the exam associated with that student's writing activity was compared with the exam associated with

discussion. As predicted, the exam scores associated with the preferred activity (mean = 79.11) were significantly higher than the exam score associated with the activity that was different than their preference (mean = 76.22) ($t = 3.61$, $df = 189$, $p < 0.001$).⁴

DISCUSSION

The absence of a control group in which students would have received a lecture-only approach detracts somewhat from the conclusiveness of the results with respect to student assessments of the effectiveness of the pause method in obtaining educational objectives. Educators are fully aware, however, of the inherent difficulties in exercising this level of experimental control in a classroom setting. To the extent that student assessment of the relative effectiveness of interspersed pauses compared to the familiar lecture-only approach can be relied upon, the results provide an endorsement of the pause method.

By randomly assigning groups to concurrently active writing or discussing sessions originally and then switching them after the first exam, a relatively high level of experimental control was obtained regarding the relative assessment of the two approaches. Because students can be relied upon to possess a reliable insight regarding their relative enjoyment of each of the two types of pause method activities, the test of H_{3a} would appear relatively sound. Admittedly, however, it may be more problematic to rely upon potentially flawed student insight as to the extent to which each method is beneficial to the learning process (H_{3b}). The objective evidence presented in the tests of H_4 , however, lends support to the student assessments. The exam results indicate that neither method is absolutely more beneficial to the learning process, but that the method that appeals most to the particular student may be more beneficial. Future research could endeavor to provide guidance regarding the characteristics of students and tasks that could help to improve the effectiveness of use of the technique.

CONCLUSION

Taken as a whole, the results reported in this study add to the growing volume of literature encouraging educators to engage students as active participants in the learning process and to “respect diverse ways of learning” (Chickering & Gamson, 1987, p. 1). Consistent with the recommendations of the American Assembly of Collegiate Schools of Business Task Force on Effective and Inclusive Learning Environments (1998), this research concludes that it is important for teaching

styles to match possible learning style differences. Inasmuch as this study examines student assessments and performance measures regarding pedagogical approaches that may have differential appeal to individuals with distinctive learning styles, it could help accounting educators to respond to calls for reform of education practices.

NOTES

1. Cooperative learning activities can involve writing. In the particular application used in this study, however, discussion groups had no responsibility to provide written responses.

2. The "one-minute paper" is a specific example of a type of pausing procedure. Rather than limiting opportunities for students to become active in the assimilation of lecture information to the end of the period, the pausing method used in this study facilitates such opportunities at periods interspersed throughout the lecture. Such an approach may be more consistent with the type of environment recommended by the AECC.

3. We conducted additional tests to determine whether significant results would be obtained for each of the two different types of pause activities. The results were significant in each of the individual tests. That is, among students indicating a preference for discussion-based pause activities, assessments of the extent to which discussion sessions are beneficial to the learning process (mean = 5.77) and enjoyable (mean = 5.66) were significantly higher than assessments of the extent to which writing sessions are beneficial to the learning process (mean = 4.70) and enjoyable (mean = 4.12) ($t_{\text{learning process}} = 7.43$, $df = 114$, $p < 0.001$; $t_{\text{enjoyable}} = 11.27$, $df = 114$, $p < 0.001$). The same held true for students indicating a preference for writing-based pause activities. That is, their assessments of the extent to which writing sessions are beneficial to the learning process (mean = 5.68) and enjoyable (mean = 4.95) were significantly higher than assessments of the extent to which discussion sessions are beneficial to the learning process (mean = 4.65) and enjoyable (mean = 4.63) ($t_{\text{learning process}} = 6.00$, $df = 84$, $p < 0.001$; $t_{\text{enjoyable}} = 2.11$, $df = 83$, $p < 0.038$).

4. Consistent with the additional testing of H_3 , we performed further analysis of H_4 to determine whether significant results would be obtained for each of the two different types of pause activities. The results were significant for the students choosing to discuss. That is, students preferring discussion-based pause activities achieved significantly higher exam scores following discussion activities (mean = 78.24) than they did following writing activities (mean = 74.74) ($t = 3.27$, $df = 111$, $p < 0.001$). The results were only marginally significant for the students choosing to write. That is, students preferring written-based pause activities achieved marginally significantly higher exam scores following writing activities (mean = 80.37) than they did following discussion activities (mean = 78.33) ($t = 1.68$, $df = 77$, $p < 0.097$).

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APPENDIX A

Examples of Pause Session Activities

Brief Pauses

- Discuss the difference between the two types of qualified opinions.
- Discuss the difference between an adverse opinion and a disclaimer of opinion.
- Janet is a partner in the Seattle office of an international accounting firm. She owns a small amount of stock in a company audited by the New York office. Is this a violation of the independence rules? Why?
- What are the two types of fraud identified by SAS No. 82? Distinguish between the two.
- What is the auditor's responsibility for fraud detection as stated in SAS No. 1?

- Classify each of the audit procedures listed below (list omitted for purposes of this appendix) as to the type of evidence.

Extended Pauses

- Given the auditor's report appearing below (report omitted in this appendix). Identify the key words and phrases that are correctly stated and identify those that should be replaced.
- Discuss the difference between violations of independence in mental attitude and independence in appearance. Is it possible to have one without the other?
- One of the fundamental legal questions upon which the courts have ruled regarding auditor liability is, "to whom is the auditor liable for ordinary negligence?" Using common law cases, discuss how the courts have answered this question.
- Read section 10(b)5 of the Securities Exchange Act of 1934. Given what you read and given what you know about the definition of ordinary negligence, does it sound like auditors should be considered liable under 10(b)5? Explain.
- Should gross negligence be considered a form of intentional deception?
- How are auditors to satisfy their responsibility for fraud detection?
- When an auditor has determined that an increased risk of material misstatement due to fraudulent financial reporting exists, how can he or she change the audit to be responsive to the increased risk?
- Given the following pairs of audit procedures (pairs omitted in this appendix), determine which is more competent and explain the distinguishing characteristic.
- Other examples of suitable pause session material can be found in auditing textbooks (review questions for brief pauses and exercises and problems for extended pauses).

APPENDIX B

Discussion/Writing Selection Form

The responses to this survey will not be seen by this teacher until after all grades have been submitted. Please answer *all* of the questions to the best of your knowledge.

- (1) I choose to _____ (*discuss or write*) responses during future time out sessions.
- (2) Score on exam in which you discussed questions _____ exam one/exam two.

- (3) Score on the exam in which you provided written answers to questions
----- exam one/exam two.

For each of the questions below, please circle the number that most closely represents your feelings toward the time out sessions. For all of the responses, the following scale applies:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

Statement	Response (Please Circle)
I found the time-out sessions beneficial to the learning process	1 2 3 4 5 6 7
I found the time-out sessions were beneficial in developing oral communication skills	1 2 3 4 5 6 7
I found the time-out sessions were beneficial in developing written communication skills	1 2 3 4 5 6 7
I found the time-out sessions were beneficial in developing interpersonal skills	1 2 3 4 5 6 7
I found the time-out sessions enjoyable	1 2 3 4 5 6 7
I found the <i>writing</i> time-out sessions beneficial to the learning process	1 2 3 4 5 6 7
I found the <i>writing</i> time-out sessions enjoyable	1 2 3 4 5 6 7
I found the <i>discussing</i> time-out sessions beneficial to the learning process	1 2 3 4 5 6 7
I found the <i>discussing</i> time-out sessions enjoyable	1 2 3 4 5 6 7
I feel development of oral communication skills is an important educational objective	1 2 3 4 5 6 7
I feel development of written communication skills is an important educational objective	1 2 3 4 5 6 7
I feel development of interpersonal skills is an important educational objective	1 2 3 4 5 6 7
Compared to a straight lecture format, the use of time-out sessions mixed with lecture is beneficial to the learning process	1 2 3 4 5 6 7
Compared to a straight lecture format, the use of time-out sessions mixed with lecture is beneficial in developing oral communication skills	1 2 3 4 5 6 7

Statement	Response (Please Circle)
Compared to a straight lecture format, the use of time-out sessions mixed with lecture is beneficial in developing written communication skills	1 2 3 4 5 6 7
Compared to a straight lecture format, the use of time-out sessions mixed with lecture is beneficial in developing interpersonal skills	1 2 3 4 5 6 7
Compared to a straight lecture format, the use of time-out sessions mixed with lecture is enjoyable	1 2 3 4 5 6 7

INCOME TAX ASPECTS OF ACCOUNTING CHANGES AND ERROR CORRECTIONS: AN INSTRUCTIONAL APPROACH

Robert Bloom and Gerald P. Weinstein

ABSTRACT

This paper offers an approach to the teaching of accounting changes and error corrections at the intermediate level that incorporates the income tax implications of these events. It was mainly motivated by two shortcomings of accounting education. First, we believe that despite calls for our courses to be more integrated, little has been done to promote integration in the areas of financial accounting and taxation. In particular, faculty should require students to consider the tax implications of financial transactions instead of having the tax effects assumed away. Second, we have found that Intermediate Accounting textbooks are invariably weak and unclear on how to deal with the income tax consequences of accounting changes and error corrections; accordingly, students develop misconceptions about proper accounting. This problem becomes compounded when accountants use Intermediate texts as references in considering appropriate financial accounting treatment. Our paper offers an instructional approach to assist in correcting these deficiencies. An appendix presents a detailed discussion of the treatment of accounting changes and error corrections in the most popular Intermediate texts on the market today.

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INTRODUCTION

The Accounting Education Change Commission in Position Statement No. 1 (1990), *Objectives of Education for Accountants*, includes “taxation” as part of its “composite profile of capabilities needed by accounting graduates.” Moreover, in the same document, the commission calls for integration of courses and subject matter in the accounting curriculum. Too often college courses, particularly in accounting and taxation, are not integrated. We believe that emphasis should be placed in our accounting courses on the linkages between taxation and financial accounting. In covering the topics underlying this paper, integration is imperative. Students should be able to see the connection between the two disciplines in the process of developing journal entries affecting income tax accounts.

The paper is also motivated by our attempts to deal with the subject’s textbook coverage of changes in accounting principle and correction of errors. These topics are often covered soon after accounting for income taxes. We have found that Intermediate textbooks are invariably weak and unclear on how to deal with the income tax consequences of accounting changes and error corrections. Our paper offers an approach to assist instructors in their coverage of this subject matter in the classroom.

Changes taking place in the Uniform CPA examination also serve as an incentive for this paper. The AICPA’s Board of Examiners has revised the content specifications of this examination to better reflect required knowledge and skills (effective upon the launch of the computer-based exam which is scheduled for early 2004). The new examination should allow testing of higher-level cognitive skills and permit integration of real-world, entry-level requirements. This paper discusses a method of exposing students to a type of integration they may have to deal with on the new CPA examination.¹

The paper consists of four main sections. In the first section, we present the background underlying the motivation of the paper. In the second section, following a discussion on how we integrate accounting and taxation in the Intermediate courses, we present a discussion of tax aspects of different types of changes in accounting principle assuming those changes are made in accounting with and without corresponding changes in taxation. The third section considers accounting errors, both counterbalancing and non-counterbalancing, along with their tax consequences. Instructors can utilize this section to accompany the discussion of income tax consequences (both deferred and current) in an Intermediate Accounting textbook. The final section provides a brief discussion of interperiod versus intraperiod income tax allocation. The Appendix presents a detailed review of the coverage of several widely used Intermediate Accounting texts.

Coverage of accounting for income taxes in most Intermediate Accounting textbooks is inadequate. It generally assumes that students have taken a course in taxation prior to Intermediate Accounting, which is often not the case. Students who have not learned income tax methods often experience difficulty in understanding deferred income taxes, which stem from non-permanent income differences as measured by tax regulations and generally accepted accounting methods. A typical intermediate-level student probably demonstrates only a vague conception of accounting income, let alone much knowledge of income tax law. Our paper is designed to bridge some of that gap in the areas of accounting for changes in accounting principles and corrections of errors.

Another problem is that some of the authors of textbooks do not adequately update their coverage in this area when tax laws change. From one textbook edition to another, there are seldom changes in the methods of accounting for changes and errors, but that is not necessarily the case for tax regulations. Even tax professionals have to work hard to keep up with ever-changing tax laws. The expertise of intermediate accounting authors rests quite naturally in financial accounting methods. We hope to clear up the misconceptions represented in some textbooks in this paper as well.

Students have difficulty deciding whether to reflect a deferred tax asset, a deferred tax liability, a current income tax liability, or a current income tax receivable stemming from a change in accounting principle. Textbooks do not do an adequate job of explaining the journal entries involved, particularly the tax consequences. It is most important in this regard to examine the underlying circumstances of the event. If the transaction produces a difference between pre-tax accounting income and taxable income or between the accounting and tax bases of the asset or liability in question, then a deferred tax liability or asset should be reflected in the journal entry. On the other hand, should the event produce an immediate income tax obligation, then a current income tax liability has to be shown. In some cases the event will generate a current income tax refund pertaining to amendment of prior tax returns and recoupment of previous taxes paid.

Table 1 "Treatment of Changes and Errors in Current Intermediate Accounting Textbooks" summarizes the tax consequences of changes in accounting and tax principles and errors in each textbook considered. Additionally, the Appendix provides a detailed review of the income tax treatment of accounting changes and errors in the current Intermediate Accounting textbooks assessed. Table 1 and the Appendix clearly indicate the problems with the textbook presentations. First, most of these books do not include any significant coverage of the tax effects of accounting changes and errors, whether in their chapters on taxation accounting or accounting changes. Second, most of the books do not clearly differentiate between income tax and accounting methods of depreciation. Some books assume

Table 1. Treatment of Changes and Errors in Intermediate Textbooks.

Reflects Tax Consequences of	Chasteen, Flaherty and O'Connor	Dyckman, Davis and Dukes	Hartman, Harper, Knoblett and Reckers	Kieso and Weygandt	Nikolai and Bazley	Revsine, Collins and Johnston	Skousen, Stice and Stice	Spiceland, Sepe and Tomassini
Typical accounting principle changes, not tax method changes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Same accounting and tax principle changes	No	Yes	Yes	No	Yes	No	Yes	Yes
Retroactive accounting principle changes, not tax method changes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Accounting errors, not tax errors	Yes	No	No	Yes	No	No	No	No
Same accounting and tax errors	Yes	Yes	Yes	No	Yes	No	No	Yes

that the sum-of-the-years'-digits method can be applied for both accounting and taxation; that is not true. Some books assume at least implicitly that if the straight-line method is used for accounting and taxation the resulting figures would be the same. That is not necessarily true since the useful lives of depreciable assets for tax purposes are often shorter than for accounting purposes. Third, most books do not treat the switch from LIFO to FIFO correctly in terms of: (1) the journal entry used – in particular, the liability created and the short- and long-term components of it – and (2) the tax law governing the payment period permitted following this change. Fourth, amendments of prior tax returns when mentioned in several of these books do not reflect the current law in terms of how far back the change can be recognized.

Overview on Integrating Accounting and Income Taxation

The manner in which we integrate accounting and income taxation in the Intermediate Accounting course is as follows. We emphasize in covering this topic that in Anglo-Saxon, common law (where the law is developed from cases in court) countries, including the U.S., Canada, and the U.K., among others, accounting standards and income tax regulations tend to differ.

Then we point to permanent differences between accounting and taxation such as interest on state and municipal obligations, penalties from violating the law, proceeds from life insurance payable to the company upon the death of principal officers and other employees, and premiums paid by the company when it is the beneficiary of life insurance on principal officers and other employees. Those are financial accounting events, but not taxation events. Then we introduce tax events that are not recognized for financial accounting purposes, including percentage depletion of natural resources above their cost and the dividend deduction received by U.S. corporations. Those events representing permanent differences are either reflected for financial accounting and never shown for tax purposes or vice versa.

Next we cover temporary differences between accounting and taxation, i.e. those differences that are expected to reverse in the future. We find it easier to discuss almost all of these differences from an income statement rather than a balance sheet perspective. We first introduce temporary events causing pre-tax financial accounting income to exceed tax return income. Those events are expected to reverse in the future, thereby generating a higher taxable income than pre-tax accounting income. Next, we describe examples of these events, including the recognition of gross profit on most installment sales at the point of sale for financial accounting purposes, in contrast to its non-recognition for tax purposes until cash is received. The installment method generally applies to gross profit

recognition for tax purposes, not accounting purposes. Other similar examples that we deal with include accelerated depreciation for tax purposes, straight-line for accounting. However, even if straight line were used for both accounting and taxation, there could still be differences between pre-tax accounting income and tax return income since the tax useful life may well be lower than its accounting counterpart. Additionally, we present “prepaid expenses” in accounting with those costs allocated to periodic income measurement while such prepayments represent immediate deductions on the tax return. Also, we discuss unrealized holding gains on trading securities, shown in the accounting income statement, but not on the tax return until such gains are realized.

Then we address the concept of deferred tax liabilities, stemming from the future reversing effects of those temporary differences. We employ the tax rates now in effect to apply to those future effects to show the deferred tax liability on the balance sheet, which we stress is a liability because it pertains to past events concerning temporary differences between accounting and taxation, and it constitutes a current obligation expected to produce a future sacrifice. We stress that deferred tax amounts are computed on the basis of the future reversing effects of the temporary differences, not on the originating differences per se nor on current reversing effects.

Next we introduce deferred tax assets, also arising from temporary differences between accounting and taxation – in this case, leading to lower pre-tax accounting income initially than taxable income. Such deferred tax items represent assets because they are likely future benefits controlled by the entity, arising from past transactions. Examples that we cover include showing accrued expenses for warranties in accounting but not for tax until such expenses are paid. The same applies to contingent losses, presenting them for accounting if payment appears probable and the amounts can be reasonably estimated, but not reflecting such losses for taxation until payment occurs. Another item we discuss in this context is deferral of revenue for cash advances received in accounting, but reflecting all that revenue for taxation upon cash receipt. Still another item relates to unrealized holding losses on trading securities as well as the lower of cost or market for inventory, both of which are reflected in financial accounting, but not taxation until the sales occur.

After this discussion, we raise the issue of how to treat unrealized holding gains and losses on available-for-sale securities representing marketable securities that are long-term investments. Such gains and losses are not included in either accounting or taxable income, yet they still represent a temporary difference between the accounting and taxation bases. These items are reflected in accounting in the long-term investments and the stockholders’ equity sections of the balance sheet, the latter in the account “accumulated other comprehensive income.” Those

gains and losses are included in the financial accounting, but not the tax basis of the investment. They will be shown in pre-tax accounting income and on tax return income only upon sale of the securities. Nonetheless, because the accounting and tax bases for the available-for-sale securities differ, deferred tax liabilities for the gains and deferred tax assets for the losses are reported. We could have employed differences between the accounting and tax bases to characterize all the other temporary differences as well, but we find the students to be more receptive to the income rather than the balance sheet approach to teaching deferred taxes.

Finally, we advise the students that deferred tax assets not only include temporary differences but also operating loss carryforwards. To take advantage of a loss carryforward, future income is needed. Showing deferred tax assets pertaining to operating loss carryforwards would seem to violate revenue recognition, since revenue is recognized before the earnings process has occurred. However, with deferred tax assets, a contra allowance account is required to be reported if it is more likely than not (a probability greater than 50%) that some or all of the deferred tax asset will not bear fruit. This allowance is intended to reduce the deferred tax asset to an estimated realizable value, analogous to the effect of the allowance for bad debts account – contra to accounts receivable – with the aim of reflecting this receivable on the balance sheet at its current cash equivalent.

Accounting Principle Changes

Income Tax Considerations

The measurement of the income tax impact of an accounting change or an error correction is ultimately dependent upon the applicability of Internal Revenue Code (IRC) Section 446, General Rule for Methods of Accounting. This section, along with certain related regulations, also contains a discussion about changes in accounting method. The general rule asserts that “taxable income shall be computed under the method of accounting on the basis of which the taxpayer regularly computes his income in keeping his books” [Code Sec. 446(a)]. Subject to specific IRS guidelines for certain items (for example, the requirement that depreciation be calculated using the modified accelerated cost recovery system) and the fact that relatively small businesses lacking inventory as a material income-producing factor may use the cash basis, the GAAP-based accrual method is appropriate for most firms in income tax reporting.

A change in accounting principle is closely aligned to what the Internal Revenue Code refers to as a change in accounting method. For accounting purposes, GAAP changes are the subject of APB Opinion No. 20 (1971), which includes three

types of changes – a change in principle, a change in estimate and a change in entity. Regulation 1.446-1 (e)(2)(ii)(a) states that changes in accounting methods include “a change in the overall plan of accounting for gross income or deductions or a change in the treatment of any material item used in such overall plan.” While similar to GAAP, this regulation is directed towards items that impact “gross income” or “deductions,” terms that carry specific income tax meanings and which are not necessarily the same as revenues and expenses under GAAP. As might be expected, the IRS focuses on those items that might impact taxable income.

Furthermore, a change in accounting principle must be justified in accounting and financial reporting on the basis that the new principle is preferable (APB Opinion No. 20, par. 16), but no such requirement exists in the Code. Since it is widely reported that many business firms change accounting principles to produce tax savings, not to reflect a preferable principle or to produce a more realistic net income, an interesting paradox arises. Firms are not supposed to change accounting principles to secure a tax savings under GAAP. However, firms make such changes, e.g. a change from FIFO to LIFO, asserting that such a change will generate a better matching of expenses against revenues in the income statement. Nonetheless, the IRS allows firms to make such changes on their tax return solely to reflect tax savings.

Code Section 446(e) and Regulation 1.446-1(e) establish that the Commissioner of Internal Revenue must grant permission to adopt a new tax method, regardless of whether the new method is appropriate or allowable. Normally the taxpayer will request this approval using Form 3115 and file it within the taxable year for which the change is requested.

Despite this requirement, there are specific changes for which consent is automatic. These changes, set forth in Rev. Proc. 98-60, include a change in method: (1) claiming less than the depreciation or amortization allowable; (2) claiming improper depreciation; (3) involving the timing of incurring liabilities for: (a) employee compensation; (b) real property taxes; or (c) payroll taxes; and (4) involving certain LIFO inventories. Other changes can also be effected with automatic consent, but the foregoing items are among those commonly discussed in an intermediate accounting class.

Financial Accounting Analysis

What follows are several examples of changes in accounting principle which are commonly used in textbooks to explain the topic along with their income tax consequences.

A Change in Depreciation Method for Financial Reporting

Far and away the most common item used in textbooks to illustrate an accounting change is switching depreciation methods. This also is an area where the income tax effect is frequently misrepresented. Let us assume that a firm changed from the straight-line depreciation method to an accelerated method. In a change of this nature, the cumulative effect of the change will normally result in a lower book value of the affected asset and therefore a reduction of net income in the year of the change.

In most cases, this GAAP change would not result in a change in method of depreciation for tax purposes since the Code mandates the use of the Modified Accelerated Cost Recovery System (MACRS) or (at the taxpayer's election) straight line regardless of the method used for accounting. As presented in Intermediate textbooks, for accounting purposes, APB Opinion No. 20 (1971) requires the change in principle be reflected by showing the cumulative effect of the new method (net of taxes) within the income statement of the current period. Also, for comparative income statements a pro forma analysis is provided of what the income in those statements would have been had the new method been used all along. Without considering the tax impact, this change would be accounted for as follows:

Cumulative Effect

Accumulated Depreciation

The tax impact of this event relates to long-term deferred taxes only. The differences between the accounting book value of the fixed assets and the adjusted bases of the same assets (i.e. the tax "book value" for all intents and purposes) produces a deferred tax asset or liability. If we assume that prior to the change in depreciation method, a deferred tax liability existed (that is, the accounting book value exceeded the adjusted basis), then adoption of the new depreciation method would cause the difference between the book value and adjusted basis to become smaller and thus reduce the deferred tax liability. Accordingly, the following journal entry would be required to reflect the tax impact on the cumulative effect item in the income statement:

Deferred Tax Liability

Cumulative Effect

Now consider a change from accelerated depreciation to straight line. The effects would be precisely reversed. The cumulative effect of this reduction in accumulated depreciation would generate an increase in pre-tax accounting income. Since the accounting book value of the fixed asset would be increased, any existing

deferred tax liability would increase. The journal entry to reflect the impact of the depreciation without regard to the tax is:

Accumulated Depreciation

Cumulative Effect

The following entry reflects the cumulative effect of the accounting change being reported net-of-tax and the increase in the deferred tax liability:

Cumulative Effect

Deferred Tax Liability

A Switch from LIFO To FIFO for Both Accounting and Income Tax Purposes

This is an exceptional change in accounting principle, treated in financial accounting by adjusting retained earnings at the beginning of the year (for prior years) as if FIFO, the new method, had been used all along as well as restating comparative financial statements to reflect FIFO rather than LIFO. For income tax purposes, the change from LIFO to FIFO can be made with “automatic consent,” i.e. without applying to the IRS commissioner for special permission [IRS Rev. Proc. 98–60]. Nevertheless, IRS Form 3115 has to be filed with the IRS national office. As a result of this change, a “LIFO (income) reserve,” which is the difference between a company’s inventory at LIFO versus FIFO, is created (known as a Section 481(a) adjustment). This raises taxable income and therefore income taxes to be paid. Since this reserve can be substantial, the IRS allows companies to pay off this debt over four taxable years in equal installments (Rev. Proc. 98-60). This allowance will cause one-fourth of the tax obligation to be payable currently and the balance to be long term in nature.

The tax effect of the realization of the LIFO Reserve is a tax liability of a certain amount. Simple present value analysis dictates that the tax postponement option be elected rather than paying the tax immediately. The journal entry must reflect the obligation, but for balance sheet purposes only the amount payable within 12 months is current. Three-quarters of the debt is classified as long term because the tax debt is payable in cash in the second through fourth year hence.²

The long term portion should not be credited to a deferred tax liability account because it did not arise from an item that will affect financial statement income and taxable income differently in the future (i.e. a timing difference). This obligation does not belong in a deferred tax account, but rather it belongs in income tax payable because it is a current tax, the payment of which is postponed. The appropriate journal entry for this accounting change is:

Inventory

Retained Earnings

Income Tax Payable – current

Income Tax Payable – long term

The foregoing entry does not have to reflect a breakdown between the current and long-term portions of the income tax payable account, but the balance sheet has to show those two accounts separately.

A Change in the Method of Accounting and Taxation for Long-Term

Construction Contracts

This particular change in principle is another exception for accounting purposes, since it is treated with a cumulative adjustment, not in the income statement but rather to retained earnings at the beginning of the year along with retroactive adjustment to comparative financial statements to facilitate comparability for users of such statements. In general, the IRS requires taxpayers to use the percentage-of-completion method for any contract that is not completed within the same year that it was implemented [Code Sec. 460(f)(1)]. Therefore, if the percentage-of-completion method had been used for tax purposes all along, a change in accounting principle from completed-contract to percentage-of-completion for book purposes would eliminate the portion of any deferred tax asset that is associated with this temporary difference. The journal entry should then be:

Construction in Process

Deferred Tax Asset

Retained Earnings

If the taxpayer in question has only small construction contracts, home construction contracts or residential construction contracts, the taxpayer can apply the completed-contract method [an exception provided under Section 460(e)(1)]. In this case, a change from the completed-contract to the percentage-of-completion method would create a temporary difference causing book income to exceed tax income. Instead of reducing an existing deferred tax asset, a deferred tax liability would then be created. The journal entry for that event would be the same as the one immediately above with the addition of a deferred tax liability if the deferred tax asset is reduced to zero. If no deferred tax asset exists, the entry would include a credit to deferred tax liability instead of deferred tax asset.

If the GAAP change were to the completed-contract method and the tax return reported income using the percentage-of-completion method, a deferred tax asset would be reported using the following journal entry:

Retained Earnings

Deferred Tax Asset

Construction in Process

If any of the exceptions to Section 460(e)(1) apply, the debit would be to a deferred tax liability account instead of a deferred tax asset. It should be noted that a switch to or from the percentage-of-completion method in taxation on long-term construction contracts cannot be made automatically. A company has to apply to the IRS Commissioner for permission to make the change using Form 3115.

Now Consider the Situation that can Arise when the FASB Issues a New Standard Involving Recognition of a Liability that Firms Were not Previously Required to Recognize

In such cases, the FASB may permit the liability to be phased in over a number of years, and it may offer the option of recognizing the entire liability immediately. Such a situation arose in 1990 when the FASB issued Statement No. 106, *Employers' Accounting for Postretirement Benefits Other Than Pensions*.

Let us assume that a company took the option of showing the entire transition in the first year instead of amortizing the transition. Reflecting the full transition immediately generally meant showing the actuarial benefit obligation (known as the accumulated postretirement benefit obligation) since these plans had not been previously funded. The journal entry mandated by the FASB for this "big bath" is:

Cumulative Effect of the Accounting Change

Deferred Tax Asset

Accrued Post Retirement Benefit Cost

The accountant establishes a deferred tax asset because pre-tax accounting income was lower than taxable income as a consequence of the debit to "cumulative effect," as required by the FASB. In the future, the transition is expected to be funded, so the difference in book and tax incomes should be temporary, though probably longer in duration than most temporary differences.

Finally, Consider the Switch from FIFO to LIFO

This particular switch is treated like a change in estimate for accounting purposes – that is, prospectively – because it is generally too difficult to attempt to create

LIFO inventory layers retroactively. Therefore, the base initial inventory for LIFO is the balance in the FIFO inventory account. Taxable income and accounting income will not differ in the future as a result of the change to LIFO. Hence, there is no journal entry to show any tax effect from this change in accounting principle. Furthermore, a switch from FIFO to LIFO is not “automatic” for tax purposes. The company in question has to apply to the IRS Commissioner for permission to make that change.

ERROR CORRECTIONS

Students often have considerable difficulty with the correction of errors from prior periods using journal entries. A principal reason for such difficulty is the failure of students to think clearly about the accounting and tax consequences of correcting entries, especially for potentially counterbalancing errors. Students are all too accustomed to memorizing rather than understanding and applying concepts and techniques. Furthermore, textbooks do not adequately explain how such entries are made, not to mention the specific rationale for each entry. As a result, students become confused about this topic.

Like GAAP, the Code distinguishes accounting changes from errors. Regulation 1.446-1(d)(2)(ii)(6) states that a “change in method of accounting does not include correction of mathematical or posting errors, or errors in the computation of tax liability” (such as errors in computation of the foreign tax credit, net operating loss, percentage depletion, or investment credit). Code Section 1311, which deals with error corrections, contains provisions allowing the IRS to assess taxes (or a taxpayer to secure a refund) when equity makes it desirable, even when a tax year may be otherwise closed because of expiration of the three-year statute of limitations.³ Those provisions apply, however, only when there has been a “determination,” which is defined in Code Section 1313 to include a closing agreement, a court decision, the final disposition by the IRS of a refund claim, or an informal agreement between the taxpayer and a representative of the Treasury Department relating to the provisions. Without a determination, the taxpayer and the IRS are prevented from reopening closed tax years. Thus, a taxpayer who failed to take allowable depreciation could not correct this error in years that were closed.

It should be emphasized that the Internal Revenue Code does not make any allowance for errors to be corrected on the tax return of a later period. This is a significant departure from the treatment of an error for accounting and financial reporting purposes. As long as the three-year statute of limitations has not expired, the taxpayer is obligated to correct the error by filing an amended tax return (using Form 1120X) for the year in which the error occurred. If the statute of limitations

has expired, a correction of the error is not permitted. In such cases, the error would be reported as an adjustment to the retained earnings balance on Schedule M-2 of the corporation's Form 1120 for the year in which the error is discovered. That could create a benefit or tax due for the taxpayer. For instance, if the error had been an understatement of revenue in the closed year, the taxpayer would benefit by avoiding the tax on that revenue.

It should also be noted that it is likely that some preparers of tax returns might not follow the foregoing procedure for correcting an error. Particularly in cases where the error is not material, the error correction would likely be included in the current year's tax return rather than preparing an amended return.

We now turn to the journal entries needed to correct potentially counterbalancing errors before such errors actually counterbalance or wash out. Counterbalancing does not occur until the accounting books of the two consecutive periods affected by the error are both closed. Once the counterbalancing happens, no correcting journal entry can be made. Nevertheless, the previous financial statements are still affected by the error, and therefore have to be corrected manually.

Before making a correcting journal entry for a prior period error, it is imperative to analyze the error and its effects on the income and taxes in the period(s) in question. That point cannot be overstressed. If the accrual method is assumed to be used for both accounting and income tax reporting purposes, the error would occur in both the financial statements and the tax return. Accordingly, there would be no deferred taxes. Instead, an income tax receivable (refund) or payable account would be used for the tax effects. In general, large businesses, and many smaller ones, would use the accrual basis for both accounting and income tax purposes. There are, however, certain specific items for which the IRS mandates a treatment contrary to GAAP. Two notable examples are the requirements that bad debts be reported for tax purposes using the direct write-off method and depreciation be computed for tax purposes using MACRS rather than a GAAP accelerated method. For a more complete listing of areas where accounting and tax reporting differ, see Torres and Albin (1997).

Table 2 lists examples of various types of counterbalancing errors and the effects on income in each of two successive years. Panel A of this table shows correcting journal entries (with explanatory discussion) assuming the books of the year the error is discovered (Year 2) are still open. Textbook presentations of error corrections often include scenarios where potentially counterbalancing errors are discovered at the very beginning of Year 2 after the books of Year 1 have been closed, but before any nominal accounts are established in Year 2. In practice, a situation like this is unlikely since the accounting books will not be closed until several weeks after the end of the year. Nonetheless, Panel B of Table 2 presents the corresponding correcting journal entries, as a useful exercise for students to

Table 2. Effects on Pre-Tax Income of Typical Errors in Each of Two Sequential Periods (Year 1 is the Year the Error Occurs).

Panel A : Error is Discovered During Year 2 After the Books of Year 1 have been Closed but Before the Closing Process for Year 2.

Error	Year 1 Pre-Tax Income	Year 2 Pre-Tax Income	Correcting Journal Entry	Discussion
1. Ending inventory understated	↓	↑	Inventory Retained Earnings Income Tax Payable	This corrects the inventory balance and records the income tax liability created by the increase in year one income. Retained earnings is credited for the net of tax effect of the increased income.
2. Ending inventory overstated	↑	↓	Retained Earnings Income Tax Refund Receivable Inventory	This entry reflects the reverse scenario of Item 1. An income tax refund receivable is created since taxable income of the prior year should be lowered causing less tax to be owed for the prior year.
3. Failure to accrue a salary expense at year end	↑	↓	Retained Earnings Income Tax Refund Receivable Salaries Expense	This will cause the prior year's taxable income to be higher when it is amended. The credit to salaries expense raises the reported net income in Year 2, by eliminating this expense from Year 2 since it belongs in Year 1. Salaries Payable should not be credited since that would not affect income in Year 2, which is understated by an excessive salaries expense. In this instance, it is common for students unthinkingly to credit "Salaries Payable" in the entry to correct the error in Item 3.
4. Overstate accrued salary expense at year end	↓	↑	Salaries Expense Retained Earnings Income Tax Payable	This situation is the reverse of Item 3. Salaries Payable should not be debited, since that would not affect Year 2 income, which is overstated.
5. Accrued revenue not recorded at year end	↓	↑	Revenue Retained Earnings Income Tax Payable	In this error, Year 2's revenue must be reduced and that amount (net of tax) transferred to Year 1 by crediting retained earnings. A receivable for the accrued revenue should not be debited, since that would not affect Year 2 income, which is overstated.

Table 2. (Continued)

Error	Year 1 Pre-Tax Income	Year 2 Pre-Tax Income	Correcting Journal Entry	Discussion
6. Accrued revenue overstated at year end	↑	↓	Retained Earnings Income Tax Refund Receivable Revenue	This is the mirror image of Item 5. A receivable for the accrued revenue should not be credited since that would not affect Year 2 income, which is understated.
7. Failure to expense prepaid expense at year end	↑	↓	Retained Earnings Income Tax Refund Receivable Expense	Correction of this error would result in a lower prior year's taxable income and a higher current year's income since the expense would not be reported in Year 2.
8. Prepaid expense at year end understated	↓	↑	Expense Income Tax Payable Retained Earnings	This scenario reverses Item 7. A receivable for the accrued revenue should not be credited since that would not affect Year 2 income, which is understated. In Items 7 and 8, a prepaid expense should not be debited and credited, respectively, since that would not affect Year 2 income, which is incorrectly stated.
9. Liability for advances understated at year end	↑	↓	Retained Earnings Income Tax Refund Receivable Revenue	This item would result in the prior years' taxable income being amended to reflect less revenue and hence less income.
10. Liability for advances overstated at year end	↓	↑	Revenue Income Tax Payable Retained Earnings	In this reverse scenario of Item 9, current year's revenue should be reduced and effectively transferred back to the prior year. In Items 9 and 10, an advance liability should not be credited and debited, respectively, since that would not affect Year 2 income, which is incorrectly stated.

Table 2. (Continued)

Panel B : Error is Discovered During Year 2 after the Books of Year 1 have been Closed but Before Nominal Accounts have been Established for Year 2.			
Error	Year 1 Pre-Tax Income	Year 2 Pre-Tax Income	Correcting Journal Entry
1. Ending inventory understated	↓	↑	Inventory Retained Earnings Income Tax Payable
2. Ending inventory overstated	↑	↓	Retained Earnings Income Tax Refund Receivable Inventory
3. Failure to accrue a salary expense at year end	↑	↓	Retained Earnings Income Tax Refund Receivable Salaries Expense
4. Overstate accrued salary expense at year end	↓	↑	Salaries Expense Retained Earnings Income Tax Payable
5. Accrued revenue not recorded at year end	↓	↑	Revenue Retained Earnings Income Tax Payable

Table 2. (Continued)

Error	Year 1 Pre-Tax Income	Year 2 Pre-Tax Income	Correcting Journal Entry
6. Accrued revenue overstated at year end	↑	↓	Retained Earnings Income Tax Refund Receivable Revenue
7. Failure to expense prepaid expense at year end	↑	↓	Retained Earnings Income Tax Refund Receivable Expense
8. Prepaid expense at year end understated	↓	↑	Expense Income Tax Payable Retained Earnings
9. Liability for advances understated at year end	↑	↓	Retained Earnings Income Tax Refund Receivable Revenue
10. Liability for advances overstated at year end	↓	↑	Revenue Income Tax Payable Retained Earnings

undertake to see if they really understand the possible impact of accounting errors on the accounts. In general, these entries substitute real accounts for nominal accounts. In each case we assume the error exists in both the financial accounting records and the tax return.

Correcting counterbalancing errors is a function of when the error is discovered. For example, if wages expense is understated in Year 1 and the error is found at the beginning of Year 2 before this amount is expensed in Year 2, but after the books of Year 1 have been closed, then the correcting entry is:

Retained Earnings

Income Tax Refund Receivable

Wages Payable

Should this error be discovered in Year 2 after the wages expense from Year 1 was erroneously reflected in Year 2, the correcting entry is:

Retained Earnings

Income Tax Refund Receivable

Wages Expense

However, if this error is found during the closing process in Year 2, the correcting entry is:

Retained Earnings

Income Tax Refund Receivable

Income Summary

If each error is discovered in the period in which it is made, the correcting entry will not involve retained earnings at all, but rather expenses and revenues or perhaps income summary as well as assets and liabilities. The key to making the foregoing correcting entries is for students to remember that these mistakes are potentially counterbalancing errors. In this sense, the incomes in two consecutive periods may be misstated and thus have to be corrected. If the books of Year 1 are closed, the only means of correcting income in that period is to adjust the balance in the Retained Earnings account. To correct the income in Year 2, neither an asset nor a liability account can be adjusted; instead, an expense or revenue account has to be debited or credited.

Should the error counterbalance, i.e. if it is discovered after the books of Year 2 are closed, no correcting journal entry can be made. Instead, comparative prior

financial statements have to be manually adjusted to reflect the correction of the error.

The foregoing has assumed that the errors affected both the accounting records and the income tax return of Year 1. If the error impacted only the financial accounting books, it would not be necessary to amend the tax return. Therefore, correcting journal entries would not have to reflect any change in the income tax expense of Year 1. In such cases, the correcting journal entries would reflect changes in the affected revenue/expense of Year 2 and the income tax expense of Year 2 with the balancing debit or credit going to retained earnings. Any error made only on the tax return would result in the tax return being amended without a journal entry in the financial accounting records.

Many texts refer to mistakes misleadingly as “counterbalancing errors.” However, these errors may very well be found before the counterbalancing actually occurs. Texts tend to do a better job of explaining the correcting entries for non-counterbalancing errors as opposed to counterbalancing errors.

With noncounterbalancing errors, the income is often misstated for only one year. For example, suppose the cost of a building was expensed in Year 1 and the straight-line method should have been used for book depreciation; however, both accounting and tax depreciation were ignored. We are now in Year 3, and we have to make an error correction. The journal entry in this situation is more complex. Since the tax return will require the use of MACRS to depreciate the building while the books use straight-line, amending the tax return will result in both a current tax liability to reflect the higher taxable income of the prior year and a deferred tax liability to reflect the difference between the adjusted basis of the building on the tax return and the net book value on the books.

We believe that students would understand this correction more clearly if it were partitioned into two entries. The first entry corrects the error of the prior year on the books and reflects the increased current liability for the prior year’s income taxes:

Building

Accumulated depreciation

Income tax payable

Retained earnings

The second entry records the deferred tax liability as of the end of the Year 1. This addition to the liability would be booked as:

Retained earnings

Deferred tax liability

INTRAPERIOD VERSUS INTERPERIOD INCOME TAX ALLOCATION

Finally, we examine the subject of income tax allocation within different elements of income in the same year and from year to year. Income tax allocation pertains solely to representations made in the financial statements. Therefore, this subject is not addressed in the Internal Revenue Code, and does not impact tax returns. Under intraperiod tax allocation, income taxes are distributed among the various income categories: (1) income from continuing operations; (2) discontinued segments, including the income or loss from operating such segments to the measurement date and the gain or loss on disposal of the segment; (3) extraordinary gains and losses; and (4) cumulative effect of a change in accounting principle or method of applying that principle. There are some cases in which intraperiod income tax allocation will be evident on other financial statements. For example, errors pertaining to prior periods are corrected by adjusting beginning-of-the-year retained earnings, net of taxes. Also, the three elements of “other comprehensive income” – unrealized gains and losses from holding available-for-sale securities, minimum pension liability adjustments, and foreign currency translation adjustments, which appear in the stockholders’ equity section of the balance sheet, are shown net of income taxes, even though none of these items is subject to current income taxes. Nevertheless, intraperiod income tax allocation generally is evident only from the income statement.

Students should be advised that deferred taxes arise only from interperiod income tax allocation. If there are no temporary differences between pre-tax accounting income and taxable income, there will be no deferred income taxes, and income tax expense will be the same total appearing in income statement, allocated among the categories of the income statement previously described.

Textbooks invariably fail to emphasize that “other comprehensive income” items are not taxable until external transactions pertaining to them occur. The unrealized holding gain on available-for-sale securities creates a deferred tax liability whereas the unrealized holding loss creates a deferred tax asset; these items are reported for accounting but not taxation purposes, leading to a difference between the accounting carrying value and tax bases for the available-for-sale securities. As for the minimum pension liability adjustments and foreign currency translation gains and losses, they also represent temporary differences between accounting and taxable income measurement, which require deferred tax asset or liability treatment.

Textbooks typically do not relate the residual computation of income tax expense to intraperiod tax allocation, leaving students to think that the total tax expense appearing on the income statement can be generally found by applying the tax rates now in effect to accounting income figures. Prior to SFAS No. 109, Accounting

for Income Taxes, (1992), we used an income statement approach (APB Opinion 11, Accounting for Income Taxes, 1967) to measure deferred taxes, which made the income tax expense a direct computation and the balance sheet accounts for deferred income taxes indirect, or plug figures. However, it is possible to measure the income tax expense in another manner by doing a “statutory rate reconciliation” – applying the current tax rate to the income from continuing operations, adding or deducting the permanent differences and then adding (subtracting) the cumulative temporary taxable (deductible) differences, multiplied by the appropriate tax rates. In this manner, the income tax expense stemming from the adjusting journal entry in accounting for income taxes can be reconciled (see Williams et al., 1995, pp. 844–848). While income tax expense can be checked in this fashion, SFAS No. 109 mandates this method not be used to determine income tax expense. Rather, tax expense is the residual from adjusting the income tax accounts on the balance sheet.

CONCLUDING COMMENTS

Each change in accounting principle or correction of error is different, and therefore has to be analyzed carefully with respect to income and income tax consequences. Only when there is a difference between pre-tax accounting and taxable income, or a difference between the accounting and tax bases of the asset or liability in question, will a deferred tax liability or asset emerge. Otherwise, if tax consequences stem from the change in accounting or correction of an accounting error, they will pertain to the realization of current income tax payable or refund receivable accounts.

With some changes in tax methods, the IRS requires a consideration of past income differences between the old and new methods (e.g. a change from LIFO to FIFO). Any resulting tax which the IRS permits to be deferred should not be classified as a deferred tax liability. In other such changes, only the current and future income effects are considered taxable. These are the types of events which give rise to deferred taxes.

This paper was largely motivated by our frustration in using intermediate texts on the subject of income tax effects of accounting changes and errors, with a view to improving the clarity of presenting this topic in the classroom. While most of the intermediate accounting textbooks cover this subject area in some degree of depth, none of them provides all the alternative examples and correcting entries involving tax effects as set forth in this paper. As a result, students encounter considerable difficulty with this subject area. This paper has attempted to assist accounting educators in their coverage of this difficult and often misrepresented area of accounting education.

NOTES

1. In the federal taxation part of this examination candidates will be expected to:

- Analyze information and identify data relevant for tax purposes.
- Identify issues, elections and alternative tax treatments.
- Research issues and alternative tax requirements.
- Formulate conclusions.

The “content specification” for this part includes the following items:

- (A) Federal tax procedures.
- (B) Accounting periods.
- (C) Accounting methods including cash, accrual, percentage of completions, completed contract, and installment sales.
- (D) Inventory methods including uniform capitalization rules.

See *Uniform CPA Examination: Examination Content Specifications* (2002).

2. For this change in principle, not one current Intermediate Accounting textbook reflects both a current and long-term “income tax payable.” Three textbooks correctly show “income tax payable,” while others incorrectly show “deferred income tax payable.” See the Appendix for a comparative analysis of these books on accounting for income taxes.

3. This is a normal statute of limitations period, but it can be extended indefinitely with the taxpayer’s consent.

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APPENDIX: DESCRIPTIVE TREATMENT OF TAX EFFECTS OF ACCOUNTING CHANGES AND ERRORS IN EACH CURRENT TEXTBOOK

Chasteen, Flaherty and O'Connor

In their discussion of general accounting changes, the authors assert: “[f]or simplicity, taxes are ignored” (p. 1023). However, in discussing accounting for a change in principle, they include a tax effect, which, while logically consistent, is nonetheless incorrect (p. 1029). Their example shows a change from sum-of-the-years-digits to straight-line depreciation, with the company continuing “to use the sum-of-the-years-digits method for tax purpose.” The problem here is that the sum-of-the-years-digits is not an acceptable method for tax purposes. Only MACRS or straight-line can be used on the tax return.

Income taxation is also addressed in the section on error corrections, but this treatment is incomplete at best. The example given (pp. 1038–1041) describes a situation involving a fixed asset initially expensed instead of capitalized. When the error is discovered in the fifth year of the asset’s 10-year life, the correcting journal entries include an increase in income taxes payable. However, their computation of this payable assumes that the tax return will reflect the same cumulative effect

as the books. This is incorrect since it ignores MACRS. The tax effect of this error is, in fact, quite difficult to analyze. Since the original error occurred five years earlier, and that tax year is now closed by the statute of limitations [Sec. 6501(a)], it cannot be reopened to correct the error unless a determination has been made with respect to the circumstances involved.

Since the year in which the error was made is closed (and thus not subject to IRS audit), only self-disclosure by the firm to the IRS requesting a determination would permit this error to be corrected. If left uncorrected on the tax return, the correction on the books, which increases existing retained earnings and decreases future book income due to future depreciation expense, would result in a permanent difference, and hence have no income tax effect, either current or long-term.

To their credit, the authors offer a brief section on the general tax effects of errors (p. 1041). An appendix providing a worksheet for analyzing errors includes tax effects under the assumption that errors made on the books were the same as the errors made on the tax returns (pp. 1046–1051).

Dyckman, Davis and Dukes

After initially ignoring income taxes in their discussion of changes in accounting principles, the authors book a tax refund receivable from a prior period adjustment due to an overstatement of ending inventory discovered in the subsequent year (p. 1263). A footnote points out the fact that a different analysis would result had the error not been the same for both book and tax purposes.

Later, in discussing a change in depreciation method (pp. 1266–1267), an existing deferred tax liability is appropriately reduced in view of the reduced book value of the fixed assets. In accounting for a change from LIFO to FIFO, the authors show an increased tax liability, which is necessary under the Section 481(a) adjustment (p. 1273), but do not indicate the current and noncurrent amounts or the time period for payment of this liability. The authors correctly reflect an income tax payable in their journal entry stemming from this accounting principle change. Only two other Intermediate books that we examined do that: Nikolai and Bazley (2000), and Skousen et al. (2001) In still other books and accompanying solution manuals, where journal entries are explicitly given for this change in principle, a deferred tax liability is incorrectly reflected.

Hartman, Harper, Knoblett and Reckers (2001)

This text provides very limited coverage of changes and errors, let alone their tax consequences, and much earlier than most traditional intermediate

books – addressing the topics in Chapter 6. It is understandable that only passing attention is given to the tax effects of changes and errors since accounting for income taxes is not addressed until Chapter 17.

This book covers the current and retroactive approaches to accounting principle changes, and in so doing the tax consequences. In another change from LIFO to FIFO, the authors also furnish a specific example and journal entry (p. 252). The problem is that “income taxes payable,” not “deferred tax payable,” should be credited in this entry.

In providing another example of a change in accounting principle, they address income taxes, but their coverage is inaccurate and incomplete (p. 255). The change in depreciation they show from straight-line to sum-of-the-years-digits produces an income tax refund receivable based on the amendment of prior years’ income tax returns. However, they reflect an amendment of four prior tax returns when in practice only the prior three years’ returns can be amended; a refund from the fourth prior year is irretrievable. No mention is made of the fact that sum-of-the-years-digits is not an acceptable method for tax purposes as in Chasteen et al.

In a later example concerning prior-period adjustments (p. 257), they discuss the effects of a failure to depreciate a \$100,000 asset. Again, they do not consider the application of MACRS for tax purposes.

Kieso and Weygandt (2001)

The authors provide an extensive analysis of the various types of accounting changes. With respect to the cumulative effect approach, they present an example dealing with a change from sum-of-the-years-digits to straight-line. This appears to be the same example that Skousen et al. (2001) have used. Straight-line was used originally for tax purposes in light of an existing deferred tax asset. Accordingly, the deferred tax asset is eliminated in the appropriate journal entry they provide. The problem here is that the authors implicitly assume that the straight-line method for accounting and taxation will yield the same figures, which may not be true since different useful lives can be applied for accounting and taxation. The IRS mandates the useful life for the tax return. As a consequence, deferred taxes may be created even though the straight-line method is used for both purposes.

Interestingly enough, the authors do not illustrate the tax consequences of the change from LIFO to FIFO in their text. However, for a “brief exercise” (23-3) at the end of the chapter, they provide a journal entry in their Solutions Manual, correctly reflecting an “income tax liability.”

Kieso and Weygandt (2001), like Chasteen et al. (1998) illustrate with a suitable journal entry a retroactive switch from the completed-contract to percentage-of-completion method for long-term construction contracts. The deferred tax liability is credited to show that the company will not change to the percentage-of-completion for tax purposes, and hence taxable income in future periods will be higher than future accounting income (pp. 1260–1261).

Nikolai and Bazley (2000)

The authors appropriately reflect the tax effects of accounting changes and error corrections. In discussing a change in depreciation method, they utilize MACRS and show a reduction in the deferred tax liability as part of a correcting journal entry (p. 1064). This reduction is suitable because the change in method produces a reduction of previously reported pretax accounting income due to a change from the straight-line to an accelerated method of depreciation.

Later, in discussing a change from LIFO, to FIFO, which increases the firm's current tax liability, they also provide an appropriate journal entry reflecting this change with the tax effect as a credit to "income taxes payable." They also point out the little-known fact that the additional resulting tax can be paid over a period of years. However, they cite a six-year period when, in fact, the current period is four years. Despite this mistake, they generally followed proper tax rules such as using MACRS in depreciating assets on the tax return.

Of all the texts we examined, in our judgment their treatment of the tax effects of changes is the best in terms of accuracy and comprehensiveness. However, this book barely touches on the tax consequences of errors. None of the books we have examined does an adequate job of considering the tax effects of accounting errors.

Revsine, Collins and Johnson (1999)

This text, among a new wave of non-traditional intermediate books, touches on changes in accounting principles in Chapter 2, using the "cumulative effect" approach, though hardly considering such changes using the "retained earnings" approach. The authors do not explicitly address errors or corrections. Early coverage of accounting changes in this book precludes a detailed analysis of income tax effects.

In an example on accounting for a change in depreciation method from straight-line to sum-of-the-years-digits (p. 63), their correction journal entry includes a deferred tax account with no proof of the dollar amount. The reader is referred to

their coverage of income taxes on Chapter 12. The authors do not indicate explicitly whether this change is only for accounting purposes. Nor do they say which tax method was used originally. The problem is that the straight line method may be applied differently for taxation vis-à-vis accounting. In particular, a shorter useful life may well be used for taxation rather than accounting, thereby creating a credit to deferred income tax payable.

Skousen, Stice and Stice (2001)

The authors address the issue of the tax effects of changes by either ignoring them or assuming amounts given to the reader. In an example concerning a change from double-declining balance to the straight-line depreciation method, the authors provide an appropriate accounting under their assumption that the principle change aligns book and tax reporting. It is assumed straight-line is used all along for tax purposes. However, as the authors fail to observe, application of the straight-line method for taxation conceivably may involve a different useful life than its counterpart for accounting purposes. As a result, deferred taxes can arise even though a firm is using straight-line for both accounting and taxation. There is no mention of applying MACRS for tax purposes.

Later, in discussing retroactive accounting changes, using the example of LIFO to FIFO, generating an income tax liability for the additional tax incurred, no mention is made of the Section 481 (a) adjustment which permits the additional tax due to the LIFO income reserve to be paid out over four years. Hence, like Dyckman et al. (2001), Nikolai and Bazley (2000), and Skousen et al. (2001), they do not indicate the portion of the liability which would be considered long term. Nevertheless, they do show an appropriate “income tax payable” stemming from the LIFO to FIFO change as do Dyckman et al. (2001) and Nikolai and Bazley (2000). Finally, the authors do not consider the tax effects of errors.

Spiceland, Sepe and Tomassini (2001)

After briefly introducing the topics of accounting principle and error corrections in Chapter 3, the authors provide an overview of the tax effects in Chapter 16 on income taxes (pp. 754–756), which precedes their chapter on accounting changes and errors. This was the only text we examined having a section on accounting changes in principle and errors in the chapter on income taxes.

In discussing the tax effects of a change in depreciation from accelerated to straight-line, an increase in the deferred tax liability is reflected. A footnote

mentions the use of MACRS for tax purposes, and there is no implied change in the depreciation method for tax purposes. Thus, all that needs to be done to reflect the tax effects is to increase the deferred tax liability, and this is what is demonstrated.

In the same chapter, an error correction is described in which depreciation was omitted from the books and the tax return (p. 756). The correcting journal entry reduces the current income tax payable, assuming the taxes had not yet been paid, with no impact on deferred tax accounts. If deferred tax accounts were unaffected, the implication is that the impact would be the same on both the books and the tax return. This is indeed the assumption they make, ignoring MACRS for taxation. However, even if straight-line were used for books and taxation, the depreciation figures could be different. In the chapter on changes and errors, the authors provide an example of equipment being erroneously expensed rather than capitalized with a correction entry (pp. 1002–1003), again ignoring depreciation differences in the books and tax return.

A retroactive accounting change from LIFO to FIFO is also discussed (p. 991), with the authors correctly computing an additional tax liability caused by the resulting increase in taxable income. However, like Nikolai and Bazley (2000), they assert that the additional tax must be repaid over six years, though it is now four years. In contrast to Nikolai and Bazley (2000) as well as Dyckman et al. (2001) and Skousen et al. (2001) Spiceland and Sepe show the entire amount as a deferred tax liability. It is an income tax payable, not a deferred tax liability. Moreover, it is mostly long-term since most of the tax will be paid after one year. Accordingly, the portion due in one year should be classified as current.

LOW-INCOME TAXPAYER CLINICS AS A FORM OF SERVICE LEARNING

Susan E. Anderson and Christine C. Bauman

ABSTRACT

This paper describes the Low-Income Taxpayer Clinic (LITC) programs at the University of Wisconsin-Milwaukee and formerly at the University of North Carolina-Greensboro and the related educational benefits for students. The LITC is an example of service learning that allows graduate tax students to participate in organized outreach that benefits the community and enriches their academic experience. Through LITC participation, students receive first-hand experience in tax research and controversy, ethical dilemmas, and taxpayer interaction. The real world setting of the tax clinics provides an opportunity for students to develop communication skills, tax research skills and social awareness. Survey feedback from students indicates that they find helping those less fortunate, interacting with taxpayers, and applying the tax law as the greatest advantages of LITC participation. LITCs provide a valuable and needed service to low-income and ESL taxpayers, as well as a visible means of a university's community outreach.

Accounting education has been extensively criticized in recent years. Accounting no longer consistently attracts the “best and brightest” students and our traditional textbook-driven approach fails to expose students to the issues that they will encounter in practice (Albrecht & Sack, 2000, p. 43). Albrecht and Sack encourage faculty to utilize creative pedagogies such as case analysis, oral

presentations, writing assignments and team work (2000, p. 53). Additionally, they suggest that students participate in out-of-classroom experiences to stimulate learning.

Service learning activities address many of the problems that Albrecht and Sack identify. Low-Income Taxpayer Clinics (LITCs) give students the opportunity to apply their tax knowledge to real-world situations. In an LTC, students assist low-income taxpayers and individuals for whom English is a second language (ESL) in conflicts with the Internal Revenue Service (IRS). The LTC is a clinical pedagogical style that provides students first-hand experience with taxpayer interaction, ethical dilemmas, and problem/resolution skills. The LTC form of service learning offers accounting faculty a new means of teaching students tax in a real-world classroom. By participating in a LTC, students have a unique opportunity to apply their tax knowledge while simultaneously providing a valuable community service.

The purpose of this paper is to describe the educational benefits of the LTC program from both a faculty and student perspective. Unlike other LTC articles (Gold, 2002; Olson, 1998; Spragens & Olson, 2000), this paper describes the service learning aspect of LITCs and includes student feedback.

The paper proceeds as follows. The first section describes LTC legislation and explains various approaches to operating a tax clinic. The next section describes pedagogical benefits of LITCs, student feedback and program disadvantages. The final section offers concluding remarks.

LITC LEGISLATION

Congress created LITCs in 1998 under Internal Revenue Code Section 7526 by authorizing the Secretary of the Treasury to provide matching funds for LITCs of up to \$6 million annually. Law schools, accredited business and accounting schools and nonprofit organizations may establish LITCs and receive a maximum annual award of \$100,000 in matching funds. Business schools and accounting programs received five grants out of 102 total awards for 2001 (IRS News Release, 2000-88), six out of 127 awards for 2002 (IRS News Release 2002-3), and six out of 138 awards in 2003 (IRS News Release 2002-132).

Clinics may reapply for funding after the initial grant period. Because the IRS receives its funds for the LTC program from Congress, there can be no guarantee of funding in future years. However, the program has received bipartisan support, and Congress is considering increasing LTC funding to \$10 million (Mohr, 2002). IRS Publication 3319 contains application forms and detailed instructions.

The IRS makes awards based on the number of taxpayers the clinic will serve, the number of taxpayers in the geographical area for whom English is a second language, the existence of other LITCs serving the same population, qualifications of the clinic’s administrators, the clinic’s record in providing services to low-income taxpayers, and the availability of alternative funding sources. Section 7526 requires clinics to provide services primarily for low-income and ESL taxpayers. Ninety percent of the English-speaking clients served must have income within 250% of the poverty guidelines, as follows:

Family Size	Income
1	\$22,450
2	\$30,300
3	\$38,150
4	\$46,000
5	\$53,850

For families with more than five members, the guidelines provide an additional \$7,850 for each family member. Poverty guidelines for Alaska and Hawaii are higher and are located at <http://aspe.hhs.gov/poverty/03poverty.html>. The Department of Health and Human Services issues these guidelines annually. In addition, the amount of any tax controversy handled by a LTC cannot exceed the amount specified in Section 7463, currently \$50,000.

A LTCs services must fall into at least one of three broad areas: representation, outreach, and tax preparation for ESL taxpayers. Representation permits students to work closely with taxpayers to help resolve tax problems with the IRS in examination, appeals and collection matters. LITCs frequently encounter earned income tax credit (EITC) audits and reconsideration of prior year claims, innocent spouse cases, collection matters, offers-in-compromise, dependency exemption and filing status disallowance, and similar state tax audit matters. Examples of outreach activities are programs to inform low-income and ESL taxpayers about their rights and responsibilities under the tax law. According to program guidelines, LITCs only can prepare tax returns for ESL taxpayers, which has been somewhat controversial (Gold, 2002). The Tax Section of the American Bar Association advocates eliminating tax preparation as a qualified activity, whereas the American Institute of CPAs supports allowing LITCs to conduct tax preparation (AICPA, 2002).

OPERATING A LITC

We formed our LITC as part of a graduate course in tax research, but the IRS does not require this type of structure. To meet IRS requirements, the LITC can be a stand alone graduate class, part of an existing graduate course, or a volunteer activity with graduate students and alumni. We chose to include the LITC as a specific component of the graduate tax research course primarily to provide the students with a service learning opportunity. We began the LITC during the fall semester of 2001 and continue to operate it each fall and spring semester. In addition, it is difficult to organize a clinic initially as a separate credit-bearing class due to the uncertainty as to the number of clients. It takes time for a clinic to develop contacts and a client base, much like establishing a new CPA practice, so it is unlikely that a clinic will generate sufficient student work in its first year of operation to support an entire course. The IRS will fund start-up activities, but the LITC must begin serving clients during its second year of funding (IRS Publication 3319, p. 4).

In the start-up phase of the LITC, student participation included assistance with publicity efforts including development and distribution of brochures, flyers, and posters and visiting organizations that may refer taxpayers. Students contacted newspapers and television stations to describe clinic services and distributed brochures to churches and businesses providing goods and services for immigrants. The Tax Section of the American Bar Association has two monographs describing tax clinic start-up procedures.¹

Our LITC operates year-round, staffed with students enrolled in the graduate tax research course in fall and spring semesters and with independent study students over the summer months. Each semester approximately twenty students participate in the clinic. The graduate tax students participating in the LITC vary significantly in professional background. For example, some students are enrolled in the masters of tax program to fulfill their 150-hour requirement while other students are practicing CPAs or in other occupations. The variation in student background remains similar each semester with a mix of professionally experienced and non-experienced students. Students work in teams of two or three students which instructors form in considering the divergence in student experience and interests. In addition to student participants in the LITC, several experienced alumni volunteer to participate in the clinic assisting students in resolving cases.

Student participation in the LITC represents 40% of their overall grade in the tax research course. Students earn the LITC portion of their grade through individual and group work. After a client initially contacts the clinic, a student team and faculty member meet with the client to gather additional information. We evaluate student participation individually during the taxpayer meeting based upon the quality of questions, note taking and issue recognition. The team prepares a research memo

describing the case issues, related tax law, and case resolution steps for which they receive a combined grade. Students receive informal feedback by discussing their case experience, technical assessments, and public policy concerns with their team and instructor after each taxpayer visit. A scheduling problem can occur for students if taxpayers do not show up for their scheduled appointments causing students to return at a rescheduled time.

Under the guidelines of the LITC grant program, students participating in a LITC must be graduate accounting or law students at an accredited institution. Undergraduate students are not eligible to participate in the LITC program. Students are able to practice before the IRS by receiving special orders from the IRS Director of Practice. To obtain these orders, the LITC faculty member must provide the IRS with information pertaining to the students' educational background, including the name of the institution awarding the student an undergraduate degree and prior tax coursework.

As our LITC program grew, taxpayer demand for services increased. Our LITC used grant funds to hire a CPA knowledgeable in tax to handle many of the day-to-day details. Faculty serve in an instructional and supervisory capacity while the CPA acts as the LITC's managing director performing the following tasks:

- (1) Screens client cases to meet LITC guidelines.
- (2) Schedules and assists with workshops and/or presentations for taxpayers.
- (3) Responds to inquiries and oversees student responses.
- (4) Determines equipment needs and coordinates purchases.
- (5) Maintains necessary forms, supplies, and resources.
- (6) Assists with preparation of budgets and periodic reports.
- (7) Develops clinic policies and procedures.
- (8) Publicizes the clinic's services to aid in obtaining clients and receiving positive media coverage.
- (9) Oversees and manages cases.
- (10) Oversees preparation of materials to be distributed.

Our LITC also formed an advisory board to monitor the Clinic's practices and procedures, to publicize services, and to secure matching grant funds. The eight members of the advisory board include two attorneys with expertise in IRS practice and procedures, a member of a charitable foundation, an alumna who is a tax manager at a multinational public accounting firm, three accounting faculty whose expertise is tax, and the school's Dean. The LITC Advisory Board meets two or three times annually to discuss LITC funding and operating procedures, as well as meeting with IRS executives and community leaders to promote the LITC.

Several LITCs associated with business schools or accounting programs have been in existence for several years. These LITCs can share examples of engagement

letters, taxpayer intake forms, appointment forms, contact logs, status reports, and case closing statements. These administrative documents should help minimize clinic organization for a new clinic.

Law schools have a tradition of valuing clinical experiences by their students (Dominguez, 1999, p. 393; Lesnick, 1994, p. 32). In 1996, the American Bar Association added a provision to its accreditation standards stating that law schools should encourage students to participate in pro bono activities and provide opportunities for them to do so (Rhode, 2000, p. 1201). In a survey of law school deans, over 90% agreed that pro bono activities provide valuable goodwill in the community and two-thirds said that these activities generated similar benefits with alumni. Almost 80% of students participating in mandatory pro bono programs said that their experience increased the likelihood that they would engage in pro bono work later in their career (Rhode, 1999). Despite these benefits, the clinical teaching method has seldom been used by business school programs (Bauman, 2001). Tax clinics are still in their infancy; one of the oldest tax clinics in the country was created in 1990 at American University, Washington College of Law. The door is open for business and accounting schools to consider the clinical approach in education.

EDUCATIONAL BENEFITS OF LITCS

By participating in a LITC, students have a unique opportunity to apply their tax knowledge while simultaneously providing a valuable community service. In addition, a clinical, pedagogical approach addresses concerns raised by Albrecht and Sack (2000) and the Accounting Education Change Commission (AECC, 1993). Albrecht and Sack (2000, p. 43) call for increased student exposure to ethics and the ambiguity of the business world. They support a greater emphasis on student skill development and less reliance upon lectures and textbooks. Participation in a tax clinic is consistent with the goals expressed by the Accounting Education Change Commission in Issues Statement Number 4, which states that “students should seek opportunities to obtain firsthand knowledge of the business world and practice environment” (AECC, 1993, p. 432).

Service Learning Considerations

A LITC program involving students may be structured as a form of service learning. Bringle and Hatcher (1995, p. 112) define service learning as a “course-based, credit-bearing educational experience in which students: (a) participate in an

organized service activity in such a way that meets identified community needs; and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility.” Rama (1998) describes several benefits of service learning, such as reinforcement of technical knowledge, improved communication and interpersonal skills, greater ethical and moral development, and increased awareness of social responsibilities and community involvement. Active learning approaches encourage students to develop greater independent capabilities than do traditional methods, thereby promoting lifelong learning (Morton & Troppe, 1996, p. 25).

Rama et al. (2000, p. 672) review research examining the impact of service learning activities on student learning and personal development, finding that service learning enhanced these personal competencies. They explain (2000, p. 658) that the outcomes of service learning activities are similar to the skills the accounting profession seeks of new graduates. The AICPA identified these desired skills in the Core Competency Framework (AICPA, 1999) which describes functional, personal and broad business perspectives that new entrants to the accounting profession should possess.

An LITC provides an effective means to help students develop several aspects of the core competencies. We identify three primary learning objectives for student LITC participation: improving communication skills, improving tax research skills, and expanding societal and regulatory awareness.

Communication Skills

Communication skills are a critical personal competency that students will need in their careers. By interacting with taxpayers and the IRS, students learn to exhibit a professional demeanor, communicate with diverse individuals, and manage client projects. Students must explain complex tax provisions to individuals with little tax knowledge, often through a translator. They must write letters and memos to taxpayers and the IRS. Case resolution often takes more than a semester, so students must maintain well-organized client files and communicate with others who become involved with the same case at a later time.

Students improve their written communication skills by creating brochures, letters, and other types of LITC promotional materials. Students personally contact targeted agencies that may refer clients to explain the LITC program. This type of work is valuable experience for the public accounting environment where it is critical for CPAs to bring new clients into the firm.

LITC students can gain public speaking experience by conducting programs to inform ESL individuals about the U.S. tax law. Outreach activities require students to describe complex tax provisions in simple, concise terms. Clinics may provide educational programs for specific interest groups; for example, a presentation on innocent spouse relief to a women's shelter or relief organization. Students will use these types of oral communication skills in their careers as they explain the tax law to clients and non-financial professionals.

Tax Research

Many of the LITC cases require students to conduct significant amounts of electronic tax research and improve their abilities in this critical functional competency. Through the LITC, students learn greater details and applications of the federal tax law. Students also must determine the state tax consequences of any federal adjustment. They gain experience in decision making and problem solving related to IRS tax notices. Client cases often involve ambiguous facts and ethical dilemmas. Similar to Rama et al. (2000, p. 660), we noted that the complexity of the real-world tax cases in the LITC allows students to become more open to uncertainty, recognize that each case involves multiple complexities, and apply tax research skills in problem resolution.

Societal and Regulatory Awareness

By working with both the IRS and taxpayers, students develop a broad business perspective. Students gain a sector perspective by appreciating the unique tax provisions applicable to low income taxpayers. Students also develop a regulatory perspective by witnessing the complexity of the tax law and IRS controversy resolution.

LITC students gain a better understanding of the tax code's role as a social policy vehicle and how a lack of tax representation affects public welfare. Few, if any, textbooks focus on issues faced by working poor. By working in the clinic, students learn to appreciate multiple family structures, living arrangements, and tax hurdles faced by society's low-income workers. Students also develop a greater understanding of the enforcement difficulties that the IRS encounters.

By working with ESL individuals, LITC students gain a better appreciation for cultural diversity and the difficulties facing new U.S. immigrants. Rama (1998, p. 15) observes that "students providing tax assistance to low-income

individuals become more aware of the problems facing such individuals, as well as cultural/linguistic barriers affecting an increasingly diverse society.” Zlotkowski (1996, pp. 9–10) concurs with this viewpoint, concluding that community service activities often force them outside their psychological comfort zones and may represent the single best chance these students have to understand cultural differences.

If a clinic engages in tax preparation, students will increase their understanding of the tax law and compliance process. They are able to see how many policy objectives are operationalized. Clinics can provide tax preparation services for international students and simultaneously provide a valuable service to the university. Working with international students requires an understanding of tax treaties, residency status, and taxation of scholarships and fellowships. Students gain knowledge of international tax law and its complexities by participating in this activity, as well as an appreciation for cultural diversity.

Other Benefits

A LITC can be a source of positive publicity for the university. The LITC can exemplify a university’s willingness to “give-back” to the local community. The university can promote the LITC as a unique aspect of its accounting program. Professionals typically value the experiences students receive in the clinic and may be financially willing to support the clinic’s activities.

STUDENT FEEDBACK ON CLINIC EXPERIENCE

In order to learn about student perceptions of their LITC experience, 29 LITC graduate tax students participating in the LITC during the fall semester of 2002 completed a brief survey. The survey questions and results appear in Table 1. The eight survey questions aim to assess whether the learning objectives of improved communication skills, improved tax research skills, and understanding of societal and regulatory matters had been met. A 5-point Likert scale (1 = strongly disagree and 5 = strongly agree) was used to evaluate students’ responses.

To determine whether students perceived that their tax research skills improved as a result of their participation in the LITC, we asked three questions (numbers 1, 6 and 7) about these skills. The results generally suggest that students believed their participation enhanced these skills. The students agreed that their participation increased their ability to identify relevant issues (mean = 4) and improved their

Table 1. Student Feedback on LITC Experience ($N = 29$).

Survey Question	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree	No Answer	Mean
1. Participating in the LITC increased my knowledge of the tax law.	1 (3%)	1 (3%)	5 (17%)	19 (66%)	3 (10%)	0 (0%)	4
2. Participating in the LITC increased my appreciation for the challenges faced by low-income taxpayers in complying with the tax law.	0 (0%)	0 (0%)	3 (10%)	17 (59%)	9 (31%)	0 (0%)	4
3. Participating in the LITC increased my willingness to be involved in community service in the future.	0 (0%)	3 (10%)	12 (41%)	9 (31%)	5 (17%)	0 (0%)	4
4. Participating in the LITC increased my confidence in my ability to work with clients.	1 (3%)	2 (7%)	13 (45%)	11 (38%)	2 (7%)	0 (0%)	3
5. Participating in the LITC increased my confidence in my ability to represent clients before the IRS in appeals and audit cases.	2 (7%)	2 (7%)	15 (52%)	7 (24%)	3 (10%)	0 (0%)	3
6. Participating in the LITC improved my ability to identify the relevant tax issues in a fact situation.	0 (0%)	1 (3%)	9 (31%)	14 (48%)	3 (10%)	2 (7%)	4
7. Participating in the LITC improved my tax research skills.	0 (0%)	2 (7%)	11 (38%)	13 (45%)	1 (3%)	2 (7%)	3
8. Participating in the LITC increased my understanding of IRS' operations and policy.	1 (3%)	1 (3%)	5 (17%)	14 (48%)	6 (21%)	2 (7%)	4

tax research skills (mean = 3). Participation also led the students to believe that their tax knowledge had increased (mean = 4). Further, it is worth noting that few students (at most two) disagreed with the statements about the positive effects on research skills.

We asked students two questions (numbers 4 and 5) about perceived improvements in their communication skills from LITC participation. The results generally indicate that students had increased confidence in their ability to work with clients (mean = 3) and represent clients before the IRS in appeals and audit cases (mean = 3).

To determine whether students gained a better understanding of societal and regulatory matters from LITC participation, we asked three questions (numbers 2, 3 and 8) about these skills. The students' responses to all three questions indicate a positive (mean = 4) reaction that participation in the LITC increased their appreciation for challenges faced by low-income taxpayers, increased their willingness to be involved in community service in the future, and increased their understanding of IRS operations and policies.

We examined the student responses further by partitioning the sample into those students with tax experience in public accounting (five students or 17% of sample) and those students with no or minimal experience (24 students or 83% of sample). The experienced students did not show any disagreement with any of the survey questions. Two students responded neutrally to questions 3, 4, 5 and 7 which was about the same percentage response as the inexperienced students. In comparison to the inexperienced students, the students with tax experience strongly agreed that participation in the LITC: (1) increased their knowledge of tax law (40% vs. 4%); (2) increased their appreciation for tax challenges faced by low-income taxpayers (60% vs. 25%); and (3) increased their understanding of IRS' operations and policies (40% vs. 13%). Although the sample size is small, it is evident that experienced tax students perceived positive educational benefits from the LITC experience. To gain a broader sense of the students' reaction to the LITC, we asked them to identify the greatest advantages and disadvantages of LITC service. The results appear in Exhibit 1.

Similar to Campbell et al. (2002) who examined student participation in a volunteer income tax assistance course preparing tax returns, we find that an LITC promotes student problem-solving, interaction, and communication skills. From the student responses, we also find that LITC participation strengthens tax research skills and sensitizes students to low income taxpayer issues. As in Campbell et al. (2002), we find the LITC experience fosters cultural understanding and instills a sense of social responsibility. The LITC provides an opportunity for students to think about social problems of low-income taxpayers.

Exhibit 1. Student Feedback on LITC Experience.

What do you believe are the greatest advantages of LITC service?

- Being able to help people who might not find help anywhere else.
- Helpful to those who are scared of IRS. Help less fortunate.
- It is a good feeling to help people in need with the skills you have from your job.
- Exposure to tax issues not seen in normal practice.
- Being able to see what low-income taxpayers are going through.
- Seeing the process.
- Exposure to residents not aware of the tax law.
- To meet with clients and solve real issues.
- It offers service that is needed by many people.
- Helping disadvantaged people and building skills for students.
- The greatest advantage of the LITC service is that it is able to help people who are facing a difficult situation and do not know where to turn for help.
- The greatest advantage for me is that it allows me to work on individual issues that I do not get to work on a daily basis. In my job, 95% of the clients that I work on are corporate taxpayers so it is nice to work on some individual issues now and again to stay current. I also find it to be a great way to stay in touch with faculty and help promote the university in a favorable manner.

What do you believe are the greatest disadvantages of LITC service?

- Hard to get people to show up.
 - Lack of cases (out of control of clinic) makes experience less beneficial.
 - Not being able to finish the case with the client.
 - Language barriers, marketing.
 - Hard to get clients to keep their appointments.
 - The clients do not pay and therefore may not always be responsible in coming to their appointments.
 - Poor use of time if clients do not appear.
 - Don't know enough about it.
 - The greatest disadvantage is that it seems hard to get the individuals to commit to the process. In my experience, many individuals missed appointments and did not follow up as asked. This can at times be frustrating.
-

DISADVANTAGES OF AN LITC

As the LITC is a service learning course, it has some drawbacks. Collins (1996, pp. 80–81) describes obstacles to service learning – student complaints, professional time commitments, time spent organizing interactions, low workshop turnouts and legal liabilities. As noted in Exhibit 1, student feedback on the greatest disadvantages of the LITC highlights client failure to keep appointments as a major frustration. Students have assisted in developing procedures to minimize low clinic turnout such as frequent reminders by phone and mail. Students also identify language barriers as an obstacle. As most taxpayers need to meet in the evenings or Saturdays, students may find this meeting time inconvenient. Since

most of the students in our LITC work during the day, the meeting times tend to be acceptable.

As highlighted by O'Neil et al. (1997, p. 97), the key to a successful tax clinic program is the willingness of one or more tax professors to train the students and to monitor the clinic's operation. Directing an LITC can be a very time-consuming task that the university may not commensurately value. In order for the LITC to succeed, it must be consistent with the university's mission and fully supported by administrators. Faculty advisers in the tax clinic should seek guidance on how administrators will consider clinic participation in performance appraisals. O'Neil et al. (1997, p. 97) suggest that supervising the clinic be part of a professor's course load or included as "service to the community." In our case, university administration favorably views the LITC and provides the participating faculty with course load reductions.

A second drawback of an LITC is the grant program's complexity. The clinic must prepare interim and final reports during the year describing its financial status and activities. The final report must compare the program's accomplishments to its goals and explain how the LITC contributed to the IRS mission. The report also must describe student training and publicity efforts. The clinic must maintain detailed statistics of the numbers of taxpayers served, types of taxpayers (low-income or ESL), and types of services (representation, outreach or preparation). Contracts and grant personnel must complete the numerous financial forms required. As with other federal grant programs, LITCs are subject to audit. The Treasury Inspector General for Tax Administration is charged with evaluating the LITC program (Bergin, 2001). In May 2002, the U.S. Department of Treasury released an audit report indicating that increased monitoring of LITCs is needed to ensure compliance with the IRS grant terms and conditions (U.S. Department of Treasury, 2002). We find that the first-year reporting was the most challenging, and the reporting burden has lessened over time.

SUMMARY

Both the LITC program and the clinical approach to teaching in business and accounting schools are in their infancy. As a result, the direction of the program is open to innovations by all participants. Based upon student feedback and course instruction, we find that the service-learning LITC experience is an effective program to increase students' tax research, problem-solving, communication, and social awareness skills. From student feedback, we learn that LITC participation strengthens tax research skills and sensitizes students to low income tax issues.

The LITC experience also fosters cultural understanding and instills a sense of social responsibility.

As the tax code continues to embrace social welfare concerns (i.e. introduction of refundable child care credit for low-income taxpayers), an opportunity exists for both service learning and research from LITC participants and others. Currently, only Wyoming and Vermont do not have an LITC. Since it is a goal of the IRS to have an LITC in every state, accounting programs in locations without a nearby LITC or in highly populated areas where existing LITCs cannot meet the demand for their services may want to submit grant applications.

Accounting programs can incorporate many aspects of the LITC program into the curriculum without obtaining an IRS grant. Students can receive the same educational benefits of LITCs by participating in Student Tax Clinics, which permit graduate students to represent clients before the IRS. Although Student Tax Clinics do not receive government funding, they can assist a wider range of clients since they are not subject to LITC requirements. The Volunteer Income Tax Assistance (VITA) programs help students gain experience in tax preparation.² The IRS is frequently seeking volunteers to teach tax preparation classes, to assist in tax problem solving days, or to advise taxpayers about their rights and responsibilities. VITA and Student Tax Clinics are other opportunities for service learning in tax.

Due to the success of the LITC program for graduate tax students, we formed another service learning course for undergraduate accounting students focused around the VITA program. The VITA course serves as a referral system to the LITC. If taxpayers visiting VITA need tax controversy assistance, they are referred to the LITC. The two service learning classes provide a valuable link between the undergraduate and graduate tax programs. Based upon our experience serving hundreds of taxpayers and instructing students, the LITC program is a positive experience for all parties involved. The ability for students to work on real tax issues with real taxpayers provides multiple rewards and benefits.

NOTES

1. In 1999, the American Bar Association Tax Section wrote two monographs ABATS (1999a, b) – “Clinic procedures from intake to conclusion” *Tax Notes* Document 1999-7535 and “Organizing a tax clinic” *Tax Notes* Document 1999-7534 describing the start-up procedures for a tax clinic.

2. See the following articles describing service learning opportunities and the IRS-sponsored VITA program: Dawson and Weihrich (2000), Dunlevy and Sherman (2000), Quinn et al. (1995), Porter and Bradwick (1996), Shafer et al. (1999).

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USING THE FINANCIAL ACCOUNTING RESEARCH SYSTEM TO DEVELOP A PROFESSIONAL RESEARCH COMPETENCY IN INTERMEDIATE FINANCIAL ACCOUNTING

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ABSTRACT

This paper describes the implementation of a computer-based professional research component into the course content of the Intermediate Financial Accounting sequence. This research component requires students to access, search, interpret, and apply financial reporting standards, using the Financial Accounting Research System (FARS), which is a set of computerized, searchable data bases that provides access to the financial reporting authoritative literature.

The paper identifies the objectives that motivated us to add this professional research component to the Intermediate Accounting courses. It also describes the decisions and processes involved in selecting and obtaining materials, the procedures we used to introduce the material to our students, and the professional research assignments we used. In addition, we discuss the positive perceived outcomes of the professional research requirements from the perspectives of both the faculty and the students

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who participated in the revised Intermediate Accounting courses during the first year.

During the 2001–2002 academic year, the Intermediate Accounting faculty at Illinois State University introduced a professional research requirement into the Intermediate Accounting course sequence. We introduced our students to the Financial Accounting Research System (FARS) and required its use in case assignments. In the following sections of this paper, we describe our objectives, the methods, materials and assignments that we used, and our assessment of the outcomes of the FARS assignments. In reporting our decisions and experiences, we hope to provide information that will be useful to other accounting professors who may be considering the use of FARS in their courses.

OBJECTIVES IN IMPLEMENTING FARS

Intermediate Accounting at Illinois State University is a two-semester course sequence. Over the two semesters, we cover the topics and concepts that normally appear in standard Intermediate Accounting textbooks. Professors cover the Intermediate Accounting material through lecture, textbook reading assignments, and problem assignments. In other words, at Illinois State University, we teach Intermediate Accounting using a fairly traditional approach.

Although this traditional approach to the Intermediate Accounting sequence provides our students with strong technical competencies, it does not necessarily provide other competencies and skills that are important for student success in the accounting profession. The Accounting Education Change Commission (AECC) focused attention on the need for accounting education to provide students a foundation for life-long learning, including skills, knowledge, and professional orientation (AECC, 1990, p. 307). More recently, Albrecht and Sack (2000, p. 3) have reiterated that traditional accounting education must make changes in order to be relevant and to add value for students.

Illinois State University Competencies

In response to calls for change in accounting education, the accounting faculty at Illinois State University identified four broad areas of competency for students and attempted to supplement traditional pedagogy with assignments and experiences that would aid students in developing these competencies. The accounting faculty

determined the four competency areas through a series of faculty meetings, during which we discussed the skills we wanted our students to have. The following four competency areas emerged from those discussions: (1) communication skills, including oral, written and interpersonal communication; (2) problem-solving skills, both structured and unstructured; (3) research skills; and (4) technology-use skills.

In early 2001, the Intermediate Accounting faculty decided to supplement their course content with a professional research component. We decided to incorporate research projects that would require students to access, search, interpret, and apply the professional literature of financial reporting. A workshop attended by Intermediate Accounting faculty members gave us our initial impetus for change. It provided an introduction to the Financial Accounting Research System (FARS). The FASB markets FARS to accounting firms and professionals, and FARS is available in an educational version through Wiley Publishing Company. FARS includes the Original Pronouncements, Current Text, Emerging Issues Task Force Abstracts, and FASB Implementation Guides.

The Intermediate Accounting faculty believed that the addition of professional research assignments, using a computer-based system, would contribute to the development of each of the four competencies identified by the Accounting Department faculty. Exhibit 1 summarizes the key elements of the FARS assignments that support the development of these four competencies; the exhibit also links these assignments and competencies to other research focusing on improvement of accounting education. Other objectives in adding a professional research competency to the Intermediate Accounting course requirements were: (1) to provide our students with competencies that would add value for them as they entered the accounting profession; (2) to improve our students' abilities to learn independently; and (3) to position our students for the computerization of the CPA examination and the proposed inclusion of research skills as an element of that examination.

A review of the literature indicated that several accounting organizations have attempted to identify the skills and competencies students need to be successful in the accounting profession. We believed our FARS professional research assignments would help develop many of those skills and competencies. In the paragraphs that follow, we review the relevant literature and list the skills and competencies that we believed our FARS assignments would help develop.

AICPA Core Competency Framework

As part of its core competency framework, the AICPA has identified a set of required competencies for students entering the accounting profession.

Exhibit 1. FARS Assignments and Competencies Developed.

Illinois State University Department of Accounting Competencies	AICPA Core Competency Framework (Functional Competencies)	AICPA Practice Analysis (Skills Needed Before Entry into the Profession)	AECC Position Statement Number One (Desired Capacities of a Professional Accountant)	Board of Examiners (Skills Needed for the Protection of the Public Interest)
<hr/>				
Technology-use skills				
<ul style="list-style-type: none"> Navigation assignments require students to learn the mechanics of using FARS 	<i>Technology competency</i> – includes the ability to access electronic databases			Simulations will require CPA candidates to have basic computer skills, including word processing and spreadsheets
<hr/>				
Research skills				
<ul style="list-style-type: none"> Case assignments require students to use the FARS query function to search the authoritative literature 	<i>Research competency</i> – the ability to access relevant information and to comprehend and apply it	<i>Learning strategies</i> – the ability to use appropriate resources to acquire knowledge	<i>Intellectual skills</i> – includes the ability to locate information	<i>Research</i> – the ability to locate and extract relevant information from available resources
<ul style="list-style-type: none"> Case assignments require students to read and comprehend the authoritative literature 		<i>Reading comprehension</i> – the ability to read and understand relevant information		<i>Understanding</i> – the ability to comprehend the meaning and application of a particular matter
<hr/>				
Problem-solving skills				
<ul style="list-style-type: none"> Case assignments require students to identify the financial reporting issue to be researched 		<i>Reasoning skills</i> – the ability to develop sound, logical conclusions through the use of reasoning	<i>Intellectual skills</i> – includes the ability to identify and solve unstructured problems	<i>Analysis</i> – the ability to organize, process and interpret data
<ul style="list-style-type: none"> Case assignments require students to identify professional standards relevant to the reporting issue 				<i>Judgment</i> – the ability to evaluate options and provide an appropriate conclusion
<hr/>				
Communication skills				
<ul style="list-style-type: none"> Case assignments require students to use written communication skills to present the case solution 	<i>Reporting competency</i> – the ability to communicate work done and conclusions	<i>Written presentation</i> – the ability to convey information in writing	<i>Communication skills</i> – includes the ability to transmit information effectively	<i>Communication</i> – the ability to effectively express information through written (or oral) means

The AICPA identified functional, personal, and broad business perspective competencies as necessary for success in the accounting profession (AICPA, 1999). Functional competencies relate most closely to the value contributed by accounting professionals and are technical in nature. Personal competencies are individual attributes and values. Broad business perspective competencies involve understanding external and internal business contexts.

The AICPA identified and defined six functional competencies – decision modeling, risk analysis, measurement, reporting, research and technology. We believed the FARS assignments would help students develop three of these competencies, the *research, reporting, and technology* competencies. The *research competency* is the ability to access relevant information and to comprehend and apply it. This competency emphasizes research into relevant standards. The *reporting competency* is communication of the work done and its conclusions or results. The *technology competency* includes the ability to access electronic databases and obtain information to support decisions (AICPA, 1999).

As part of the Core Competency Framework Project, the AICPA has set up a web site to assist educators in integrating the competencies into accounting courses (AICPA, 2003). This Educational Competency Assessment web site identifies general educational strategies that educators can use to develop each of the core competencies. Contributors to the web site describe specific strategies that they have used. Several contributors identify case assignments similar to the FARS assignments as an educational strategy that contributes to the development of core competencies, including each of the three functional competencies that we discussed in the preceding paragraph.

AICPA Practice Analysis

The AICPA recently sponsored a practice analysis in order to give guidance in the revisions of the CPA examination (Norris et al., 2001). The AICPA identified knowledge content areas and skills needed in the practice of public accounting as part of this practice analysis and also elicited input on which knowledge content areas and skills candidates should acquire prior to taking the CPA examination. The analysis divided respondents into three practice groups, accounting and auditing, taxation, and business and industry. Respondents from each practice group ranked fifty skills as to importance prior to taking the CPA examination. We expected that the Intermediate Accounting professional research assignments would help our students improve in several of the top ten skills identified by practicing CPAs. All three practice groups ranked *reading comprehension*, defined as “reading, understanding, and retaining relevant written information” as the

most important skill (Norris et al., 2001, p. 65). All three practice groups also ranked *written presentation*, defined as “conveying . . . information . . . in writing at the level appropriate for a particular audience,” within the top ten skills (Norris et al., 2001, p. 65). Two practice groups identified *reasoning skills* and one group ranked *learning strategies* within the top ten. The definition of *reasoning skills* is “developing sound, logical conclusions through the use of inductive and deductive reasoning,” and *learning strategies* involve “using appropriate resources to acquire and maintain up-to-date knowledge and skills” (Norris et al., 2001, pp. 65–66). The professional research assignments incorporated into our Intermediate Financial Accounting courses should enhance the development of each of these four skills.

AECC Position Statement Number One

The development of a professional research competency in Intermediate Accounting is also responsive to the recommendations of the AECC in terms of developing two of the desired capacities of a professional accountant. The AECC identified the possessing of *intellectual skills* and *communication skills* as necessary for success in the accounting profession. *Intellectual skills* include the ability to locate information and to identify and solve unstructured problems; *communication skills* include the ability to receive and transmit information effectively (AECC, 1990, p. 307). By incorporating case assignments that require our students to identify the accounting issue, use the FARS to identify relevant professional standards, and communicate their conclusions in writing, we believed that the professional research assignments would improve the intellectual and communication skills of our students.

In addition, both the AECC and Albrecht and Sack have stressed the importance of teaching students how to find answers rather than giving students answers and have recommended that accounting education shift from a “transfer of knowledge” approach to a “learning to learn” approach (AECC, 1990, p. 310; Albrecht & Sack, 2000, p. 64). The AECC summarized this approach as developing the student’s ability to identify problems, to search for needed information, analyze that information and reach a conclusion (AECC, 1990, p. 310). Again, we believed that the professional research cases were extremely relevant to developing our students’ ability to learn independently.

CPA Exam Skills

Our final motivation was to prepare our students for proposed changes in the CPA examination. The changes to the CPA examination, to be effective after November

2003, include requiring candidates to take the examination on computers. The revised exam reflects the importance of technology in the public accounting profession and tests higher-order skills as well as basic knowledge (DeVore, 2002, p. 4). In the *Financial Accounting & Reporting* section of the exam, knowledge of generally accepted accounting principles and the skills to apply that knowledge will be tested (AICPA, 2002, p. 7). Approximately 20% of the revised examination will consist of simulations, requiring some research activity, usually an electronic search of relevant authoritative literature (DeVore, 2002, p. 4). The ability to use electronic data bases, to find pronouncements relevant to the issue, and to use the research findings to support responses to the simulations will be used to evaluate candidates.

As part of the process of developing the revised CPA exam, the Board of Examiners has identified and defined five skills they deemed necessary for the protection of the public interest. These skills are *analysis, judgment, communication, research and understanding* (AICPA Board of Examiners, 2002, p. 2). The FARS case assignments in Intermediate Accounting require students to identify a reporting issue (analysis), search the professional standards (research), read and comprehend the material (understanding), identify relevant information (judgment), and arrive at and communicate their conclusions (analysis and communication). The FARS case assignments, we believe, will help students develop each of the skills identified by the Board of Examiners.

IMPLEMENTATION DECISIONS AND PROCESSES

We made the decision to add FARS into our Intermediate Accounting courses, as compared to a graduate financial accounting research course, because we had just attended a workshop where two faculty members from the University of Illinois explained how they had very successfully used FARS in their Intermediate Accounting courses. Inspired by the experiences of the professors of the University of Illinois, the Intermediate Accounting faculty at Illinois State University, as a group, made the decision to add the professional research component to our Intermediate Accounting courses. In addition, we believed that developing research competence is a process that is more effectively accomplished through multiple research assignments in several courses.

At the time of this initial decision to add FARS, three faculty members were teaching all sections of Intermediate Accounting. Since the initial adoption, we have involved a fourth faculty member. Two faculty members (the authors of this paper) agreed to oversee the planning and implementation processes. At Illinois State University, we teach five sections of Intermediate I and two sections of

Intermediate II in the fall; we teach two sections of Intermediate I and four sections of Intermediate II in the spring. Each section has approximately 30 students. The Intermediate Accounting professors agreed to require a standard set of professional research assignments in all sections of Intermediate Accounting. We also made the decision to implement the professional research assignments in stages. We added the research assignments to Intermediate Accounting I during the Fall 2001 semester and to Intermediate II in Spring 2002. In addition, we added a professional research case to the course requirements of Advanced Financial Accounting in the Fall 2002 semester.

We obtained the educational version of the FARS software by purchasing a license from the Wiley Publishing Company, and we installed the software on the College of Business (COB) computer lab network. The Wiley Publishing Company provides an updated version of FARS once a year. It also provides the network version of FARS in increments of 15 concurrent users. We purchased a license for 30 concurrent users. We based the decision to acquire a license for 30 users on expected enrollment in our Intermediate Accounting courses and our intention to offer training sessions in a 30-seat computer classroom. Also, since most of our students live on campus, we did not believe that the availability of the software only in the COB computer lab would be a hardship on our students. The computer lab hours are from 8:00 a.m. to 11:00 p.m. Monday through Thursday; 8:00 a.m. to 4:00 p.m. on Friday; and 9:00 a.m. to 5:00 p.m. on Saturday.

FARS is also available in CD format. The use of the CD version would result in the students, rather than the University, bearing the cost of FARS. An additional consideration of using the CD version is that, depending on when students take Intermediate I and purchase the software, students in Intermediate Accounting II may have different versions of FARS. Our department chose to purchase the software and install it in the COB computer lab. Also, we believed that the availability of FARS in the COB computer lab would encourage professors in other accounting courses to make use of this software.

We also adopted a workbook/lab manual for students to use as a FARS reference. This workbook, *An Introduction to Applied Professional Research for Accountants* (2nd edition) by David A. Ziebart, provides information about professional research in general and more specific information about research using FARS. The workbook contains a series of navigation exercises that allow students to become familiar with the FARS' features. The workbook also includes short cases on a variety of financial reporting topics. The Ziebart text contains several versions of each of the navigation exercises; this feature allows us to rotate assignments from one semester to the next, thereby reducing information exchange between semesters. Our final source of materials was the Trueblood cases, provided by Deloitte & Touche LLP.

INTRODUCING FARS INTO THE CLASSROOM

We introduced FARS to our students by using a four-step process: (1) an in-class FARS demonstration; (2) a “hands-on” FARS computer-lab training session; (3) a series of FARS navigation exercises; and (4) research cases. We discuss each of these four steps below.

FARS In-Class Demonstration

In order to introduce the Intermediate Accounting I students to FARS, each Intermediate Accounting I professor, during the second week of class, did an in-class demonstration of FARS. This demonstration consisted of the following: (1) an explanation of the opening screen (i.e. menu) that appears when the FARS program is accessed; and (2) a detailed tour of the “Original Pronouncements” section of the infobase. The professors targeted the Original Pronouncements section because this is the section that students must use when they actually perform research. While touring the Original Pronouncements, the professors showed the students how to perform an “Advanced Query.” The professors also showed the students examples of superseded text, amended text, jump links, and footnotes that generate popup text boxes. This FARS in-class demonstration took approximately 30 minutes.

FARS Computer Lab Training Sessions

After the in-class FARS demonstration, the Intermediate Accounting I professors immediately informed the students of voluntary, “hands-on” FARS training sessions that were available to them. We believed that after the students had seen the FARS system demonstrated, they would have some interest in attending a hands-on training session in the COB computer lab. These training sessions were voluntary, occurred in the evening, and took place during the third week of class. The professors circulated sign-up sheets in order to manage attendance at each session. During the first two semesters in which we used FARS in Intermediate Accounting I, approximately 60–70% of students attended the training sessions. This attendance rate did not deteriorate in subsequent semesters.

The Intermediate Accounting professors conducted the FARS computer lab training sessions. At each hour-long training session, the professors gave the students a FARS handout prepared by one of the Intermediate Accounting professors. This handout allowed each student to leave the session with some examples and instructions to use as a reference. To date, one Intermediate

Accounting professor has conducted nearly all of the lab training sessions. This professor developed the lab-training handout that is distributed to the students. However, the other Intermediate Accounting professors attend the training sessions and help students at their computers. We run six training sessions in the fall semester and three in the spring.

We covered the following topics in the computer lab training sessions: (1) how to open the FARS program; (2) a review of the options available on the FARS opening menu; (3) another tour of the Original Pronouncements infobase; (4) an explanation of the various “panes” students can use to view the infobase; (5) a review of how to perform an “Advanced Query;” (6) an explanation of various query syntax (e.g. wildcard operators); and (7) how to print and save search results.

FARS Navigation Exercises

We used a series of 15 FARS navigation exercises to make sure that students were familiar with the FARS software *prior* to us asking the students to perform professional research. These 15 exercises came from the Ziebart workbook. Students completed the exercises during the fourth through the ninth weeks of the semester. The professors graded all navigation exercises and factored them into the student’s overall grade for the course. In the 600-point Intermediate I course, the exercises were worth 75 points – 12.5% of a student’s final grade.

The workbook exercises forced the students to “move around” within the FARS system. Some examples of workbook exercises included the following: students had to: (1) document where they had been in the infobases by providing appropriate literature citations; (2) generate search queries; and (3) demonstrate their ability to save and print search results.

FARS Research Cases

We assigned two research cases during weeks 10 through 13 of the semester. We believed that the students, having completed 15 navigation exercises, were now comfortable with FARS and were ready to learn to attempt meaningful research.

All Intermediate Accounting I research cases came from the Ziebart workbook. The professors graded all research cases. In the 600-point Intermediate I course, the two research cases were worth a total of 75 points. When we combined the navigation exercises (75 points) with the research cases (75 points), we allocated 150 points, or 25%, of a 600-point course to FARS. We deliberately allocated substantial points to FARS assignments to insure that students took the FARS

assignments seriously. We allocated the other 450 points as follows: three hourly exams (300 points); a comprehensive final exam (100 points); and a job-fair assignment (50 points). Appendix A provides an example of an assignment sheet for Intermediate Accounting I. It indicates the navigation exercises and cases assigned and the distribution of due dates for these assignments during the semester.

The professors gave a sample research case from the Ziebart workbook, with a suggested research solution prepared by one of the Intermediate Accounting professors (see Appendix B), to the students before they started their research. The suggested solution consists of three parts: (1) the problem statement; (2) the solution; and (3) the authoritative citation(s). When preparing solutions to research cases, students had to follow this three-part organization scheme. Their solutions could not exceed one single-spaced, typed page. A final requirement is that students attach the authoritative citation(s) they had printed from the FARS infobase to their one-page solutions.

We intended the first assigned research case to be rather simple, the second case to be more difficult. Additionally, none of the research cases identified the problem students needed to investigate. We wanted to force students to think critically *to first identify the problem* to be solved. Once students identified the problem, their research could begin.

In Intermediate Accounting II, we assumed that the students were competent users of FARS. (If a student in Intermediate II has no experience with FARS, professors provide one-on-one guidance, and the student may attend one of the Intermediate I training sessions). We assigned Intermediate Accounting II students three research cases. The cases became progressively more difficult. We selected the third and final case from the Trueblood cases, a “real world” case for which there may be no single, correct answer. In both Intermediate Accounting I and II, we changed the case assignments each semester. The FARS case assignments in Intermediate Accounting II accounted for approximately 15% of the course grade. Appendix C is an example of a case assignment sheet from Intermediate Accounting II; the professor also assigned two non-FARS cases during the semester.

We deliberately chose research cases that related to the topics being covered in the course. We wanted our students to have the appropriate foundational knowledge to be able to answer the research case. We did not ask students to research topics with which they had no familiarity. The two research cases in Intermediate Accounting I had discernable answers, as did the first two cases in Intermediate Accounting II. However, students could answer the final case in Intermediate Accounting II several different ways. We tried to gradually increase the difficulty level of the cases so that our students would not become discouraged or overwhelmed by the research process.

PROFESSOR PERCEPTIONS OF FARS

The Intermediate Accounting professors have identified the following positive and negative aspects of incorporating FARS into the Intermediate Accounting courses.

Positive Aspects

The Intermediate Accounting professors believe that the FARS case assignments help students develop critical thinking skills. FARS research cases force students to first identify the accounting problem (instead of the textbook defining it for them). Students then conduct research and suggest a solution to the case. Thus, the assignments enhance the students' ability to solve unstructured problems.

FARS teaches professional research skills. These skills easily transfer to other subject matter, such as tax research databases. We were pleased to learn that some of our students from prior semesters were voluntarily using FARS in their master's level accounting research class, even though they were not specifically required to do so. Thus, we believe our students' early introduction to FARS is simply another tool that they may draw upon in later courses.

We are also aware that students may need FARS research skills on future CPA Exams. One objective of the revised, computerized CPA Exam is to test the ability to perform online research of the authoritative accounting literature. Our students will be better prepared for such skills testing as a result of the FARS assignments.

We also believe that the FARS assignments contribute to our students' ability to learn independently. The FARS research skills acquired by our students provide an alternative to memorization. The students become aware that resources exist that will enable them to solve problems or issues that they have not encountered previously in the classroom or in the textbook. We believe that the ability to conduct *independent* research is a critical step in the process of developing from a student into a professional.

We did not have to dramatically alter our approach to teaching Intermediate Accounting I and II. At Illinois State University, we still teach Intermediate Accounting in a very detailed, technical fashion. Students complete the FARS navigation exercises and research cases outside of class time, and the professors provide most of the feedback on the cases through written comments. Therefore, we experienced very little reallocation of class time (see "Negative Aspects" below) due to FARS.

The addition of FARS to our Intermediate Accounting courses has not affected our student retention rate in a negative fashion. Students do not drop Intermediate Accounting or change their majors due to FARS. Our students have not complained

that the FARS navigation exercises and research cases were burdensome or inappropriate.

The Ziebart workbook has two, three, or four versions of the same exercise for *most* of the navigation exercises. Due to this feature, we have been able to vary the exercises to a great extent for four semesters. We also have chosen different research cases for four consecutive semesters. We believe it is relatively easy to vary assignments to minimize students copying the work of students from prior semesters.

In addition, FARS research assignments allow students to become familiar with the authoritative literature in financial accounting, enhance students' technology skills, and help to develop students' writing skills. In general, the Intermediate Accounting faculty have seen evidence of improvement over the five case assignments in Intermediate I and II. By the last case, students demonstrate an increased ability to define the accounting issue and to identify *relevant* accounting standards. In addition, the ability of the students to communicate a conclusion, and support that conclusion from the authoritative literature, improves. This improvement supports our belief that the FARS assignments are helping our students to develop desired competencies including research, communication, critical thinking and independent learning.

Negative Aspects

Incorporating FARS assignments into a course does take additional class time. Accordingly, professors may have to delete some previously-covered accounting material in order to incorporate the FARS assignments. The authors of this paper found the reallocation of class time to be minimal. One of the authors deleted three homework problems to make room for FARS in Intermediate Accounting I. If a professor can reallocate 90 minutes of Intermediate I class time to FARS items, he or she can implement FARS as we did. We needed approximately 30 minutes to do an in-class demonstration of the software; 40 minutes to go over the 15 navigation exercises that we assigned in four groupings (10 minutes for each of the 4 groupings); and 20 minutes for the two research cases (a 10-minute discussion of each one). In addition, professors will face the additional grading (research cases and workbook exercises) that FARS generates. In Intermediate Accounting II, we reallocate about 30 minutes of class time (10 minutes to go over each research case). Some professors may prefer to allocate more time for in-class discussion of the research cases, especially the more challenging Trueblood cases. In this case, a professor must determine where best to reallocate class time within the course.

Students may initially resist FARS assignments. For example, when we first added FARS assignments, many students pointed out that the prior semester's students did not have to do FARS assignments. Also, some students may see little value in FARS. We have observed frustration as students adapt to the more unstructured nature of the FARS cases. One common student frustration is not being able to identify the accounting problem. Another common student frustration is that of citing, as a solution to the case, a passage from the financial accounting literature that is totally off base. These frustrations diminish over time as the students gain research experience and become more confident in their abilities.

In addition, because of the number of FARS assignments during Intermediate Accounting I and II, students may reach a point where they feel that they are sufficiently competent in using FARS and that additional assignments are unnecessary. The authors have not seen evidence of this attitude in class evaluations or student comments, but it is a possible reaction that professors adopting FARS should consider. A major factor in reducing student resistance is the attitude of the faculty members. By pointing out the positive outcomes of the FARS assignments and communicating their belief in the value of these assignments, faculty members can overcome, to a great extent, most negative student reactions or perceptions.

STUDENT EVALUATIONS OF FARS ASSIGNMENTS

During the last week of the Spring 2002 semester, we asked the students in Intermediate Accounting to evaluate (anonymously) their experiences with FARS. We waited until Spring 2002 to collect the data because, at this point, we had incorporated FARS into *both* Intermediate Accounting I and II, and the students in Intermediate Accounting II had used FARS for two semesters. We received 127 responses from 26 students in one section of Intermediate Accounting I and 101 students in four sections of Intermediate Accounting II. The response rates of the Intermediate Accounting I and II students, respectively, were 74 and 94%. Students who responded to the survey were 51% female and 49% male. The students were predominantly juniors (73%); 24% were seniors and 3% were graduate students. By major, the breakdown of the respondents was 70% accounting majors, 27% other College of Business (COB) majors, and 3% non-COB majors.

On the first part of the evaluation form, we asked students to indicate the extent to which they agreed or disagreed with 12 statements. We present the mean responses in Table 1. For each of the twelve scaled statements, there were no statistically significant differences between the responses of the Intermediate Accounting I and Intermediate Accounting II students. (The purpose of this statistical test was

Table 1. Student Responses to FARS Evaluation (Means and Number of Respondents).

	Mean
1. The FARS workbook was helpful to me as a reference while using the FARS database.	3.59 (126)
2. The navigation and query exercises in the FARS workbook were helpful to me in learning to use the FARS database.	3.72
3. The cases in the FARS workbook were helpful to me in learning to use the FARS database to research accounting issues.	3.69
4. The hands-on lab session (beginning of semester in Intermediate I) was helpful in introducing me to the basics of using FARS.	3.75 (97) ^a
5. I did not have any significant problems accessing FARS in the computer labs.	4.16
6. The FARS assignments in Intermediate I and II improved my understanding of the concept of professional research in the accounting profession.	3.77
7. The FARS assignments in Intermediate I and II improved my ability to conduct professional research into accounting issues.	3.76
8. FARS assignments in Intermediate I and II improved my ability to identify and analyze accounting issues.	3.66
9. FARS assignments in Intermediate I and II improved my ability to communicate my conclusions in writing.	3.58
10. FARS assignments in Intermediate I and II improved my knowledge of the professional accounting standards and how the information in the standards is organized.	3.91
11. FARS assignments in Intermediate I and II improved my ability to read, interpret and apply the professional accounting standards.	3.76
12. FARS assignments in Intermediate I and II provided me with skills that will be useful to me in my future profession.	3.54 (123)

Note: Strongly agree = 5; strongly disagree = 1; not applicable; *N* = 127 (except as noted).

^aStudents responded “Not applicable” to item 4 if they did not attend any of the lab sessions.

to allow the responses of the two courses to be combined; we are not drawing any conclusions or inferences from this test.)

Several statements (1, 2, 3) dealt with the usefulness of different elements of the FARS workbook. We also evaluated the helpfulness of the introductory, “hands-on” lab training session (4) and the accessibility of FARS in the COB computer lab (5). The remaining statements (6–12) reflected the desired outcomes for our students in improvements of skills. Students also responded to several open-ended questions in order to identify specific positive and negative aspects of the FARS assignments. Detailed breakdowns of the responses to these questions appear in Tables 2–5.

Responses to both the scaled statements and the open-ended questions provided a relatively positive view of the experience of our students with the FARS

Table 2. Responses to Question 1.

What elements of the FARS assignments do you believe were most valuable to you as a student? (<i>N</i> = 127)	
Learning FARS navigation skills	30
Researching cases	25
Exposure to the authoritative literature (GAAP)	18
Exposure to “real world” cases and applicability to “real world”	13
Miscellaneous	16
Question left blank or unresponsive answer	25

Table 3. Responses to Question 2.

What elements of the FARS assignments do you believe will be most valuable to you in the future? (<i>N</i> = 127)	
Knowing how to find GAAP and how to research GAAP	30
Knowledge of general research skills and how to reach a conclusion	30
Knowing how to navigate within FARS and learning about infobases	18
Developing the ability to research cases	13
Nothing of value	10
Miscellaneous	8
Question left blank or unresponsive answer	18

professional research assignments. Mean responses to statements 1–5, ranging from 3.59 to 4.16, indicated that students found the workbook helpful and felt that FARS was readily accessible in the COB computer lab. The responses to statements 6–12 indicated student agreement that the FARS assignments did contribute to

Table 4. Responses to Question 3.

What elements of the FARS assignments did you find to be difficult or confusing? (<i>N</i> = 127)	
The cases	35
Identifying the accounting issues in the cases	20
Identifying appropriate words to use in queries	18
Miscellaneous	16
Question left blank or unresponsive answer	38

Table 5. Responses to Question 4.

What elements of the FARS assignments do you believe should be included in Intermediate Accounting I and II in future years? (<i>N</i> = 127)	
No changes recommended	35
Research cases should be included	20
Miscellaneous	17
Question left blank or unresponsive answer	55

improvements in their research, analytical and writing skills as well as improving their understanding of and ability to use the financial accounting authoritative literature.

Written responses to the open-ended questions were generally positive. Students identified the ability to do research and to understand and use FARS as valuable to them, both currently and in the future (Tables 2 and 3). The students identified the research cases as being the most difficult element of the FARS assignments (Table 4), but other responses showed an awareness of the value of these case assignments. A significant number of students recommended no changes in the FARS assignments and many specifically recommended that the cases continue to be assigned (Table 5).

CONCLUSIONS

Accounting students need more than just textbook-based knowledge to be successful in the accounting profession. In introducing our students to professional research, our primary objectives were to improve student competencies in research, problem-solving, technology and communication. In addition, we hoped to prepare our students for the proposed changes in the CPA examination and improve their ability to learn independently.

The consensus of the Intermediate Accounting professors is that integrating a professional research component into the Intermediate Financial Accounting courses at Illinois State University has been a worthwhile endeavor with a number of positive outcomes. We believe that our students' abilities to read and comprehend, to think critically, to learn independently, and to solve unstructured problems have improved. Both faculty and students believe that the students' ability to conduct research using computerized databases and their understanding of the structure and organization of the professional standards have improved. Many of the skills developed in the FARS assignments (e.g. research skills, writing skills, reasoning skills) will be helpful to our students as future CPA examinations are revised to include skills testing. Most importantly, the improvements in skills identified previously should mean that our students will be better prepared to enter the accounting profession upon graduation.

Because of these positive outcomes, we believe that FARS has been a valuable learning opportunity for our students, and we intend to continue using the FARS assignments in Intermediate Accounting at Illinois State University.

ACKNOWLEDGMENTS

The authors would like to thank Professors David A. Ziebart and Anita L. Feller and the Department of Accountancy of the University of Illinois at Urbana-Champaign. After introducing the Financial Accounting Research System into their classes, Professors Ziebart and Feller developed and sponsored a workshop for faculty at other Illinois universities. We deeply appreciate their willingness to share their experience and expertise.

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APPENDIX A

Example of Assignment Sheet for Intermediate Accounting I

Assignment	Due Date
Read Workbook Chapters 1 and 3	Tuesday, August 27
FARS Workbook #1	
Read Workbook Chapter 4, pages 55–68	Tuesday, September 17
Complete Workbook E4-1, E4-2, E4-3, E4-4	
FARS Workbook #2	
Complete Workbook E4-8, E4-11, E4-15	Tuesday, October 1
FARS Workbook #3	
Read Workbook Chapter 4, pages 87–97	Tuesday, October 8
Complete Workbook E4-18, E4-22, E4-26, E4-30, E4-34	
FARS Workbook #4	
Read Workbook Chapter 4, pages 119–126	Thursday, October 17
Complete Workbook E4-36, E4-38, E4-40	
Read Workbook Chapter 5, pages 137–150	Tuesday, October 22
FARS Research Case #1	
Workbook p. 237, Case OFS-5, Gholson Corporation	Tuesday, October 29
FARS Research Case #2	
Workbook p. 237, Case OFS-6, Eastern Illinois Power Company	Tuesday, November 12

Each FARS Workbook exercise is worth 5 points (15 exercises x 5 points = 75 points). FARS Research Case #1 is worth 35 points. FARS Research Case #2 is worth 40 points.

All FARS Workbook exercises and cases are due at the *beginning* of class on the due date indicated. FARS assignments turned in after the beginning of class will have points deducted for being late. Once I grade the FARS assignments and return them to the students, I will no longer accept cases as “late;” at this point, students who have not turned in an assignment will receive a grade of zero.

APPENDIX B

Sample Case with Suggested Solution and Solution Format

Sample Research Case

Bill Smith, the accountant for TriMAX Enterprises, maintains that the company's statement of cash flows should be very simple since it should have only cash inflows and cash outflows from operating activities. Bill maintains that all activities of the company are related to the production of income and therefore should be considered operating activities. Bill's argument confuses Sharon Kerns, the recently hired controller. She knows that TriMAX has recently purchased and sold fixed assets and recently borrowed money from the local bank. She agrees that these activities have some effects on income – for instance, depreciation of the fixed assets or interest expense on the bank borrowings (Ziebart, 2001, p. 239).

Suggested Solution to Sample Research Case

Problem Statement. When preparing a statement of cash flows in accordance with generally accepted accounting principles, is it correct to classify all cash inflows and cash outflows as operating activities?

Solution. A statement of cash flows should classify cash inflows and cash outflows as resulting from operating, investing, or financing activities. In the case of TriMAX Enterprises, the company should have more than just an “operating activities” section to its statement of cash flows. TriMAX's purchase (i.e. cash outflow) of fixed assets should be classified as an “investing” activity. Its sale of fixed assets (i.e. cash inflow) is also an “investing” activity. TriMAX's borrowing of money (i.e. cash inflow) from the local bank should be classified as a “financing” activity. TriMAX's depreciation expense and its interest expense affect the “operating activities” section of the statement of cash flows.

Authoritative Citation(s). The primary citation is FAS95, Par. 14. This paragraph indicates that a statement of cash flows should classify cash inflows and cash outflows as operating, investing, or financing.

The secondary citations are FAS95, Paragraphs 15–23. These paragraphs define cash inflows and cash outflows from investing, financing, and operating activities.

(Note to professors: Students are required to staple printouts of FAS 95, Paragraphs 14–23 to their solutions.)

APPENDIX C

Example of Assignment Sheet for Intermediate Accounting II

Intermediate Accounting II: Case Assignments

Objectives: The objectives of the case assignments for Intermediate Accounting II are to allow you to improve your writing, organization and analysis skills in relation to financial reporting topics. By using FARS to research accounting issues and cases, you will improve your research and analytical abilities. In addition, you will use the Internet to obtain some information, and you will enter three of the cases, as indicated, into your student portfolio.

Requirements: Four of the case assignments are taken from your textbook (KWW) or from the FARS workbook (FARS). The last FARS case will be distributed in class. Each case write-up is due at the beginning of class on the date indicated. Each paper should be approximately one page in length (typed, single-spaced). Be sure to proofread and spell-check your paper! [*Note:* The format requirements for FARS research reports are included on the following page. The textbook case write-ups should be in essay or memo format and should respond the questions in the individual case].

Assignments and Due Dates:

Case Assignment #1: FARS – RE-3 (p. 256) – Retained Earnings**Due Date: Monday, January 27 – 15 points****Student Portfolio Assignment # 1****Due Date: Monday, March 31 – 10 points**

After *FARS Retained Earnings Case* has been graded and returned to you, this assignment is to be entered into your student portfolio.

Case Assignment #2: KWW – Chapter 18 (page 995) – Ethics Case**Due Date: Monday, February 10 – 15 points****Student Portfolio Assignment #2****Due Date: Monday, March 31 – 10 points**

After *Chapter 18 Ethics Case* has been graded and returned to you, this assignment is to be entered into your student portfolio.

Case Assignment #3: KWW – Chapter 20 (page 1115) – Research Case 1

Due Date: Wednesday, February 26 – 15 points

For this assignment, you will obtain this information from corporate annual reports using the SEC's EDGAR database. To access this information, go to the SEC web site (<http://www.sec.gov>) and from here to the EDGAR database. You can enter a company name and obtain a listing of all reports filed by that company.

Student Portfolio Assignment #3

Due Date: Monday, March 31 – 10 points

After *Chapter 20 Research Case 1* has been graded and returned to you, this assignment is to be entered into your student portfolio. In addition to your responses to the case requirements, include a one or two paragraph description of how you obtained the financial statement information that you used in the case. Also include a *link* to either the SEC web site or any other site you used in your research.

Case Assignment #4: FARS – POBEB-3 (p. 253) – Income Tax Accounting

Due Date: Monday, March 24 – 25 points

Case Assignment #5: The Needle Eater – FARS case

Due Date: Wednesday, April 23 – 50 points

STUDENT INVOLVEMENT IN ACCOUNTING ORGANIZATIONS: THE EFFECT ON CPA FIRM RECRUITING

Shawn Mauldin, John L. Crain and Joseph L. Morris

ABSTRACT

This study attempts to ascertain the importance CPA firm recruiters place on student participation in Beta Alpha Psi and the Institute of Management Accountants. Three groups of recruiters participated in an experiment to determine whether student participation in either organization affects recruiting decisions. The results of the experiment suggest that active participation in Beta Alpha Psi, and to a lesser extent, the Institute of Management Accountants, does have a positive impact on recruiters' decisions. As a second phase of the study, a fourth group of recruiters participated in a survey to determine the relative importance of nine student attributes, including active participation in Beta Alpha Psi and the Institute of Management Accountants. The recruiters indicated that both organizations are important, but did not rank either as one of the top attributes. The results of both phases seem to suggest that recruiters' decisions are incrementally affected by student participation in these organizations, and do not report those attributes at the top in terms of importance.

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INTRODUCTION

Many accounting faculty and, consequently, their students, believe that participation in accounting professional/honor organizations is viewed positively by CPA firm recruiters. Although there is anecdotal evidence and acceptance that this is true (James, 2000), the empirical research addressing this question is modest and somewhat inconclusive. Additionally, the job environment, and therefore, recruiting considerations, change significantly over time. There are indications that the accounting profession has become less attractive to young people in the wake of the 150-hour requirement – so much so that the AICPA has allocated \$25 million to fund a student recruiting initiative over a five-year period (AICPA, 2001). Because of these changes, any conclusions drawn from past research may not remain valid in the present environment. This study attempts to ascertain the importance CPA firm recruiters place on student participation in accounting professional/honor organizations.

The accounting professional/honor organizations chosen for this study are Beta Alpha Psi and the Institute of Management Accountants. Through its student chapters, each organization provides numerous professional development opportunities. Beta Alpha Psi fraternity members participate in many activities: networking with professional speakers on campus; coordinating volunteer income tax assistance programs; attending regional and national meetings; and making field trips to CPA firms and industry firms. In addition, students in superior chapters are eligible for scholarships (Institute, 1996). Considering these activities, CPA firm recruiters might infer that Beta Alpha Psi members hold the promise of a skill set tailored for public accounting. Historically, Beta Alpha Psi has most closely aligned itself with public accounting. In fact, in 1996 Beta Alpha Psi came under the umbrella of the American Institute of Certified Public Accountants. The percentage of senior accounting majors actively involved in Beta Alpha Psi was 32% in 1995 and 30% in 2000 (Nelson et al., 2002).

By the same token, IMA student members have the opportunity to network with recruiters, take on leadership roles, shadow an accountant, attend company tours, go to regional and national conferences, and receive scholarship money (IMA Students Homepage, 2002). IMA eligibility, however, is not dependent upon GPA. Another difference is that IMA student members have more contact with professionals in management accounting and financial management rather than public accounting. Notwithstanding these differences, CPA firm recruiters might infer that IMA membership provides another source of students who are engaged in their profession and possess an above average skill set compared to students with no organization membership.

PRIOR RESEARCH

Few empirical studies have attempted to directly address the importance that CPA firm recruiters place on student participation in accounting professional/honor organizations. However, many studies have used various research techniques to identify characteristics that are important to recruiters of entry-level accountants. Dinius and Rogow (1988) applied the Delphi method to identify characteristics that Big Eight firms seek in entry-level accountants. By questioning a panel of Big Eight partners, one of the characteristics identified as important (ranked 11th out of 49) was leadership as demonstrated through holding office in an organization. Membership in organizations was found to be less important (tied in the ranking with four other characteristics at 19–23). The study found GPA to be the most important characteristic.

In 1989, the Big Eight firms issued the now famous White Paper describing the characteristics they believed to be necessary for success in the accounting profession (Arthur Andersen et al., 1989). The Accounting Education Change Commission (AECC) also attempted to determine the characteristics or skill set that accounting graduates should possess (AECC, 1990). The Commission identified seven characteristics as being important: (1) accounting degree; (2) overall grade-point average; (3) accounting GPA; (4) communication skills; (5) personal integrity; (6) energy, drive, and enthusiasm; and (7) appearance.

Pasewark et al. (1988) attempted to explain accounting-recruiting decisions based on student characteristics. Using principal-components analysis, they reduced nine objectively measurable student characteristics to three factors: academic performance, involvement in extracurricular activities, and past work experience. They noted that the recruiting process consisted of three stages: selection for on-campus interviews, selection for office visits, and selection for job offers. Further, they identified Big Eight accounting firms, non-Big Eight national accounting firms, local and regional accounting firms, and companies in private industry as the four types of accounting employers. The researchers employed regression analysis to measure the importance of each of the three factors on recruiting. For Big Eight firms, involvement in extracurricular activities was a significant factor in recruiter selection for on-campus interviews and selection for job offers, but was not a significant factor in recruiter selection for office visits. For national non-Big Eight firms, regional and local firms, and private companies, involvement in extracurricular activities was not a significant factor in recruiter selection at any of the three stages. It is interesting to note that membership in Beta Alpha Psi, arguably the preeminent accounting organization, was not included in the measure of extracurricular activities because it did not load highly in the principal components analysis. The authors reasoned that because

membership is based on academic achievement, Beta Alpha Psi membership provided little additional information in estimating factor structure above that provided by academic performance characteristics.

Using Saaty's (1980) Analytical Hierarchy Procedure (AHP), Hassell and Hennessey (1989) found that recruiters ranked campus involvement eighth out of the nine factors they considered in making recruiting decisions. Furthermore, they found that campus involvement ranked seventh using simple self-reported rankings. The study found accounting GPA to be ranked third and second in the AHP and simple self-reported rankings, respectively. The type of campus involvement was not described in either procedure.

Although pursuing a different primary research objective, Hardin and Stocks (1995) also examined factors important in the recruitment of entry-level accountants. They employed a field experiment to study the importance accounting recruiters in both CPA firms and corporations place on AACSB accounting accreditation. As a second part of the study, they surveyed a different group of recruiters drawn from the same pool to determine the importance in recruitment of nine student attributes, including student activities (there was no mention of what type of student activity). Corporate recruiters in both small and large firms ranked student activities ninth, while recruiters from small CPA firms ranked it eighth and recruiters from large firms ranked it sixth.

Baker and McGregor (2000) used conjoint analysis to assess the importance of seven characteristics to Big Six CPA firms, local CPA firms, industry, accounting faculty, and students. Building on the AECC's recommended skill set, the characteristics tested were master's degrees; overall GPA; accounting GPA; communication skills; personal integrity; energy, drive, and enthusiasm; and appearance. They found personal integrity the most important characteristic for non-student groups. Students gave the most importance to energy, drive, and enthusiasm. Interestingly, overall GPA was the only characteristic that was not important to all five groups in making hiring-preference decisions.

In summary, the prior studies found several student attributes (including extracurricular activities and student activities) that are potentially important to recruiters of entry-level accountants. These studies also found conflicting results as to which student attributes are the most important in recruiting decisions. However, there has not been any research that focused solely on the importance of student participation in an accounting professional/honor organization.

RESEARCH PROBLEM AND HYPOTHESES

Students' participation in accounting professional/honor organizations may suggest many characteristics that are potentially desirable to CPA firm recruiters.

These include leadership skills, organizational commitment, social networking skills, and realistic job expectations. It is unlikely that all student organizations are equal to the extent their members possess these desirable characteristics.

As previously mentioned, this study will focus on two of the most widely recognized accounting student organizations: Beta Alpha Psi and the Institute of Management Accountants. Beta Alpha Psi is a national scholastic and professional fraternity for financial information professionals, most of whom are accounting majors. Founded in 1919, the fraternity's primary objective is to encourage and give recognition to scholastic and professional excellence in the business information field. Historically, Beta Alpha Psi has promoted the study and practice of accounting. Starting in 1999, the organization allowed chapters to also accept students with concentrations in finance and information systems to align the organization with emerging trends in business education and corporate hiring strategies. CPA firms have expanded their degree criteria to include finance and information systems majors for the many services they now offer (Rooney, 2001). By 2002 there were 232 chapters of Beta Alpha Psi with over 200,000 members initiated since the fraternity's formation (Beta Alpha Psi Homepage, 2002).

Established in 1919, the Institute of Management Accountants is dedicated to advancing management accounting and financial management. Its goals are to help its 75,000 members and nearly 300 chapters develop both personally and professionally by means of education, certification, and association with other business professionals. The IMA's ethical standards provide guidance to practitioners for maintaining high levels of ethical conduct. Its national college program has reached 600 college and university campuses (IMA Homepage, 2002).

Beta Alpha Psi and IMA have been widely recognized by recruiters as providing means of developing relationships with students well before graduation (Jeffords et al., 2000). While it is reasonable to expect that CPA firm recruiters would view active participation in these organizations by students as desirable, it is not clear from prior research whether recruiters' decisions are significantly influenced by such participation. Therefore, this study seeks to answer the above question by addressing the following primary hypotheses, which are stated in the null:

H1. A student's active involvement in Beta Alpha Psi is not an important factor in recruiting decisions.

H2. A student's active involvement in the Institute of Management Accountants is not an important factor in recruiting decisions.

H3. There is no difference in recruiting decisions between students who actively participate in Beta Alpha Psi and those who participate in the Institute of Management Accountants.

Pasewark et al. (1988) and Lewis et al. (1983) observed that the criteria affecting recruiting decisions differ based on firm size. Accordingly, the following secondary hypothesis, stated in the null, investigates whether such a difference exists in the context of the current study.

H4. Recruiters' firm size is not related to any effect of students' active participation in Beta Alpha Psi or the Institute of Management Accountants on recruiting decisions.

RESEARCH: PHASE 1

In the first phase of the study, an experiment was used to examine the influence of a student's active participation in Beta Alpha Psi or the Institute of Management Accountants on CPA firms' recruiting decisions for entry-level positions. In the second phase of the study, a survey was used to determine how recruiters report the relative importance placed on the same student attributes used in Phase 1, including active participation in Beta Alpha Psi and the Institute of Management Accountants.

Research Design

Employing a between-subjects design in this phase, we asked recruiters to evaluate a prospective entry-level accountant based on several criteria. We manipulated participation in honor/professional organizations by indicating that the student was actively involved in either Beta Alpha Psi, the Institute of Management Accountants, or was not involved in any student organization. In addition, we asked the recruiters to indicate the approximate number of employees in their firms as a measure of firm size, allowing the secondary hypothesis to be tested.

Research Instruments

Appendices A, B, and C contain the research instruments. The one-page research instrument instructs the recruiters to assume that they are in the process of recruiting an entry-level staff accountant. Recruiters should assume that interviews had been conducted at several regional universities and that they had interviewed a student with specific attributes. Prior research has identified the seven attributes included in each instrument as factors of potential importance to accounting recruiters (AECC,

1990; Baker & McGregor, 2000; Craig, 1990; Dinius & Rogow, 1998; Hardin & Stocks, 1995; Hassell & Hennessey, 1989; Pasewark et al., 1988).

We arbitrarily ordered the seven student attributes on the instrument with the exception of the manipulation. We listed the manipulation – the student's active participation in accounting professional/honor organizations – fourth in the list on each instrument to place it approximately in the middle to minimize a possible order effect. The other six attributes were identical on all instruments. Thus, the three identical instruments are the same with the exception of the following manipulations:

- The student is an active member in Beta Alpha Psi (Appendix A).
- The student is an active member in the Institute of Management Accountants (Appendix B).
- The student is not a member in any student or professional/honor organization (Appendix C).

After reviewing the student attributes, we asked recruiters to rate how actively their firms would recruit the student by placing a slash (/) on a continuous scale ranging from zero to 10. The Likert-type scale ranged from zero to 10 so that 5 was the obvious median of the range. The zero on the scale indicated that the student would not be recruited very actively while a 10 indicated that the student would be recruited very actively. Recruiters participating in the study did not know which of the attributes was being manipulated or that there was even a manipulation employed.

Since CPA firm recruiters were the research subjects in this study, we consulted with several experienced CPAs in the design and pretest of the instrument. Each of them completed all of the instruments. There was consensus among the CPAs that the attributes provided were sufficient to make a hypothetical recruiting decision about the student. This process also validated the attributes identified in prior research as factors of potential importance to accounting recruiters. Accordingly, no changes were made to the research instrument as a result of the pretest.

Sample and Data Collection Procedures

The recruiters in the study come from an Excel database of 1900 recruiters representing 500 firms acquired from the Emerson Company. We utilized the Emerson Company database because it provided a current national database of individuals in CPA firms who are responsible for recruiting. We selected a random sample of 250 recruiters for each of the three manipulations, using a random

Table 1. Phase 1: Firm Sizes of the Recruiters.

Firm Size	Number of Recruiters	Percentage
1–50	57	24
51–100	68	29
101–500	58	25
500–1000	31	13
Over 1000	20	9

number generator in Excel to select the sample recruiters. Therefore, we mailed a total of 750 instruments to CPA firm recruiters. The information mailed to each recruiter included a personalized letter on University letterhead, one instrument, and a business reply envelope. All materials were identical in all respects except for the manipulated variable. Fifty-two mailings were returned undeliverable. Of the 698 instruments delivered, we received 234 completed instruments for a response rate of 34%. Table 1 presents data related to firm sizes (total number of employees) of the recruiters. The sampling period covered approximately three weeks and 32 states were represented by the reporting sample.

Data Analysis and Results

Hypotheses H1 and H2 predict that active participation in Beta Alpha Psi or the Institute of Management Accountants will not affect how actively an accounting graduate will be recruited. Hypothesis H3 predicts that there is no *difference* in recruiting decisions between students who actively participate in Beta Alpha Psi and those who participate in the Institute of Management Accountants. Hypothesis H4 predicts that recruiters’ *firm size* is not related to any effect of student’s active participation in Beta Alpha Psi or the Institute of Management Accountants on recruiting decisions. The investigators’ tolerance for risk of Type I error is 0.05 and will be employed throughout the study.

As presented in Table 2, the 234 responses include 78 responses for the Beta Alpha Psi manipulation, 79 responses for the Institute of Management Accountants manipulation, and 77 for the manipulation where the student is not a member in either organization. Table 2 also displays the means and standard deviations for each manipulation. Because of the structure of the questions presented in the instrument, higher scores reported by recruiters on the Likert scale indicate a higher rate of recruitment activity. Therefore, the means from highest to lowest are the Beta Alpha Psi manipulation (8.13), the Institute of Management Accountants manipulation (7.99), and the no participation manipulation (7.49).¹

Table 2. Phase 1: Responses, Means, and Standard Deviations of Ratings by Manipulation.

Manipulation	Number of Responses	Means of (RATINGS)	Standard Deviations
Beta Alpha Psi	78	8.13	1.17
Institute of Management Accountants	79	7.99	1.60
No participation	77	7.49	1.38

To determine whether the means reported in Table 2 represent statistically significant differences, we performed an analysis of variance (ANOVA). The dependent variable (RATING) is the ratings provided by the recruiters as to how actively the student described in the research instrument would be recruited. The independent variable of interest is a student’s active participation in an honor/professional organization, referred to as PARTIC. We manipulated PARTIC in the experiment by including as one of the student’s attributes the active participation in Beta Alpha Psi, the active participation in the Institute of Management Accountants, or no participation in honor/professional organizations. The other independent variable is the approximate number of employees in the recruiter’s firm, referred to as SIZE.

Table 3 summarizes the results of the ANOVA procedure. As indicated, the main effect of PARTIC is significant ($p < 0.015$). The effect size for the differences in the means for PARTIC is relatively small ($d = 0.073$) (Cohen, 1988). However, the results do not indicate which means are statistically different. To test Hypotheses H1–H3, we applied a Scheffe’s post hoc test to determine which treatment level means are statistically different.² Table 4 presents the results of the Scheffe post hoc tests. The results indicate that there is a significant difference between the means for participation in Beta Alpha Psi and no participation ($p < 0.018$). Since the recruiters rated the accounting graduates higher who actively participated in Beta Alpha Psi compared to no participation in professional/honor organizations,

Table 3. Phase 1: ANOVA Results.

Source	F Value	Prob > F
PARTIC	4.28	0.015
SIZE	0.043	0.836
PARTIC × SIZE	0.673	0.511

Table 4. Phase 1: Scheffe Post Hoc Results.

Manipulations – Mean Comparisons	Prob > <i>F</i>
Beta Alpha Psi compared to no participation	$p < 0.018$
Institute of Management Accountants compared to no participation	$p < 0.088$
Beta Alpha Psi compared to the Institute of Management Accountants	$p < 0.814$

there is sufficient evidence to reject H1. This indicates that a student’s participation in Beta Alpha Psi compared to no participation in honor/professional organizations has a favorable effect on recruiters’ hiring decisions. The difference between means for participation in the Institute of Management Accountants and no participation ($p < 0.088$) provides evidence that H2 cannot be rejected. This indicates that a student’s participation in the Institute of Management Accountants compared to no participation in honor/professional organizations does not have a favorable effect on recruiters’ hiring decisions. The difference between means for participation in Beta Alpha Psi and the Institute of Management Accountants ($p < 0.814$) is not significant. Therefore, there is insufficient evidence to reject H3 indicating that recruiters do not perceive a difference in students’ active participation in Beta Alpha Psi compared to the Institute of Management Accountants.

H4 predicted that there would be no difference in the effect on recruiting decisions for a student’s active participation in Beta Alpha Psi or the Institute of Management Accountants based on recruiter’s firm size. We used the interaction term $PARTIC \times SIZE$ to test this hypothesis in the ANOVA model. As shown in Table 3, the results of the ANOVA found no statistically significant interaction between the size of the firm and the participation manipulation ($p < 0.511$), indicating that there is no evidence of a difference in how firms responded to the participation manipulation based on firm size. Therefore, there is insufficient evidence to reject H4.

RESEARCH: PHASE 2

The second phase of the study attempted to address the same research question by seeking to determine whether students’ participation in Beta Alpha Psi or the Institute of Management Accountants is a primary factor that is *self-reported* by recruiters. For this analysis, firm size was categorized as either small or large by frequency statistics. Responses below the 50th percentile constitute the small firms, while responses above the 50th percentile constitute large firms.

Instrument and Sample

The research instrument (Appendix D) used in Phase 2 is a one-page document that presented the recruiters with a list of nine attributes that are identical to those used in the Phase 1 experiment. We asked the recruiters to allocate 100 points among what they believe to be the top five attributes.

For this phase of the study, we drew a fourth random sample of 250 different CPA firm recruiters from the pool of 1,900 recruiters used in Phase 1, again applying a random number generator in Excel to select the sample recruiters. Fifteen of the 250 surveys were returned undeliverable. Of the 235 instruments delivered, we received 76 completed surveys for a response rate of 32%, which is consistent with the response rate achieved in Phase 1.

Data Analysis and Results

Mean responses for each attribute were calculated for small firms, large firms, and all firms. Table 5 presents these means.³ The overall mean weights placed on participation in Beta Alpha Psi and the Institute of Management Accountants by all recruiters was 10.3 and 7.4, respectively. Table 6 presents the mean ranking for the nine attributes by small, large, and all firms. All firms ranked the top three attributes as communication and computer skills, accounting GPA, and overall GPA. Participation in Beta Alpha Psi and the Institute of Management Accountants ranked fifth and seventh, respectively. There appears to be a high degree of agreement among recruiters across firm sizes about the relative importance of participation in either organization. This observation is similar to the results related to firm size in Phase 1.

Table 5. Phase 2: Mean Weights of Accounting Graduates' Attributes.

Attributes	Small Firm N = 38	Large Firm N = 38	Total N = 76
Professional appearance	11.6	12.9	12.2
Willingness to travel	4.2	5.2	4.6
University's academic reputation	7.4	8.7	8.0
AACSB accreditation	4.5	3.4	4.0
Active membership in Beta Alpha Psi	9.6	10.9	10.3
Active membership in IMA	7.2	7.5	7.4
Overall GPA	14.6	13.5	14.1
Accounting GPA	20.8	16.8	18.8
Communication and Computer Skills	20.1	21.1	20.6

Table 6. Phase 2: Mean Ranks of Accounting Graduates' Attributes.

Attributes	Small Firm <i>N</i> = 38	Large Firm <i>N</i> = 38	Total <i>N</i> = 76
Professional appearance	4	4	4
Willingness to travel	9	8	8
University's academic reputation	6	6	6
AACSB accreditation	8	9	9
Active membership in Beta Alpha Psi	5	5	5
Active membership in IMA	7	7	7
Overall GPA	3	3	3
Accounting GPA	1	2	2
Communication and computer skills	2	1	1

FURTHER ANALYSIS AND CONCLUSIONS

In Phase 1 of the study, three groups of recruiters took part in an experiment to determine whether student participation in accounting professional/honor organizations affect recruiting decisions. Active participation in Beta Alpha Psi does have a statistically significant positive effect on CPA firm recruiters' decisions when compared to no participation. Active participation in the Institute of Management Accountants does not have a statistically significant positive effect on recruiters' decisions when compared to no participation. Although the effect of participation in the Institute of Management Accounting is not statistically significant, we believe it has some practical significance ($p < 0.088$). When Beta Alpha Psi and the Institute of Management Accountants are compared, the difference is not statistically significant. The effects do not appear to be related to firm size. The results suggest that participation in accounting professional/honor organizations, in general, does have a favorable impact on recruiters' decisions.

While the observed effect size was small, we believe it is substantive in the confines of the parsimonious model used in this study. The purpose of the study was to determine whether participation in professional/honor organizations affects recruiters' decisions. Thus, it was the only attribute that was experimentally manipulated in the study. The effect size was consistent with our *a priori* expectations of the importance of participation in professional/honor organizations as a criterion for distinguishing among applicants, and supports the external validity of the experimental manipulations.

In Phase 2, a fourth group of firm recruiters participated in a survey to determine the relative importance of nine student attributes, including active participation

in Beta Alpha Psi or the Institute of Management Accountants. Although the recruiters indicated a high degree of agreement across firm size related to active participation in either Beta Alpha Psi or the Institute of Management Accountants, neither organization ranked as one of the top factors in recruiting decisions. It appears that CPA firm recruiters place an incremental value on these organizations, but do not rank them above other attributes like communication skills and GPA.

Accounting educators and students need to be aware of the attributes that CPA firms seek in entry-level accountants. Based on the collective findings from both phases of this study, it appears that a student's active participation in Beta Alpha Psi, or to a lesser extent, the Institute of Management Accountants, may have a small positive influence on recruiting decisions by CPA firm recruiters when considered with other important factors such as GPA. It may be that membership in Beta Alpha Psi is especially helpful to "borderline" students who qualify for membership, but are not at the top of their class in terms of GPA. While not directly tested in this study, IMA membership may be particularly helpful to students who are not eligible for membership in Beta Alpha Psi.

One limitation of this study is the focus is only on CPA firm recruiters. Since many accounting students pursue entry-level jobs with non-CPA firms, future research should consider if the same findings are applicable to private and governmental entities. Also, future studies should attempt to tease out other factors that explain the incremental importance of other attributes used by CPA firm recruiters.

In the current academic environment, students have limited time and resources. Therefore, the results of the study provide guidance as to where students pursuing public accounting jobs should focus their time and resources so as to maximize the impact on recruiters. This information may prove helpful to faculty who are advising accounting students throughout their academic careers.

NOTES

1. The mean values in the cells represent the ratings of recruiters on a scale of zero (low recruiting activity) to 10 (high recruiting activity). On the instruments, an appropriate number of dash marks were placed between numerals, and participants were asked to respond by placing a "/" anywhere on the scale. This allowed the scale to be measured to one decimal place for purposes of hypotheses testing and presentation of the results.

2. A Scheffe Post Hoc Test is used because it is an extremely cautious method for reducing the risk of Type I error and is considered as one of the safest of all possible post hoc tests. The test allows pairwise multiple comparisons that test the difference between each pair of means (Gravetter & Wallnau, 1995).

3. ANCOVA was also used to overcome the potential weakness resulting from splitting the firms into two groups at the median by firm size. The results of the ANCOVA indicated that there was no statistical difference on eight of the nine attributes based on firm size (Accounting GPA was statistically different). These results are supported by the mean weights of the attributes when splitting the data at the median by firm size.

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APPENDIX A

Assume that your firm is in the process of recruiting an entry-level staff accountant. You have conducted several interviews at several regional universities. At one of these universities you met a student with the following attributes:

- The student is 23 years old with a professional appearance.
- The student is willing to travel.
- The student’s university has an average academic reputation.
- The student is an active member in Beta Alpha Psi.
- The business programs at the institution are accredited by the AACSB (The International Association for Management Education).
- The student’s GPA in accounting courses is 3.6 with an overall GPA of 3.4 on a 4.0 scale.
- The student demonstrated excellent communication and computer skills.

**HOW ACTIVELY WOULD YOUR FIRM RECRUIT THIS STUDENT?
PLEASE INDICATE YOUR ANSWER BY PLACING A SLASH (/) ON
THE LINE BELOW?**

0____1____2____3____4____5____6____7____8____9____10

Not Very ActivelyVery Actively

What is the approximate number of employees in your firm?_____

APPENDIX B

Assume that your firm is in the process of recruiting an entry-level staff accountant. You have conducted interviews at several regional universities. At one of these universities you met a student with the following attributes:

- The student is 23 years old with a professional appearance.
- The student is willing to travel.
- The student’s university has an average academic reputation.
- The student is an active member in the Institute of Management Accountants.

- The business programs at the institution are accredited by the AACSB (The International Association for Management Education).
- The student's GPA in accounting courses is 3.6 with an overall GPA of 3.4 on a 4.0 scale.
- The student demonstrated excellent communication and computer skills.

**HOW ACTIVELY WOULD YOUR FIRM RECRUIT THIS STUDENT?
PLEASE INDICATE YOUR ANSWER BY PLACING A SLASH (/) ON
THE LINE BELOW?**

0____1____2____3____4____5____6____7____8____9____10

Not Very Actively

Very Actively

What is the approximate number of employees in your firm?_____.

APPENDIX C

Assume that your firm is in the process of recruiting an entry-level staff accountant. You have conducted several interviews at several regional universities. At one of these universities you met a student with the following attributes:

- The student is 23 years old, with a professional appearance and presence.
- The student is willing to travel.
- The student's university has an average academic reputation.
- The student is not a member in any student or professional organization.
- The business programs at the institution are accredited by the AACSB (The International Association for Management Education).
- The student's GPA in accounting courses is 3.6 with an overall GPA of 3.4 on a 4.0 scale.
- The student demonstrated excellent communication and computer skills.

**HOW ACTIVELY WOULD YOUR FIRM RECRUIT THIS STUDENT?
PLEASE INDICATE YOUR ANSWER BY PLACING A SLASH (/) ON
THE LINE BELOW?**

0____1____2____3____4____5____6____7____8____9____10

Not Very Actively

Very Actively

What is the approximate number of employees in your firm?_____.

APPENDIX D

Survey

The following is a list of attributes that are commonly sought in accounting graduates. Please rank the *top five* by allocating 100 points among them. The more important an attribute, the more points you should assign.

- Professional appearance.
- Willingness to travel.
- The university's academic reputation and university-wide accreditation.
- The business programs at the university are accredited by the AACSB (the International Association for Management Education).
- Active membership in Beta Alpha Psi.
- Active membership in the Institute of Management Accountants.
- Overall grade-point average.
- Grade-point average in accounting.
- Communication skills and computer skills.

What is the approximate number of employees in your firm?_____

AN INVESTIGATION OF THE USE AND PERCEIVED EFFECTIVENESS OF PEER TEACHING OBSERVATION FOR UNTENURED ACCOUNTING FACULTY

Sharon Bruns, Cynthia Jackson, Paul A. Janell
and Timothy J. Rupert

ABSTRACT

The increased focus on assessment as part of the AACSB accreditation process has created a renewed interest in alternative methods for evaluating teaching effectiveness. One method that has received additional attention is peer observation of teaching. While previous accounting studies have mentioned peer observation as part of a portfolio of teaching evaluation or offered suggestions for implementing peer observation in accounting departments, no studies have investigated the current practices and perceptions surrounding peer observation. The present study examines the extent of use and perceived effectiveness of peer teaching observation for developing and evaluating teaching skills of untenured accounting faculty.

To gain a better understanding of the use of peer observation in accounting departments, the present study surveyed department chairs from AACSB-accredited schools. The results of the survey indicate that roughly half of the departments use some form of peer observation for untenured faculty, but they generally do not have a formalized process for training observers

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or reporting the results of the observation. The results also suggest that the manner in which the results of the peer observation are communicated and the number of different attributes observed affect the perceived effectiveness of peer observation when it is used for evaluation as compared to when it is used for development.

INTRODUCTION

Since the late 1980s, calls for greater emphasis on effective teaching have come from several constituents of the accounting profession. In 1989, the then Big 8 accounting firms called for accounting educators to improve their teaching methods (Perspectives on Education, 1989). In 1990, the American Assembly of Collegiate Schools of Business (AACSB) changed to mission-driven accreditation and the Accounting Education Change Commission (AECC) sent out a recommendation to redirect the focus of higher education (Accounting Education Change Commission, 1990). The Commission suggested that the retention of a competitive and viable society hinges upon institutions' abilities to renew an emphasis on effective teaching; therefore, the Commission urged institutions to give greater priority to teaching. More recently, Albrecht and Sack (2000, p. 49) further underscored the importance of effective teaching in their report on the state of accounting education by suggesting that "regardless of curricular and other changes made, an effective and inspiring teacher makes more difference to a student's educational experience than any other factor."

As a result of this increased focus on teaching, many accounting departments and institutions of higher learning now include effective teaching as a primary part of their mission, and teaching effectiveness has received increased significance in the faculty promotion and tenure decision at many institutions. However, in spite of this increased emphasis on teaching effectiveness, measuring and increasing teaching effectiveness are still challenging issues for accounting departments as well as for other academic departments.

Accounting departments, like other university departments, struggle with selecting evaluation methods that will accurately measure the instructors' teaching effectiveness, provide instructors with feedback that will allow them to increase their effectiveness and facilitate administrators' abilities to make appropriate promotion and tenure decisions. Traditionally, departments have widely used student evaluations to assess faculty teaching performance. Proponents of student evaluations suggest that these evaluations are reliable because the results represent an average of many students' opinions thus decreasing the potential for misleading results driven by the personal biases of any one individual (Batista, 1976, p. 261). Proponents also argue that the multidimensional nature of student evaluations and

their relative validity when compared with other indicators of effective teaching are strengths of this method (Marsh, 1984, p. 568).

In contrast, other educators question the validity of student evaluations, arguing that factors unrelated to teaching effectiveness may drive the results and that these evaluations provide limited, if any, help for improving the effectiveness of the instructor. In fact, Calderon and Green (1997, p. 223) argue that “there is a broad consensus that student ratings do not provide all the information necessary for the constructive assessment of effective teaching performance.” Students have difficulty examining issues such as “the appropriateness of teaching methods and materials, the amount of material covered, the currency of course material being presented, and the importance of material taught both within the field and for its value to related fields” (Sorcinelli, 1984, p. 11). Thus, educators are calling for supplementing student evaluations with other types of teaching effectiveness assessment tools.

A program of peer evaluations to measure teaching effectiveness is one response to this call. The results of prior research indicate that if the information from peer evaluations is judiciously interpreted, it can provide key information for merit, promotion and tenure decisions (Sorcinelli, 1984, p. 12). Further, proponents suggest that peer evaluations have a tremendous potential to improve classroom instruction as well as “enhance the self esteem and professional growth of teachers” (Singh, 1984, p. 73). More specifically, peer evaluation can facilitate this goal by creating an environment where “teachers see themselves as supportive of each other working towards the ultimate goal of providing the best instruction possible” (Singh, 1984, p. 74). While peer evaluation can encompass a variety of methods, previous researchers have identified classroom observation as the key component (Kieg & Waggoner, 1995, p. 21). Additionally, the AACSB has recently confirmed the importance of peer observation by including it as a key method for evaluating teaching effectiveness (AACSB, 2004, Standard #12).

Although prior research and literature suggest that peer observation may be an important tool in assessing teaching effectiveness, little is known about how accounting departments currently use this tool. Thus, the present study has the following objectives: (1) to determine the extent to which peer teaching observations are used in accounting departments; (2) for those departments using peer observations, to examine the process by which these evaluations are undertaken; and (3) to investigate the perceived effectiveness of this tool for developing and evaluating teaching skills.

LITERATURE REVIEW

In describing the evolution of current teaching evaluation methods, Ory (2000, p. 13) suggests that changes in the users of these evaluations have spurred the

advances in teaching evaluation. He notes that students first transformed teaching evaluation in the 1960s as they began to demand more public accountability from instructors. As a result, many student governments became involved in gathering student ratings of instructors. Ory suggests that more recently, faculty themselves have transformed the evaluation process by searching for ways in which to improve the fairness and accuracy of teaching evaluation. As a result, some departments are using more means of measuring teaching effectiveness.

The results from prior research (Austin, 1992, p. 100; Edgerton, 1988, p. 8; Seldin, 1998, p. 5) suggest that peer observation is one method of measuring teaching effectiveness that has increasingly received more attention. For example, the results of a survey of deans of liberal arts colleges conducted by Seldin (1998, p. 5) indicate that over 40% use peer observation reports in their evaluations of teaching effectiveness, an increase compared to the roughly 27% from a similar survey conducted 10 years earlier.

Although peer observation is receiving widespread interest in many sectors of education, considerable controversy still exists regarding the appropriate role of this evaluation tool (see for example, Dressel, 1976, p. 351; Weimer et al., 1988, p. 286). More specifically, researchers have suggested two roles of peer observation (Kieg & Waggoner, 1994, p. 34). One common purpose of peer observation has been for summative reviews (i.e. reviews designed for evaluation, typically in cases of promotion and tenure). In contrast, the second use of peer observation has been for formative reviews (i.e. reviews designed to help instructors develop their teaching effectiveness further).

Cohen and McKeachie (1980, pp. 148–151) indicate that peer observation, when used for evaluation, is beneficial in providing information on teaching aspects that student evaluations do not address. These areas include the qualities of teaching effectiveness, judging course design and instructional materials, assessing student achievement, and integration of information on teaching. In contrast, Willerman et al. (1991, p. 2) suggest that peer observation used for development offers three ways of helping instructors. First, it gives feedback about some of the key elements of teaching including instructional objectives, teaching methods, and delivery methods. Second, it provides affirmation for positive aspects of the instructor's teaching. Third, it increases the motivation to make changes by reducing anxiety.

Whether it is used for evaluation or development, the literature suggests that peer observation can have some drawbacks as well. Willerman et al. (1991, p. 99) note that if care is not taken in providing feedback, the instructor may ignore or reject the suggestions offered by the observer. They also suggest that the rapport between the instructor and the observer is an important factor in the acceptance of the feedback.

Another key issue that researchers have examined is the validity of this evaluation method. The results of research to date have been mixed. Some have argued that peer observation contributes little to decisions on advancement and promotion (Scriven, 1987). Others have argued that peer observation provides vital information for both development and evaluation (Baker & Mezei, 1988, p. 100; Millis, 1992, p. 190). For example, a survey of administrators of accredited graduate social work schools indicated that peer observations are a very important component in assessing teaching effectiveness for tenure and promotion decisions (Weinbach & Randolph, 1984, p. 84).

While a substantial body of literature examines general issues of faculty evaluation and the use of peer observation (Cohen & McKeachie, 1980, p. 147; David & Swift, 1995; Ford & Hassel, 1984, p. 12; Martin & Double, 1998, p. 161; Millis, 1992, p. 189), only a handful of studies have addressed these issues in accounting and few have focused on peer observation of teaching.¹ The lack of research on the role of peer observation in the accounting area is especially surprising given that the value of peer review to accounting education was first expressed by the Bedford Committee (AACSB, 1986). Then in 1993, the Accounting Education Change Commission (1993, p. 330) again challenged the accounting discipline to use more in-class peer observation. However, as an explanation for the discipline's slow response to this challenge, Bailey (1994, p. 7) indicated that the methods for performing peer observation were not well developed. To address this deficiency, Mohrweis (1996, p. 22) provides a framework for implementing formative peer evaluations, including peer observations. Mohrweis (1996, p. 30) reviews some of the literature related to peer observation and offers recommendations for accounting departments wishing to implement such peer observation tools.

While this aforementioned article provides some guidance for using peer observation, we know little about how accounting departments currently use this tool. Kieg and Waggoner (1995, p. 95) suggest that a thorough understanding of the effects of peer observation within various institutional contexts is lacking and that a need for careful study of these programs still exists. Therefore, we designed the current study to answer the following research questions related to the use of peer observation by accounting departments:

Research Question 1. To what extent do accounting departments currently use peer observation in evaluating and developing untenured faculty, and is its use mandated or voluntary?

Research Question 2. What processes and procedures do these departments have in place to guide peer observation?

Research Question 3. Do department chairs believe peer observation is an effective tool for evaluating and developing teaching performance for untenured faculty?

To address these research questions, we administered the survey described in the following section.

SURVEY METHOD

To determine the extent to which accounting departments use peer observation and its perceived effectiveness as a tool for evaluating and developing teaching skills, we developed a survey instrument to be administered to department chairs. We chose department chairs as the target sample for our survey because in most departments the chair will have primary responsibility for overseeing the evaluation and development of the teaching performance of untenured faculty. Further, others have argued that chairs play an important role in improving teaching performance (Seldin, 1991, p. 6) and are “the key agents for enhancing the quality of undergraduate education” (Lucas, 1990, p. 65).

We administered the instrument to a sample of accounting department chairs by identifying all people holding such positions at AACSB accredited schools and universities as designated in the 2000–2001 *Accounting Faculty Directory* (as compiled by James Hasselback). We identified a total of 322 accredited U.S. universities. We sent a copy of the survey instrument to the chair of each of these departments. The survey gathered basic information about the university’s accounting department (e.g. whether they have separate accreditation, the size of the faculty) as well as information about the extent to which they use peer observation, the format this observation takes, and their evaluation of the effectiveness of this tool. In gathering this information, we focused on the use of peer observation for untenured faculty because we believe that departments are likely to have more formal policies related to peer observation of untenured faculty members than the faculty as a whole. Further, chairs are likely to take a more active role in overseeing the development and evaluation of the teaching performance of untenured faculty.

We received a total of 112 instruments, with 108 of those instruments providing useable responses, resulting in a response rate of 33.5%.² Of the 108 department chairs that responded, 74% are from public institutions while the remaining 26% identified themselves as affiliated with private institutions. Forty-four percent of the departments have separate accounting department accreditation and the median response for faculty size fell into the category of 11–15 faculty members.

RESULTS

Extent of Use of Peer Observation for Untenured Faculty

As noted previously, a number of commentators have suggested that peer-teaching observation should be viewed as an additional means of gathering information about teaching effectiveness. To determine the various forms of evidence that accounting departments use in evaluating teaching effectiveness during the tenure process, the survey included a question that asked respondents to rank a list of the most commonly used methods of evaluating effectiveness in order of importance. For this question, respondents ranked the most important form of evidence as one, the second most important as two, etc. The instrument instructed the respondents to rank only the forms of evidence that their departments currently use. Table 1 reports the results from this question.

As might be expected, respondents identified student evaluations (mean ranking of 1.34) as the most common form of evidence used for evaluating teaching effectiveness. All 108 of the respondents indicated that their school used student evaluations at least to some extent, with 88 departments indicating that they are the most important form of evidence in their evaluations. Interestingly, peer observation had the next most important mean rating at 2.90. However, only 42 of the respondents indicated that they used peer observation during the tenure process. Departments used five of the other forms of evidence (review of syllabus, review of course materials, use of innovative teaching methods, evaluation of curriculum development and review of grade distributions) more often. Nevertheless, the

Table 1. Ranking of Various Forms of Evidence of Effective Teaching (*n* = 108).

Form of Evidence	Mean Ranking ^a	Total Number of Schools Ranking	Number of Schools Ranking	
			First	Second
Student course evaluations	1.34	108	88	11
Peer observation of teaching	2.90	42	9	17
Review of syllabus	3.15	89	7	26
Review of course materials	3.30	90	2	29
Use of innovative teaching methods	3.38	88	8	23
Evaluation of curriculum development	3.64	74	7	17
Review of grade distributions	4.40	55	3	7
Assistance and development of colleagues	5.35	23	3	5

^a 1 = Most Important; 2 = Second Most Important, etc.

importance ratings indicate that those schools that did use peer observation were more likely to view it as an important form of evidence.

Required Use of Peer Observation for Untenured Faculty

To examine further how extensively accounting departments use peer observation, the survey included a question asking whether the department required untenured faculty to undergo peer observation. Twenty-six of the respondents (24%) indicated that their department requires untenured faculty to undergo peer observation of their teaching.³ As might be expected, these schools ranked peer observation relatively high among the various forms of evidence included in Table 1. In fact, seven of the 26 schools ranked peer observation as the most important form of evidence while another 11 schools ranked it second in importance.

The survey also included information about the peer observation process at these schools. Half of these 26 schools require untenured faculty members to undergo such reviews annually, although another six require the review to take place each academic term. The remaining respondents required review on a less frequent or less consistent basis. All of the survey respondents indicated that tenured faculty in accounting acted as the peer observer, although seven department chairs also indicated that the peer observation process also involved faculty from outside of accounting.

The survey results also indicated that although these schools have a requirement for peer observation of teaching, they generally do not have formalized training for observers or a formalized process (e.g. written guidelines) that the observers follow. Only four of the 26 respondents indicated that they offered formal training for the observer while ten indicated that they had created a formal process for the observation.

Many of the published articles that advocate peer observation suggest that the value of the review is maximized if the instructor and the observer meet prior to the observation to identify areas of concern and the scope of the observation (Mohrweis, 1996, p. 22; Sorcinelli, 1984, p. 14; Weimer, 1990, p. 112). Few schools from the survey sample, however, follow this recommendation. Only one of the 26 schools requires the observer and instructor to meet prior to the observation to discuss the goals and parameters of the classroom observation. However, half of the schools recommend that the parties meet prior to the observation.

We asked the respondents who required untenured faculty to undergo peer observation to provide information regarding the process by which the observer reported the results of the observation. Over half of these respondents (14 of the 26 schools) indicated that they had formal guidelines for reporting the results of the

Table 2. Attributes Evaluated during Peer Observation (Reported as a Percentage of Sample).

	Untenured Faculty Required to Participate in Peer Evaluation (<i>n</i> = 26)	Untenured Faculty who Voluntarily Participate in Peer Evaluation (<i>n</i> = 30)
Organization of subject matter	100.0	76.7
Clarity of presentation	92.3	76.7
Ability to keep students' attention	92.3	66.7
Discussion and questioning skills	92.3	60.0
Instructor's presentation style	88.5	80.0
Rapport with students	88.5	56.7
Use of presentation media	84.6	66.7
Instructor's knowledge of subject matter	76.9	53.3
Pacing of classroom presentation	65.4	63.3

observation. The most common form for reporting the results was through some written document. Twenty-five of the 26 respondents indicated that the observer reported the results in this manner. In addition, 16 of these schools combine the written feedback with some type of personal meeting.

Finally, based on a list developed by Kieg and Waggoner (1994), we asked respondents to indicate what types of attributes observers evaluate when they perform a peer observation of teaching at their institutions. As reported in the first column of Table 2, the observers for this group requiring peer observation generally evaluate a wide range of attributes. All of the respondents indicated that observers evaluate the organization of the subject matter while nearly all also evaluate the clarity of presentation, the ability to keep students' attention, and the instructor's discussion and questioning skills. Even nearly two-thirds of the respondents included the least evaluated attribute (pacing of classroom presentation).

Voluntary Use of Peer Observation for Untenured Faculty

While 26 respondents required their untenured faculty to undergo peer observation, another 30 respondents indicated that their untenured faculty voluntarily participate in peer observation.⁴ On average, the respondents indicated that approximately a third of their untenured faculty participate in peer observation, with these responses ranging from 5 to 100%. Further, the perceived importance of peer observation as a form of evidence for documenting effective teaching had a wider range for these

respondents. Only two of the 30 department chairs rated it as the most important and four rated it as the second most important form of evidence.

Similar to those departments that require untenured faculty to undergo peer review, tenured faculty perform most of the peer observations for this group (25 of the 30 departments) although eight of the 30 departments also involve faculty outside of the accounting area. Further, as might be expected, the departments that have voluntary participation for untenured faculty have fewer formalized procedures than those that require peer observation. Only two of these departments provide training for observers and only three departments have created a formal process for the observation. Similarly, only one of the departments has formal guidelines for reporting the results of the observation. Instead, the reporting of results takes a variety of forms for these schools, with 17 of the 30 departments providing written feedback and 21 providing feedback in some form of personal meeting between the observer and the instructor.

An examination of the second column of Table 2 also suggests that observers from this group that voluntarily uses peer observation do not evaluate the same wide range of attributes as the group that requires peer observation. For this group, the observers most commonly evaluated the instructor's presentation style followed closely by the organization of the subject matter and the clarity of the presentation.

Perceived Effectiveness of Peer Observation for Untenured Faculty

As noted previously, the literature on teaching evaluation suggests that two types of peer observation are possible. Formative evaluations are designed to provide developmental advice to instructors. In contrast, summative evaluations are designed to provide evidence for evaluation decisions such as promotion and tenure. To gain an understanding of how the respondents to our survey rate the effectiveness of peer observation in each of these roles, we asked those participants who either required or had voluntary peer observation two questions about the usefulness of peer observation in these roles. The first of these questions asked respondents to rate "How useful are peer observation reports in helping to evaluate the teaching skills of untenured faculty members?" We used a seven-point Likert scale with endpoints of 1 (Not at all Useful) to 7 (Extremely Useful) to measure the response. Similarly, the second question used the same scale to measure "How useful are peer observation reports in helping untenured faculty members further develop their teaching skills."

Table 3 includes the results for these two questions. In general, as might be expected, those schools that require untenured faculty to undergo peer observation perceive it to be a more effective tool. In terms of *evaluating* teaching effectiveness,

Table 3. Descriptive Statistics: Perceived Effectiveness of Peer Observation for Faculty Development and Evaluation.

	Faculty Required to Participate in Peer Evaluation	Faculty who Voluntarily Participate in Peer Evaluation
Effectiveness as an evaluative tool ^a		
Mean	4.90	4.16
Median	5.00	4.00
Standard deviation	1.11	1.83
Effectiveness as a developmental tool		
Mean	4.69	4.47
Median	5.00	5.00
Standard deviation	1.23	1.63

Effectiveness as an Evaluative Tool is measured on a seven-point Likert scale (1 = Not at all useful, 7 = Extremely Useful) in response to the question, “How useful are peer observation reports in helping to evaluate the teaching skills of untenured faculty members?”

Effectiveness as a Developmental Tool is measured on a seven-point Likert scale (1 = Not at all useful, 7 = Extremely Useful) in response to the question, “How useful are peer observation reports in helping untenured faculty members further develop their teaching skills?”

^aMean effectiveness ratings between the two groups are significantly different ($t = 1.85, p < 0.05$, one tailed test).

the mean rating of effectiveness for those schools that require peer observation was 4.90. In contrast, those schools with faculty who voluntarily undergo peer observation have a mean perceived effectiveness of 4.16 as an evaluation tool. The results of a t -test indicate that the perceived effectiveness rating for those schools requiring peer observation was significantly higher than those schools with faculty who voluntarily use peer observation ($t = 1.85, p = 0.04$, one-tailed test).

In terms of helping to *develop* teaching effectiveness, the difference in mean ratings across the two groups was not as large. Those schools that require untenured faculty to undergo peer observation rated its effectiveness as a developmental tool with a mean of 4.69. Those schools with faculty that voluntarily undergo peer observation had a mean effectiveness rating as a developmental tool of 4.47. The difference in perceived effectiveness ratings between the two groups was not significant.⁵

To gain a better understanding of these perceived effectiveness ratings beyond a simple comparison of means across groups, we used a regression model. To examine differences in the perceived effectiveness of using peer observation as an evaluation tool versus a development tool, we created the dependent variable in our analysis (DIFFERENCE) by subtracting the perceived effectiveness as

a development tool from the perceived effectiveness as an evaluation tool. We also included five independent variables related to the manner in which each of these universities implements peer observation. The first of these variables (WHO) indicates who conducts the observation. We believed that the perceived effectiveness as an evaluation tool when compared to the effectiveness as a development tool could be increased if the observation was performed by someone viewed as more independent. For this reason, we coded this variable 1 if someone outside the department (either other faculty or dean) is involved in the observation while we coded it 0 if a member of the accounting faculty conducts the observation. We also believed that more formal means of communicating the results of the observation might increase the perceived effectiveness as a tool for evaluation compared to development. Thus, we constructed the second variable (REPORT) to be coded 1 if the observer communicated the results of the observation to the instructor in writing while we coded it 0 if the observer reported the feedback verbally. Similarly, we believed that those departments that have a formal process for observers to follow when they attend a colleague's class might result in greater perceived effectiveness in use for evaluation. Therefore, we coded the variable FORMAL 1 if the department has a formalized process. We coded this variable 0 if there is no formal process.

In addition to the variables related to how the peer observations are performed, we also believed that the breadth of the feedback provided might impact the relative perceived effectiveness for using peer observation for evaluation or development. Thus, the fourth variable (ATTRIBUTES) is a sum of the total number of attributes (from the list of nine attributes presented in Table 2) that the respondent indicated that observers generally evaluate when they are conducting a peer observation. Finally, we believed that the number of other sources for evaluating teaching that the department uses may impact the relative perceived effectiveness of peer observation as a tool for evaluation and development. To test for this potential effect, we created the variable SOURCES. This variable is the sum of the number of sources for evaluating teaching (from the list of eight contained in Table 1) that the department uses.

Panel A of Table 4 reports the results of the regression model. In this analysis, although the adjusted R^2 is relatively low, ATTRIBUTES proved to be significant ($t = 2.57, p = 0.013$). The positive coefficient for this variable suggests increases in the number of attributes evaluated in the peer observation are associated with increases in the perceived effectiveness as a tool for evaluation over the perceived effectiveness as a tool for development. Further, a second variable, REPORT, proved to be marginally significant ($t = 1.77, p = 0.084$). The positive coefficient for this variable indicates that communicating the feedback from the peer observation in writing rather than verbally is associated with an increase in

Table 4. Regression Models for Effectiveness of Peer Observation as a Tool For Evaluation and Development.

Independent Variable ^a	B Coefficient	<i>t</i>	Significance
Panel A: Primary analysis (<i>n</i> = 50) ^b			
Dependent variable: DIFFERENCE = Effectiveness for evaluation – Effectiveness for development			
Intercept	–1.397	–2.11	0.040
WHO	–0.298	–0.86	0.196
REPORT	0.792	1.77	0.084
FORMAL	–0.122	–0.33	0.372
ATTRIBUTES	0.206	2.57	0.013
SOURCES	–0.112	–1.28	0.206
Model <i>F</i> = 2.623 (<i>p</i> = 0.04), Adjusted <i>R</i> ² = 0.140			
Panel B: Supplemental analysis (<i>n</i> = 54)			
Dependent variable: DIFFERENCE			
Intercept	–1.398	–2.06	0.046
Organization of subject matter	–1.004	–1.17	0.249
Clarity of presentation	–0.694	–0.98	0.332
Ability to keep students’ attention	–0.160	–0.34	0.732
Discussion and questioning skills	0.282	0.54	0.589
Instructor’s presentation style	1.441	2.28	0.028
Rapport with students	0.914	1.92	0.061
Use of presentation media	–0.433	–0.82	0.419
Instructor’s knowledge of subject matter	0.900	2.37	0.022
Pacing of classroom presentation	–0.006	–0.14	0.888
Model <i>F</i> = 1.870 (<i>p</i> = 0.08), Adjusted <i>R</i> ² = 0.127			

^aWHO is an indicator variable set to 1 if faculty outside of accounting conducts the peer observation and 0 if faculty within the accounting department conducts the observation. REPORT is an indicator variable set to 1 if the feedback from the peer observation is reported in writing and 0 if it is provided verbally. FORMAL is an indicator variable set to 1 if the department has a formal process for conducting peer observation and 0 if there is no formal process. The significance levels for these three variables are based on one-tailed tests. ATTRIBUTES is the sum of the attributes from Table 2 that the respondents indicated are evaluated with peer observations. SOURCES is the sum of the number of different sources from Table 1 that are used to evaluate teaching.

^bSix participants are excluded from this analysis. Two participants did not complete the question regarding who conducts the peer observation. Another two participants did not complete the question indicating how the feedback is reported. The final two participants did not provide a response for the attributes that are evaluated with peer observation. These two participants are also excluded from the analysis in Panel B.

perceived effectiveness of the peer observation as a tool for evaluating teaching over developing teaching.

To investigate the finding related to the attributes evaluated as part of peer observation, we ran the supplemental analysis reported in Panel B of Table 4. While the primary analysis examined the number of attributes evaluated, for this supplemental analysis, we ran a regression model that investigated the effect of the specific attributes evaluated. DIFFERENCE once again served as the dependent variable for this analysis to allow us to examine if including any of the specific attributes in the feedback increases the relative perceived effectiveness of the peer observation as either an evaluation or development tool. The independent variables for the analysis included nine indicator variables (based on the nine attributes in Table 2) set to 1 if the attribute is typically included in the peer observation process and 0 if it is not.

As the results in Panel B of Table 4 suggest, three of the attributes proved to be significant or marginally significant. The instructor's presentation style and the instructor's knowledge of the subject matter were both significant ($t = 2.28$, $p = 0.028$ and $t = 2.37$, $p = 0.022$, respectively). Further, the instructor's rapport with students also proved to be marginally significant ($t = 1.92$, $p = 0.061$). The coefficients for these three variables are positive, suggesting that when these attributes are included in the feedback, the perceived effectiveness of the peer observation increases when it is used for evaluation compared to its effectiveness as a development tool.

Benefits and Drawbacks

In addition to gathering the numerical data related to the perceived effectiveness of peer observation, we also asked two open-ended questions designed to elicit further opinions about peer observation. First, we asked all respondents to indicate "the major benefits (if any) of requiring untenured faculty members to undergo peer observation." Second, we asked the respondents to indicate "the major drawbacks (if any) of trying to implement a peer observation program."

Two researchers working independently categorized the responses to these two questions. The two researchers then met to reconcile differences in their codings. Table 5 reports the responses from these questions. As Panel A of this table indicates, participants' responses to the question related to the benefits of peer observation centered on the two uses frequently cited in the literature. Nearly 40% of the respondents suggested that one of the major benefits of peer observation is the developmental information that it provides to help untenured faculty improve their teaching skills. Thirty-two percent of the participants provided responses that

Table 5. Responses to Open-Ended Questions Related to The Benefits and Drawbacks of Peer Observation.

	Total Sample (n = 108) (%)	Required Users (n = 26) (%)	Voluntary Users (n = 30) (%)	Non-Users (n = 52) (%)
Panel A: Benefits				
Provides information helpful for development	39.8	46.2	33.3	40.4
Provides information helpful for evaluation	32.4	53.8	23.3	26.9
Panel B: Drawbacks				
Resentment from faculty being reviewed	25.9	0	26.7	38.5
Amount of resources needed is excessive	25.0	30.8	13.3	28.8
Potential biases of the observer/training issues	22.2	26.9	20.0	21.2
Limitations of one-time visit	10.2	7.7	3.3	15.4

suggested peer observations could be useful in providing valuable information for the evaluation of teaching.

While the benefit of providing additional information for development was most often cited by the total sample, the results vary when broken down by sub-samples. For those who require their untenured faculty to undergo peer observation, more respondents listed the benefits provided for evaluation than for development (53.8% vs. 46.2%). This finding is consistent with the significant difference in perceived effectiveness of peer observation as indicated by the results in Table 3. In contrast, over 40% of the non-users suggested developmental benefits of peer observation while only 27% of this group indicated evaluative benefits.

Panel B of Table 5 provides the responses to the open-ended question regarding the drawbacks of peer observation. The most frequently cited drawback was resentment from the faculty member being reviewed (26% of total sample), followed by the commitment of resources (25%) and the potential biases of the observer/training issues (22%). Once again, the breakdown of responses by sub-sample demonstrates some interesting differences between the groups. While many non-users (38%) cited resentment from faculty as one of the key drawbacks of peer observation, none of the respondents from departments that require peer observation cited faculty resentment as a problem. This result suggests that these accounting departments did not experience this problem with their faculty, did experience the problem but were somehow able to overcome its effects, or were not aware of the faculty resentment. In contrast, the respondents from departments

that require peer observation were more likely to indicate that limited resources and training issues were the potential drawbacks of peer observation.

CONCLUSIONS AND DISCUSSION

Previous literature in accounting has suggested that an increased focus on assessment as part of the AACSB accreditation process will likely lead to a greater interest in various methods to evaluate effective teaching (Green et al., 1999, p. 72). One such method that has received increased interest is peer observation. While proponents of this evaluation method suggest that peer observation can offer valuable information about instructional objectives and teaching methods, others have questioned the validity of such evaluations as well as the instructor's willingness to accept this feedback.

In the present examination of the use of peer observation in accounting, we administered a survey to department chairs to gather information related to how they use peer observation (if at all) and their beliefs regarding its effectiveness as an assessment tool. The findings of the study are limited by the fact that we only surveyed department chairs. The faculty members of these departments may have quite different views of the effectiveness of peer observation. Further, the findings are limited by the fact that our questions focused on untenured faculty members. Future studies could survey faculty at various career stages to gain an understanding of how their perceptions of peer observation differ from those of the department chairs surveyed for the current study.

Despite the limitations of the current study, the findings provide important information about the use of peer observation in accounting departments that is missing from the existing literature. From our survey results, we find that many accounting departments do not require peer observation.⁶ The survey results also suggest that those using peer observation (whether it is required or voluntary) do not generally have a formalized process for training for, preparing for, or reporting the results of the peer observation experience.

A lack of formalized policies and procedures suggests that untenured faculty may need to take greater initiative to ensure that the peer observation meets their needs. Braskamp and Ory (1994, p. 201) note that untrained observers may focus on issues of style and the ability to interact in a friendly manner with students to the detriment of other pedagogical goals such as appropriate content. This misplaced focus may explain why department chairs in the present study indicated that peer observation was only somewhat effective in helping faculty develop their teaching skills (mean of 4.6 on a seven-point scale). For this reason, if untenured faculty members intend to use peer observation to enhance their

teaching development, they can help ensure that the observation meets their needs by initiating a conversation with the observer to request that attention be paid to specific aspects of their teaching. Without this conversation, it is unlikely that the peer observation will offer the same opportunities to improve teaching.

The results of our comparison of the perceived effectiveness of peer observation for development and evaluation also suggest that untenured faculty members may benefit from taking the initiative with regard to the scope of the peer observation when it is being used for evaluation. As the supplemental analysis in Table 4 indicates, the perceived effectiveness of peer observation as a tool for evaluation increases when the observation includes an examination of the instructor's presentation style, knowledge of the subject matter and rapport with students. Untenured faculty who are required to undergo peer observation as part of their evaluation process may request that observers consider these factors as part of their evaluation in order to increase the perceived effectiveness of the observation.

In addition to these suggestions for how untenured faculty can use the results of this study to improve their teaching, the results also suggest opportunities for future research. We have based our suggestions on the data gathered from department chairs about the attributes often included in peer observation. However, future research can further our understanding of the relation between these attributes and the perceived effectiveness of peer observations. As noted above, one limitation of the present study is the fact that we focused exclusively on the opinions of department chairs. This stream of literature would benefit from an understanding of how faculty members perceive the relation between the attributes examined and the perceived effectiveness of the peer observation for development or evaluation. Further, future researchers might consider alternative or supplemental methods to the survey method used in the current study. For example, if researchers can obtain actual peer observation reports, they could conduct content analysis on the attributes that are included in the report and further examine the relationship between these attributes and the perceived effectiveness of the peer observation. A better understanding of this relationship offers the opportunity to increase the value of peer observation in both evaluating and developing the teaching skills of accounting faculty.

NOTES

1. The existing studies generally have focused on the validity of student evaluations (see for example, Green et al., 1998) or the use of different methods of evaluating teaching effectiveness (see for example, Calderon & Green, 1997; Green et al., 1999).

2. The response rate for this study is within the 30–40% return rate that Crimp and Wright (1995) indicate is reasonable for mailed surveys. Additionally, the response rate is

similar to other studies that have surveyed business school administrators about teaching performance (e.g. Medlin et al., 2000, achieved a 28% response rate from a sample of 355 deans of AACSB accredited business schools).

3. While the survey instrument focused on the requirements for peer observation for untenured faculty, we did gather information about peer review for other faculty groups. Interestingly, of the 26 schools requiring peer observation for untenured faculty, 40% also required tenured faculty to undergo peer observation. Further, 73% required non-tenure track faculty to undergo peer observation.

4. One difference between those departments that require peer observation and those whose faculty use it voluntarily is the extent to which other tenured or non-tenured faculty participate in peer observation. Only 10% of the voluntary departments recommend that tenured faculty undergo peer observation versus over 60% for departments that require peer observation of untenured faculty. Similarly, 30% of the voluntary departments recommend that non-tenure track faculty undergo peer review as compared to nearly 90% for the group of departments that require peer observation of untenured faculty.

5. In addition to testing for differences between the two groups (required or voluntary use of peer observation), we also tested the perceived effectiveness within each group to determine if either group perceived peer observation to be more effective for either evaluation or development. The differences between the perceived effectiveness for the two purposes were not significant for either group.

6. One reason for the reluctance of creating a peer observation program in many accounting departments may be the lack of guidance in the accounting literature for structuring such a program. While not specific to the accounting discipline, a number of published sources provide general guidance that accounting departments may find useful for creating a peer observation program (see for example, Martin & Double, 1998, p. 165; Millis, 1992, p. 192; Sorcinelli, 1984, p. 13). Further, Cosh (1998) offers suggestions for the types of issues that need to be considered to develop an effective observation mechanism.

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FORENSIC ACCOUNTING EDUCATION: A SURVEY OF ACADEMICIANS AND PRACTITIONERS

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ABSTRACT

This study gathers opinions of both academicians and practitioners regarding the importance, relevance, and delivery of forensic accounting education. Results indicate that the demand for and interest in forensic accounting is expected to continue to increase; more universities are planning to provide forensic accounting education; both groups of respondents viewed forensic accounting education as being relevant and beneficial to accounting students, the business community, the accounting profession, and accounting programs; and the majority of 49 suggested forensic accounting topics are considered as important for integration into the accounting curriculum by both groups of surveyed academicians and practitioners. Results also indicate that some significant differences exist regarding topical coverage of forensic accounting between academicians and practitioners. These results are useful to universities and colleges that are considering integrating forensic accounting education into their curriculum or redesigning their forensic accounting courses.

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INTRODUCTION

We have recently witnessed significant emphasis on improving investor confidence and public trust in financial reports. Reported financial scandals (e.g. Enron, Global Crossing, Parmalat, Qwest, WorldCom) have eroded investor confidence and made forensic accounting an attractive career opportunity for accountants to combat fraud. Forensic accounting is defined in this study as the practice of rigorous data collection and analysis in the areas of litigation support consulting, expert witnessing, and fraud examination.¹ There is evidence of considerable growth in forensic accounting careers (AccountingWeb, 2002): on April 10, 2002, ABC News carried a fanciful item imagining a new TV series named "Fraud Squad," underscoring the fast growing field of forensic accounting; *U.S. News and World Report*, in a February 8, 2002 report, named forensic accounting as one of the eight most secure career tracks over the next few years; many universities are currently offering forensic accounting related courses;² there are several professional organizations and associations promoting fraud examination and forensic accounting;³ and three of the top six accounting niche services fall within the forensic accounting area: business valuations, litigation support, and forensic/fraud (Covalesski, 2003). At present, there appears to be a gap between forensic accounting practice and education in the sense that forensic accounting is viewed as one of the most secure career tracks, yet there are only a limited number of accounting programs offering forensic accounting courses.

There is little background data available, and rarely any evidence post-Enron, Andersen, and other financial scandals, with respect to the integration of forensic accounting education into the accounting curricula, and particularly whether academicians' actions are consistent with the needs of practitioners for well-trained and knowledgeable forensic accountants. This paper reports the opinions of academicians and practitioners about the importance, relevance, and delivery of forensic accounting education. To assist with the curriculum design of forensic accounting, this study examines both academicians' (accounting faculty) and practitioners' (certified public accountants, CPAs) views of demand for and interest in forensic accounting education, relevance of forensic accounting education, methods of integrating forensic accounting into the accounting curriculum, and topical content of forensic accounting education. Accounting programs generally recognize the value of practitioners' inputs when designing program content, because their views and suggestions can improve the relevance of programs, and foster graduates' marketability.⁴ These views and insights from academicians and practitioners are useful to universities and colleges that are considering integrating forensic accounting into their curriculum or redesigning their forensic accounting courses.

Results indicate that the majority of both academicians and practitioners expect that future demand for and interest in forensic accounting will increase: more accounting programs are planning to provide forensic accounting education; both groups of respondents viewed forensic accounting education as being relevant and beneficial to students, the accounting profession, and the business community; the majority of the 49 suggested forensic accounting topics are considered important for integration into the accounting curriculum; and only minor differences of opinion between academicians and practitioners are found regarding the delivery and topical content of forensic accounting education. The results have public interest implications, on the grounds that the business community and the accounting profession are deeply concerned with reported financial and accounting scandals, the demand for forensic accounting practices in rebuilding eroded investor confidence in financial reports is increasing, and the need for the reexamination of the content, coverage and delivery of forensic accounting education post-Enron and other financial scandals is justifiable.

This paper is organized as follows. As a background and motivation for our study, the next section reviews relevant prior literature. Section three discusses methods and procedures used in gathering and analyzing data pertaining to forensic accounting. Results are presented in the fourth section. Section five discusses curriculum design of forensic accounting education, and the final section concludes the study.

REVIEW OF LITERATURE

KPMG's (2003) Fraud Survey reveals that more companies are experiencing more incidents of fraud than in prior years, taking measures to combat fraud, and launching new anti-fraud initiatives and programs in response to the Sarbanes-Oxley Act of 2002. PricewaterhouseCoopers' (PWC, 2003) Global Crime Survey indicates that 37% of respondents in 50 countries reported significant economic crimes with an average loss per company of \$2,199, 930. These survey results underscore the importance of forensic accounting practice and education. Prior research (Crumbley, 2001; Peterson & Reider, 1999, 2001; Rezaee, 2002; Rezaee & Burton, 1997; Rezaee et al., 1996) reviews the literature on forensic accounting practices, certifications, and education. These studies also provide evidence indicating that forensic accounting education has evolved from being limited, to continuing professional education sessions for practicing accountants to a current state of being offered as a credit course by several universities. Buckhoff and Schrader's study (2000, p. 135) finds, "adding a forensic accounting course to the accounting curriculum can greatly benefit the three major stakeholders

in accounting education – academic institutions, students, and employers of accounting graduates.”

Prior related studies are classified into two groups. The first group consists of studies that examine course syllabi to determine the coverage of forensic accounting including fraud investigation education. Groomer and Heintz (1994) analyze the topics covered in internal auditing courses in the United States and Canada and find that fraud related topics were taught in more than 31% of examined internal auditing courses. Rezaee et al. (1996) examine the coverage of forensic accounting in the accounting curriculum and find that only a handful of universities offer a fraud or forensic accounting course, and suggest that the accounting curriculum provide a knowledge acquisition base in forensic accounting as part of curriculum changes in response to the mandated American Institute of Certified Public Accountants (AICPA) 150-hour accounting program. Peterson and Reider (2001) review forensic accounting course syllabi of universities and analyze the level of course offering, learning objectives, content of forensic accounting courses, and course requirements.

Studies in this group provide information on a small sample of universities that are already offering forensic accounting or fraud investigation courses. These studies address only the “supply side” of the equation in the sense that they provide information on what is being taught or what academicians feel are important forensic accounting topics. We review a sample of 21 universities that are currently offering forensic accounting related courses and have their syllabi available online.⁵ These syllabi and other related prior studies were reviewed in designing the survey instrument. Table 1 presents a summary of forensic accounting course descriptions, objectives, and assignments and other requirements. The three most important course objectives specified in the reviewed syllabi are: (1) to provide education on pervasiveness of and the cause of fraud and white-collar crime; (2) to explore methods of fraud detection, investigation and prevention; and (3) to obtain insight on fraud prevention and identifying weaknesses in internal control systems.

The second group of prior research consists of survey studies of practitioners or academicians regarding fraud investigation or forensic accounting courses and topics. Rezaee and Burton (1997) conclude that the demand for forensic accounting services and education will continue to increase, and that practicing Certified Fraud Examiners (CFEs) favor offering a separate forensic accounting course whereas academicians prefer integrating forensic accounting topics throughout existing accounting courses. Buckhoff and Schrader (2000) find that the majority of responding institutions indicated that offering a course in forensic accounting is only slightly important to their accounting program. Rezaee (2002) conducts a survey of a small sample of undergraduate and graduate accounting students

Table 1. Forensic Accounting Course Description, Objectives, and Assignments ($n = 21$).

Course Description	Percent ^a	Course Objectives	Percent ^a	Assignments	Percent ^a
(1) An examination of various aspects of fraud prevention and detection, including the sociology of fraud, elements of fraud, types of fraud involving accounting information, costs of fraud, use of controls to prevent fraud, and methods of fraud detection.	53	(1) Provide education on pervasiveness of and the causes of fraud and white-collar crime.	33	(1) Individual written assignments	100
(2) Accounting concern with detection and prevention of fraud and white-collar crime.	14	(2) Explore methods of fraud detection, investigation, and prevention	23	(2) Research projects	100
(3) Study and application of the procedures and techniques used in the prevention, investigation, and detection of fraud and white-collar crime.	9	(3) Obtain insight on fraud prevention and identifying weaknesses in internal control systems	9	(3) Academic research journal readings	95
(4) Study of social, ethical, legal, and political considerations that surround fraud	9	(4) Acquire a broad overview of the nature and magnitude of the problem of economic fraud.	5	(4) Group projects	90
(5) Cover all of the major methods employees use to commit occupational fraud	5	(5) Provide students an opportunity to gain experience in investigative (forensic) accounting.	5	(5) Internet readings, practitioner journal readings	86

Table 1. (Continued)

Course Description	Percent ^a	Course Objectives	Percent ^a	Assignments	Percent ^a
(6) Student will learn why fraud is committed, how it will be deterred, and how it will be detected.	5	(6) Increase fraud awareness	5	(6) Text book readings	57
(7) Study of the nature and scope of white-collar criminal activity.	5	(7) Learn aspects of fraud detection	5	(7) Discussion and oral presentations	43
		(8) Understand the role of accountant in prevention, detection, and investigation of fraud.	5	(8) Interview paper	38
		(9) The motivation for perpetrators of fraud	5		
		(10) The warning signs of fraudulent activity	5		
Total	100		100		

^aPercentages are rounded up, and reviewed syllabi require more than one assignment.

and finds that responding students believed forensic accounting offers rewarding career opportunities, yet forensic accounting education is not getting adequate attention in the accounting curriculum and should be further promoted in colleges and universities. Many of these studies provide information on the “demand side,” focusing on the views of students and practitioners on the importance and delivery of forensic accounting. Thus, forensic accounting coverage in today’s accounting curricula is not well defined.

This study focuses on both the supply and demand sides of forensic accounting education, and it attempts to provide information that may be useful for faculty and universities considering offering a course in forensic accounting in light of most recent changes in the business environment and the accounting profession. New insights from both practitioners and academicians should be useful, as many accounting programs throughout the nation began to offer forensic accounting related courses to provide a better understanding of this emerging area of accounting practice. This study contributes to the literature on forensic accounting by shedding light on the increasing importance of forensic accounting in the business and academic communities post-Enron, Andersen, and other reported financial scandals; presenting new evidence from a sample of academicians and practicing CPAs regarding the emphasis on forensic accounting education and practice; and analyzing the opinions obtained from both academicians and practitioners pertaining to the new interest in forensic accounting and the ever-changing priorities in the key forensic accounting issues and topics, which set the future direction and role of forensic accounting education.

METHODS AND PROCEDURES

Two methods are used in gathering data pertaining to forensic accounting education. First, we perform a content analysis of a sample of 21 forensic accounting course syllabi. Forensic accounting syllabi were either received from professors teaching a forensic accounting (fraud examination) course or obtained from accounting programs’ World Wide Web (Web) sites. The compiled 21 syllabi were submitted to content analysis to identify the list of forensic accounting course description, objectives, and assignments. The primary focus of studied syllabi is on fraud examination and a minimal attention has been given to the other two areas of forensic accounting practice (litigation consulting and expert witnessing). Forensic accounting topics included in 21 analyzed syllabi were organized and combined with other forensic accounting topics in developing the questionnaire.

Second, we conduct a nationwide survey of accounting academicians and practicing CPAs to determine the demand, benefits, coverage, and delivery

of forensic accounting education. A random sample of 1000 accounting professors, teaching primarily auditing and financial accounting, was selected from Hasselback's 2002 *Accounting Faculty Directory*. A random sample of 1000 practicing CPAs, primarily partners and managers of public accounting firms, was purchased from the AICPA. A four-page questionnaire was sent to the selected academicians and a shorter, two-page version of the questionnaire was mailed to practitioners. Copies of the two versions of the questionnaire, modified appropriately for the respective groups, are presented in Appendices A and B. To improve the response rate, we included with each questionnaire a pre-addressed, postage-paid envelope and a cover letter stating the survey objectives, assuring confidentiality of the responses, agreeing to share the summary of findings, and giving the approximate time needed to complete the questionnaire.

We prepared, pre-tested, revised, and then mailed the four-page, five-section questionnaire to the subjects.⁶ The four main sections of the questionnaire asked respondents for their perceptions of the future demand for and interest in forensic accounting, current and future methods of delivery of forensic accounting education, benefits, support, and obstacles of forensic accounting education coverage, and the degree of relative importance of topics related to forensic accounting education.⁷ The last section collected demographic and background information used for classification purposes. Panel A of Table 2 shows that 153 usable responses were returned from academicians, providing a response rate of 15.4%, and 105 usable responses were received from practitioners, resulting in a response rate of 10.7%. The overall response rate is above 13%. While this response rate is lower than might be desired, response rates of this level are not uncommon when certain types of individuals are surveyed (Dillman, 1978; Hodge, 2003). We compare late responses with early responses and find no significant differences.

We applied the chi-square test of independence to test for differences in responses involving categorical dependent variables for the between subject analysis, the Kruskal-Wallis non-parametric analysis of variance to examine differences in responses in the ranked data, and the strength of response metric approach to determine the strength of response of each of the groups (academicians, practitioners) on each of the selected 49 topics ranked in a five-point Likert scale. Following Campbell and Mutchler (1988), we measure the strength of responses by taking the absolute value of the difference between the mean response of the group and the neutral response, which was 3.0. Mean responses that fall within 0.5 point of the midpoint (3.0) can be considered as neutral ratings. We find no additional statistically significant differences in the strength of response across the selected 49 forensic accounting topics between academicians and practitioners other than those being identified by the use of a non-parametric test.

Table 2. Survey Demographic Data.

Panel A: Responses

	Academicians	Practitioners	Total
Mailed	1000	1000	2000
Undeliverable ^a	9	17	26
Potential Responses	991	983	1974
Usable Responses	153	105	258
Response Rate	15.4%	10.7%	13.1%

Panel B: Demographical Data

	Yes		No		Not Sure	
	Number	Percentage	Number	Percentage	Number	Percentage
(1) Would you be able to obtain administrative support to offer a forensic accounting course?	89	58.2	55	35.9	9	5.9
(2) Is your school AACSB accredited?	106	69.3	47	30.7		

Table 2. (Continued)

Panel B: Demographical Data		Full	Assoc.	Assistant	Other					
(3) What is your current position? (in percentages)		36.2	27.0	27.6	9.2					
	Number	Percentage								
(4) Regional classification of responding schools										
Southeast	46	30.1								
Northeast	41	26.8								
Midwest	40	26.2								
Southwest	16	10.4								
Far West	4	2.6								
Rocky Mountains	4	2.6								
Northwest	2	1.3								
Percentages of Responses										
	25 or Less	26–50	51–75	76–100	101–150	151–200	201–250	251–300	>300	
(5) How many students do you graduate per year in Business?										
Undergraduate	24.3	5.3	7.2	7.2	15.1	7.9	3.9	5.3	23.8	
Master	55.3	12.5	3.3	9.2	7.1	5.3	0.00	5.3	2.0	
Doctoral	100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
(6) How many students do you graduate per year in Accounting?										
Undergraduate	52.0	15.8	6.6	13.8	5.9	2.6	0.00	0.70	2.6	
Master	82.2	13.2	2.00	2.00	0.6	0.00	0.00	0.00	0.00	
Doctoral	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

^aThe undeliverable surveys were due to changes in address, non-affiliation of the subjects with the survey schools or firms, or the firm's policy of not participating in any survey studies.

Demographic data presented in Panel B of Table 2 show that: (1) more than 58% of the responding schools would be able to obtain administrative support to offer a forensic accounting course; (2) more than 69% of responding academicians were from AACSB-accredited colleges; (3) responded faculty were almost equally from all ranks of full professors, associate professors, and assistant professors (36, 27 and 28% respectively); (4) more than 30% of academicians were from southeast universities, about 27% from northeast universities, 26% from mid-west, more than 10% from southwest, and the approximately 7% remaining were from far-west, rocky mountains and northwest universities; and (5) more than half of responding universities graduate more than 100 students in business and less than 25 students in accounting per year. Nearly 55% (82%) of responding universities graduate less than 25 students in their master programs in business (accounting). Further analysis of responses (not reported) indicates that participating practitioners were all in auditing practices at manager or higher level with medium to large accounting firms widely spread throughout the nation. Almost all responded practicing CPAs indicated interest in forensic accounting practice.

RESULTS

Results of this study are presented and discussed in the following six sections: (1) relevance of forensic accounting education; (2) perceived benefits of forensic accounting education; (3) curriculum development of forensic accounting; (4) presentation techniques; (5) curriculum content of forensic accounting; and (6) demographic differences in responses.

Relevance of Forensic Accounting Education

We display results from our analysis of the future demand for and interest in the three areas of forensic accounting services (litigation support, expert witnessing, fraud examination) in Table 3. The majority of both groups of respondents reported that they believe the future demand for and interest in all three areas of forensic accounting will increase. However, differences in responses on the future demand for and interest in litigation support and expert witnessing between the two groups of respondents are statistically significant (0.01 and 0.05 levels of significance respectively) in the sense that practitioners expect higher growth in these two areas of forensic accounting practices (litigation support, expert witnessing) than academicians. In fact, some academicians even believe that demand and interest for litigation support and expert witnessing will decrease. Slightly more than half of the responded academicians felt that there would be an increase in demand and

Table 3. Relevance of Forensic Accounting Services.

Do You Expect Future Demand and Interest in the Following Three Areas of Forensic Accounting to	Percentage					
	Litigation Support		Expert Witnessing		Fraud Examination	
	Academicians	Practitioners	Academicians	Practitioners	Academicians	Practitioners
Increase?	58.1	75.0	53.6	63.5	93.3	88.2
Remain the same?	41.3	25.0	43.8	36.5	6.1	9.9
Decrease?	0.6	0.0	2.6	0.0	0.6	1.9
Total	100	100	100	100	100	100
Chi-square (Kruskal-Wallis Test, K-W)	12.393**		5.592*		1.095	

*Significant at 5%.

**Significant at 1%.

interest in litigation support and expert witnessing (58.1 and 53.6% respectively). More than 40% of academicians felt demand and interest in litigation support and expert witnessing would remain the same (41.3 and 43.8% respectively). Of the two forensic accounting practices, practitioners felt there would be more demand and interest in litigation support rather than expert witnessing (75.1 and 63.5% respectively). The majority of academicians (93.3%) and practitioners (88.2%) expect future demand for and interest in fraud examination to increase. More practitioners (9.9%) felt that demand for and interest in fraud examination would remain the same versus 6.1% of the academicians. Differences in responses between practitioners and academicians regarding fraud examination are not statistically significant.⁸

Perceived Benefits of Forensic Accounting Education

Given the increased demand for forensic accounting practice and education, we asked respondents to rank the importance of perceived benefits of forensic accounting education on a five-point Likert scale, with “5” indicating “very important” and “1” representing “not important.” Table 4 shows that academicians considered the following benefits as being important (mean response of higher than 3.5): strengthening the credibility of financial reporting; promoting responsible corporate governance; increasing the demand for individuals possessing forensic accounting education and skills; preparing students to engage in fraud examination; making students more desirable in the marketplace; and satisfying society’s demand for forensic accounting education and practice. Practitioners, while viewing the above benefits as important, placed more emphasis on the importance of preparing students to engage in litigation consulting and expert witnessing as the most important benefits of forensic accounting.

There is a difference of opinions between practitioners and academicians with respect to the benefits of forensic accounting education. Mean responses for practitioners for litigation support and expert witnessing were higher than for academicians (3.59 and 3.53 vs. 3.19 and 2.96 respectively), which are statistically significant at the 1% level. These results suggest that litigation support and expert witnessing do not have the same support at the university level as in the marketplace and practitioners place more emphasis on these two areas of forensic accounting. Academicians placed slightly more importance than practitioners on this debatable issue that a forensic accounting background makes students more desirable in the marketplace (3.62) versus practitioners (3.23). There are statistically significant differences in responses between the two groups, with respect to the possible impact of forensic accounting education on promoting responsible corporate

Table 4. Perceived Benefits of Forensic Accounting Education.

Benefits	Academicians		Practitioners		K-W Chi-Square
	Mean Response	Std. Dev.	Mean Response	Std. Dev.	
Strengthen the credibility of financial reporting	3.95	1.03	3.61	1.07	6.501**
Promote responsible corporate governance	3.87	0.94	3.34	1.13	16.012**
Demand for individuals possessing forensic accounting education and skills is increasing	3.82	0.82	3.77	0.95	0.008
Prepare students to engage in fraud examination	3.75	0.90	3.71	1.02	0.034
Make students more desirable in the marketplace	3.62	0.96	3.23	1.19	7.090**
Satisfy society's demand for forensic accounting education and practice	3.51	1.03	3.29	1.07	2.224
Prepare students to engage in litigation support consulting	3.19	0.97	3.59	1.02	10.491**
Prepare students to engage in expert witnessing	2.96	1.05	3.53	1.07	16.907**

**Significant at 1%.

governance and strengthening the credibility of financial reporting in the sense that academicians realize more benefit in this area than practitioners. Reported financial scandals and regulatory responses have galvanized more interest in corporate governance and its role in improving quality, reliability, and transparency of financial statements. Corporate governance participants, including the board of directors, the audit committee, top executives, internal auditors, and external auditors, are being held more accountable and responsible for business activities and financial reports in the wake of the Enron, Andersen, and other reported scandals. These results are consistent with the recent report of the Ethics Education Task Force of the AACSB, which states, “knowing the principles and practices of sound, responsible corporate governance can also be an important deterrent to unethical behavior” (AACSB, 2004, p. 6).

Curriculum Development

Table 5 presents responses from academicians pertaining to the curriculum development of forensic accounting. Panel A of Table 5 indicates that 36.4%

Table 5. Curriculum Development of Forensic Accounting (Responses from Academicians).

	Number	Percentages	
Panel A: How do you integrate forensic accounting education into your curriculum? ^a			
(a) Integrate through accounting and auditing courses	77	50.0	
(b) Do not cover forensic accounting at all	56	36.6	
(c) Offer a separate forensic accounting course	25	16.3	
Panel B: If you do not currently offer any forensic accounting coverage, when are you planning to do so?			
(a) Within a year	8	5.2	
(b) Within two years	19	12.4	
(c) Within five years	22	14.4	
(d) Do not plan to offer such coverage	32	20.9	
Statements	Mean Responses	Median	Std. Dev.
Panel C: Please indicate the extent to which you would agree with the following statements			
Current high-profile financial statement fraud cases, including Enron and WorldCom, galvanize more interest in and demand for forensic accounting, including fraud examination.	4.25	5.00	0.992
The accounting curriculum should provide forensic accounting coverage.	4.02	4.00	0.913
Colleges and universities should encourage and advise students on career opportunities in forensic accounting.	3.99	4.00	0.917
The current accounting curriculum is not sufficiently responsive to society's demand for forensic accounting education and practice.	3.81	4.00	1.080
Forensic fieldwork auditing should be integrated into auditing textbooks and audit engagements.	3.78	3.00	0.870
There are numerous employment opportunities in forensic accounting.	3.40	4.00	0.973
Obstacle ^b	Mean Responses	Median	Std. Dev.
Panel D: Perceived obstacles in the integration of forensic accounting education			
Lack of financial resources	3.54	4.00	1.232
Lack of instructional materials including textbooks	3.49	3.00	1.140
Lack of administrative interest and support	3.41	4.00	1.232
Lack of faculty interest	3.25	3.00	1.230
Lack of job opportunities	2.49	2.00	1.033
Lack of student interest	2.31	2.00	1.089

^aMore than one response was allowed.^bOther obstacles being reported are no slack in the curriculum and many other required courses.

of the respondents reported they do not cover any forensic accounting at all in their accounting program. Only 16.2% of the respondents have a separate forensic accounting course, with 50% indicating that forensic accounting is integrated through other accounting and auditing courses. Panel B indicates that 5.2% will begin forensic accounting coverage in one year, 12.3% within two years, and 14.3% within five years, whereas 20.8% do not plan to offer forensic accounting coverage. These results are encouraging in the sense that more than 16% of our sample respondents reported that they offer separate forensic accounting courses, whereas the Buckhoff and Schrader (2000) study reported only about 9% of their responding institutions were offering or planning to offer a course in forensic accounting.

We asked several questions pertaining to the curriculum development of forensic accounting education. We ranked responses on a five-point Likert scale, with "5" indicating "strongly agree" and "1" representing "strongly disagree." Panel C of Table 5 reveals that academicians strongly agree, with the mean response in parentheses, that reported financial statement fraud committed by high profile companies such as Enron and WorldCom has galvanized more interest in and demand for forensic accounting including fraud examination (4.25), the accounting curriculum should provide forensic accounting coverage (4.02), and colleges and universities should encourage and advise students on career opportunities in forensic accounting (3.99). The responding academicians also slightly agreed, with the mean response in parentheses, that the current accounting curriculum is not sufficiently responsive to society's demand for forensic accounting education and practice (3.81), forensic fieldwork auditing should be integrated into auditing textbooks and audit engagements (3.78), and there are numerous employment opportunities in forensic accounting (3.40).

We asked participating academicians to indicate the severity of a number of obstacles in integrating forensic accounting education into the accounting curriculum. Panel D of Table 5 shows that the mean responses for all listed obstacles, except for lack of student interest and lack of job opportunities, are greater than 3, indicating some degree of perceived severity. The main obstacles to the integration of forensic accounting into the curriculum, with the mean response in parentheses, are lack of financial resources (3.54), lack of instructional material (3.49), lack of administration interest and support (3.41), and lack of faculty interest (3.25). Lack of financial resources, instructional materials, administration, and faculty interest can impede the integration of forensic accounting into the accounting curriculum.⁹ These results suggest that the primary obstacles facing delivery of forensic accounting education are institutional in nature (i.e. faculty, funding, administration), and not because of a perceived lack of demand by employers and students.

Table 6. Importance of Learning Mechanisms in Teaching a Forensic Accounting Course.

Mechanism ^a	Mean Responses	Median	Std. Dev.
Cases	4.36	4.00	1.993
Textbooks	4.25	4.00	0.943
Research projects	3.97	4.00	0.931
Guest speakers	3.63	4.00	1.045
Videos	3.32	3.00	0.988
Field trips (to professional organizations and correctional facilities)	2.73	3.00	1.204

^aOther learning mechanisms being reported are student presentations, internships, and case studies.

Presentation Techniques

We ask academicians to rank the importance of several listed learning mechanisms in teaching a forensic accounting course by using a five-point scale. Results presented in Table 6 indicate that the most commonly used methods are cases, textbooks, research projects, guest speakers, and videos. Cases and textbooks characterized the most important learning mechanisms in teaching a forensic accounting course (mean responses of 4.36 and 4.25 respectively). Respondents also considered important research projects (mean response of 3.97) and guest speakers (mean response of 3.63). They viewed video presentation as a slightly important teaching technique (mean response of 3.32). Respondents did not consider field trips to professional organizations and correctional facilities as a popular way of teaching a forensic accounting course. Learning mechanisms presented in Table 6 are consistent and support teaching assignments provided in Table 1 from the review of a sample of 21 existing forensic accounting syllabi. One respondent commented “We need more workbooks (with answers) for online students and PowerPoint slides that inform as well as entertain.”

Curriculum Content of Forensic Accounting

Given the increased demand for forensic accounting, a major question is “what should be the content of a forensic accounting education?” Table 7 ranks the importance of coverage of 49 topics in forensic accounting by using a Likert scale of 1–5, with 5 being the “most important” and 1 being the “least important.”¹⁰ The results were tested for differences in responses between academicians and practitioners using the parametric *t*-test and the nonparametric chi-square.

Table 7. Curriculum Content: Comparison of Academicians vs. Practitioners.

Academicians			Curriculum Content	K-W Chi-Square	Practitioners		
Rank	Mean Response	Std. Dev.			Rank	Mean Response	Std. Dev.
1	4.52	0.74	Fundamentals of fraud	3.580	1	4.30	0.77
2	4.41	0.83	Financial statement fraud	4.093*	2	4.23	0.83
3	4.32	0.83	Types of fraud (e.g. employees, management)	6.467**	8	4.07	0.86
4	4.24	0.91	Cooking the books and problems in accounting	1.356	4	4.12	0.93
5	4.23	0.82	Anti-fraud controls	2.074	13	3.96	1.17
6	4.21	0.93	Elements of fraud: pressure, opportunity and rationalization	8.462**	16	3.91	0.91
7	4.18	1.05	Internal control evaluation	1.375	5	4.10	1.10
8	4.15	0.96	Theory and methodology of fraud examination	0.001	7	4.07	1.14
9	4.13	0.95	Principles of ethics and corporate code of conduct	0.250	6	4.09	0.91
10	4.09	0.92	Fraud detection and deterrence programs	2.175	10	4.00	0.77
11	4.04	0.92	Anti-fraud auditing standards	0.504	18	3.81	0.90
12	4.03	0.97	Analytical review procedures	0.067	9	4.00	0.97
13	3.96	0.89	Anti-fraud criteria	4.406*	24	3.67	1.12
14	3.95	1.02	Environmental and business red flags	8.818**	29	3.60	1.14
15	3.90	1.02	Cyber and computer fraud	0.922	11	3.99	1.02
16	3.89	0.90	Anti-fraud training	0.378	17	3.88	1.17
17	3.88	0.96	Anti-fraud education	0.105	20	3.76	1.17
18	3.87	0.96	Professional standards pertaining to forensic accounting	0.660	15	3.91	1.11
19	3.83	1.04	Manipulation of related party transactions	0.951	12	3.98	0.89
20	3.78	1.12	Effective report writing	10.585**	3	4.22	0.88
21	3.74	1.11	Earnings management	3.199	30	3.56	0.98
22	3.73	1.15	Financial reporting process and analysis	0.518	23	3.71	0.93
23	3.70	1.03	Criminology and white-collar and economic crimes	0.005	22	3.72	1.00

Table 7. (Continued)

Academicians			Curriculum Content	K-W Chi-Square	Practitioners		
Rank	Mean Response	Std. Dev.			Rank	Mean Response	Std. Dev.
24	3.69	1.17	Financial reporting standards and principles	0.476	19	3.79	1.05
25	3.59	1.15	Techniques in locating hidden assets	4.671*	14	3.94	0.84
26	3.58	1.03	Legal elements of fraud	0.749	21	3.72	0.96
27	3.57	1.18	Corporate governance	3.137	38	3.36	0.962
28	3.48	1.05	Conducting internal investigations	0.964	28	3.60	0.88
29	3.43	0.96	Security and privacy	0.041	34	3.50	0.95
30	3.38	1.21	Statistical sampling	1.925	43	3.24	1.02
31	3.36	1.08	Careers in forensic accounting	0.415	42	3.25	1.12
32	3.35	1.09	Knowledge of the legal system	3.744	27	3.65	0.82
33	3.32	1.12	Occupational fraud	1.721	32	3.52	1.01
34	3.31	0.883	Bribery and corruption investigation	0.583	45	3.24	1.06
35	3.30	1.14	Conflicts of interest investigating techniques	4.894*	26	3.65	0.90
36	3.28	1.08	Intellectual property fraud	0.275	47	3.22	1.03
37	3.27	1.03	Compliance with applicable laws and regulations	8.739**	25	3.65	0.98
38	3.26	1.22	Interview skills and legal aspects of interviews	0.475	36	3.44	1.01
39	3.24	1.17	Crime control techniques	0.696	39	3.36	0.93
40	3.17	1.11	Shareholder litigation	1.471	40	3.33	1.12
41	3.15	1.05	Professional organizations sponsoring forensic accounting	4.447**	48	2.86	1.08
42	3.06	1.04	Resolution of allegations of misconduct	6.923*	37	3.40	0.84
43	3.05	1.20	Rules of evidence	8.470*	33	3.51	1.08
44	2.92	1.13	Business valuations and cost estimates	7.806*	41	3.33	0.977
45	2.89	1.16	Expert testimony and expert witness techniques	16.329*	35	3.49	0.98
46	2.85	1.15	Litigation consulting techniques	22.069*	31	3.54	0.95

Table 7. (Continued)

Academicians			Curriculum Content	K-W Chi-Square	Practitioners		
Rank	Mean Response	Std. Dev.			Rank	Mean Response	Std. Dev.
47	2.82	1.09	Modeling and discounting future damages	10.601*	46	3.24	0.83
48	2.60	1.14	Trial and cross-examination	21.383*	44	3.24	1.01
49	2.06	0.97	Valuation expert in divorce	30.832*	49	2.86	1.13

*Significant at 5%.

**Significant at 1%.

Chi-squares, presented in Table 7, and parametric *t*-statistics produced similar results. Topics are presented in Table 7 according to their mean response rankings by academicians. There were statistically significant differences in responses between academicians and practitioners on 18 of the 49 topics. The comparison of responses of academicians and practitioners reveals that not only were there differences in the rankings of topics, as determined by the strength of responses (not reported), but also statistically significant differences in responses between the two groups.

According to Table 7, both academicians and practitioners ranked the topics “Fundamentals of fraud” and “Financial statement fraud” number one and two, with the academicians ranking them higher. The main disparity between the two groups involved the topic of “Effective report writing,” which was ranked as third by practitioners and as low as 20th by academicians. Practitioners tended to rank fraud-type topics lower than academicians. For example, academicians ranked “elements of fraud: pressure, opportunity, and rationalization” sixth, but practitioners ranked this topic 16th. The most robust differences in rankings between academicians and practitioners are on the following topics: elements of fraud consisting of pressure, opportunity, and rationalization; types of fraud; environmental and business red flags; anti-fraud criteria; techniques in locating hidden assets; effective report writing; expert testimony and expert witness techniques; and litigation consulting techniques. Academicians showed more interest than practitioners in the coverage of fraud examination including topics such as types of fraud, environment and business red flags, elements of fraud, and anti-fraud criteria. While practitioners considered fraud examination important, they placed more importance on topics pertaining to techniques in locating hidden assets, compliance with applicable laws and regulations, conflicts of interest investigating techniques, expert testimony

and expert witness techniques, effective report writing, and litigation consulting techniques.

Results presented in Table 7 reveal that although the relative importance of forensic accounting topics varied between academicians and practitioners, there is a general consensus as to the relevance of these topics in forensic accounting. Mean responses from academicians on 12 of the 49 listed forensic accounting topics are greater than 4, suggesting a high degree of importance and relevance of coverage of these topics in a forensic accounting course. Practitioners, on the other hand, placed a high degree of importance on 10 of the 49 topics, with mean responses of greater than 4. The 13 top-ranked topics, with the mean response greater than 4, by both academicians and practitioners are fundamentals of fraud, financial statement fraud, types of fraud (e.g. employees, management), cooking the books and problems in accounting, elements of fraud (pressure, opportunity and rationalization), anti-fraud controls, internal control evaluation, theory and methodology of fraud examination, principles of ethics and corporate code of conduct, fraud detection and deterrence programs, anti-fraud auditing standards, analytical review procedures, and effective report writing.

Demographic Differences in Responses

We performed the nonparametric *t*-test to examine differences in the responses between academicians in AACSB schools versus those in non-AACSB schools. There were only a few statistically significant differences between these two groups of respondents. Faculty from AACSB-accredited colleges placed more importance than those from non-AACSB schools on satisfying society's demand for forensic accounting education and practice and preparing students to engage in fraud examination as primary benefits of forensic accounting education. The mean responses on other questions were not statistically significant, indicating that there is a general agreement between these two groups of academicians regarding the importance, delivery, and topical coverage of forensic accounting. We did not find any variable being statistically correlated with academic rank (e.g. assistant, associate, or full professors). We divide academic respondents into three categories of those from small, medium, and large universities, according to their undergraduate business enrollment (e.g. small ≤ 100 , $101 < \text{medium} < 300$, and large ≥ 300 students). Results (not reported) indicate respondents from medium sized universities reported lack of administrative interest and support, lack of instructional materials, and lack of financial resources as less significant impediments to forensic accounting integration in accounting curricula than their counterparts at small and large universities.

Limitations and Suggestions for Future Research

This study is subject to the limitations of any survey research. First, the apparently homogeneous subjects (accounting faculty and CPA practitioners) may have systematic biases in their perceptions as to the relevance and coverage of forensic accounting in the accounting curriculum. While this possibility should not negate interest in the results, the generalizability of findings beyond that population may be limited.

Second, a non-response bias may be present in the results. It is not possible to determine how non-respondents would have answered. However, as a test of non-response bias, we compared late responses with early responses, assuming that late responses are similar to non-responses (Solomon, 1990). There were no significant differences in the responses of early respondents and late respondents.

Third, the 49 forensic accounting topics reported in Table 7 come from the extensive review of related literature and content analysis of the selected 21 forensic accounting syllabi. It is possible that these topics do not represent all of the topics that should be covered in forensic accounting education. The list of selected topics is by no means all-inclusive, even though we asked respondents to add topics not covered in the list and some respondents commented that several topics overlap. Finally, the reader should interpret the results with care because of the small sample size (153 academicians and 105 practitioners) and low response rate (15.4 and 10.7% respectively). As suggested by one of the respondents, future research should examine the feasibility of integrating forensic accounting as modules into a graduate capstone course to assist accounting programs either to plan a 45-hour semester course in forensic accounting or to integrate these modules into a variety of accounting and auditing courses. Future research should also examine other curriculum design issues not adequately addressed in this study, such as who is best suited to teach a forensic accounting course (e.g. tenured faculty, clinical faculty, practitioners), should such a course be a required or elective offering, where is a forensic accounting course more relevant (e.g. undergraduate, graduate), and is a forensic accounting course best appropriate to be taught in the accounting program or team taught with coordination and cooperation with other disciplines (e.g. finance, law). The next section addresses some of these issues.

CURRICULUM DESIGN OF FORENSIC ACCOUNTING EDUCATION

Several fundamental questions pertain to the curriculum design and development of forensic accounting education. The first question is “Should accounting programs

integrate forensic accounting education into their curriculum?” Reported financial scandals, regulatory responses, ACFE’s anti-fraud education programs, and results of this study (see Table 2) provide strong support for and interest in the coverage of forensic accounting particularly anti-fraud education, in the accounting curriculum as demanded by the marketplace post-Enron, Andersen and other business and accounting scandals.

The second question is that given the demand for and interest in forensic accounting, “How should forensic accounting education be integrated into the accounting curriculum?” Two different approaches to coverage of forensic accounting education are possible. These approaches are integration of forensic accounting through accounting and auditing courses and offering of a stand-alone forensic accounting course. It can be argued that forensic accounting education should be integrated into the accounting curriculum throughout existing accounting and auditing courses. The rationale for this approach is that the three fields of forensic accounting (litigation consulting, expert witnessing, and fraud examination) are significantly affecting all aspects of today’s business. Forensic accounting topics can be infused into existing upper level accounting and auditing courses. This process assures coverage of all critical aspects of forensic accounting, without having to add a new course into already saturated accounting curricula. However, this approach has a few major impediments. First, adding forensic accounting to existing accounting and auditing courses can overburden faculty and students alike in dealing with courses already saturated with related materials. Second, accounting faculty may not wish to add forensic accounting topics to their courses primarily because of their own lack of comfort with forensic accounting topics. Finally, instructors may have to drop some of the existing accounting and auditing subjects to add forensic accounting topics. Nevertheless, results presented in Panel A of Table 5 indicate that about 50% of responded academicians preferred integration of forensic accounting education through existing accounting and auditing courses.

The second approach is to offer a distinct forensic accounting course(s) at either the undergraduate or graduate level. Panel A of Table 5 shows that only 16% of responded academicians reported that their accounting program offers a separate forensic accounting course. Offering a separate forensic accounting can give more focus to forensic accounting topics, particularly anti-fraud education, and ensure adequate coverage of forensic accounting education. Many universities have begun to offer anti-fraud education courses. For example, the ACFE identifies 100 universities that have made commitments to offer an anti-fraud education course promoted and supported by the ACFE (ACFE, 2003). However, our experience indicates that many universities are struggling with how to integrate forensic accounting education including anti-fraud education into their courses and curriculum primarily because curriculum changes involve both financial and

personal costs as well as administrative commitments and guarantees for success. Our survey results (Panel D of Table 6) show that major impediments to forensic accounting integration in the accounting curriculum are lack of financial resources, instructional materials, administrative support and faculty interest. There are too few faculty members interested in teaching and developing forensic accounting course materials. If forensic accounting, particularly anti-fraud concepts and techniques, were integrated into accounting texts, a broader set of universities could incorporate forensic accounting education into their curriculum. We are witnessing incorporation of post-Enron related fraud and ethics cases in most accounting texts. Nevertheless, there are no broad, widely distributed materials to help universities integrate forensic accounting into their curriculum, even though the need for such education has been considerably recognized.¹¹

The third question is, for accounting programs that decide to offer a forensic accounting course, "Should they offer it at the undergraduate or graduate level?" The examination of 21 forensic accounting syllabi indicates that the majority of accounting programs offer their forensic accounting courses at the graduate or at a combined graduate-undergraduate level to ensure that students have had a sufficient understanding of the various business and accounting concepts covered at the undergraduate level before they are given the opportunity to take a forensic accounting course. Universities may offer forensic accounting at the undergraduate level based on the expectation that graduating accounting students should have exposure to forensic accounting topics at the undergraduate level to succeed in the ethically challenging and practically scrutinized and regulated business environment. However, any undergraduate forensic accounting course may be best placed toward the end of the undergraduate curriculum as an elective course.

The final question is, regardless of the selected method of delivery of forensic accounting (integration, separate course), "What are the important and relevant forensic accounting topics that should be covered in forensic accounting education?" This study identifies 49 distinct forensic accounting topics that should make up the content of forensic accounting education. Both groups of our respondents viewed the majority of these topics (see Table 7) as important for consideration by accounting programs in developing their forensic accounting curriculum. The convergence of forensic accounting topics in a separate course or the integration of those topics into upper-level courses requires the classification of interrelated topics into smaller subsets or tiers. Table 7 suggests three tiers form the forensic accounting modules. The first tier, consisting of topics ranked one through 20 by both groups, involves fundamentals of fraud, financial statement fraud, types of fraud, fraud prevention and deterrence programs, anti-fraud auditing standards, effective report writing, and environmental and business red flags. The second tier, consisting of topics ranked 21–30, focuses on the corporate governance, financial

reporting process and analysis, earnings management, professional standards pertaining to forensic accounting, criminology and white-collar and economic crimes, legal element of fraud, occupational fraud, and security and privacy. Finally, the third tier, consisting of topics ranked 31 through 49, concentrates on careers in forensic accounting, expert testimony and expert witness techniques, litigation consulting techniques, shareholder litigation, crime control techniques, conflicts of interest investigating techniques, compliance with applicable laws and regulation, interview skills and legal aspects of interviews, intellectual property fraud, business valuations and cost estimates, and rules of evidence. Some of the listed topics in Table 7 may be similar and could be combined and arranged differently in these three tiers. The lack of adequate research directed at identifying and grouping forensic accounting topics suggests the need to use some systematic approach to develop a taxonomy of these topics. This study should help in modularizing forensic accounting topics.

CONCLUSION

The past two decades have witnessed significant changes in the business environment including globalization, technological advances, and now with reported high-profile financial scandals, ways to improve public trust and investor confidence in financial reports. Emerging regulatory, social, economical, ethical, and legal challenges facing corporate America that contribute to an increasing demand for forensic accounting should encourage accounting programs to place more focus on this area of accounting. We conducted a nationwide survey of academicians and practitioners to determine the importance, relevance, and delivery of forensic accounting education. Results should aid in setting the future direction and role of forensic accounting education. Results indicate that the demand for and interest in forensic accounting is expected to continue to increase, more universities are planning to provide forensic accounting education, both groups of respondents viewed forensic accounting education relevant and beneficial to accounting students, the business community, the accounting profession, and accounting programs, the majority of 49 suggested forensic accounting topics are considered as very important for integration into the accounting curriculum by both groups of surveyed academicians and practitioners, and the relative importance of these topics varies between the two groups, however, there is a general consensus as to the importance of these topics in forensic accounting.

Forensic accounting is a fast-developing accounting area, especially given today's fraudulent business practices and financial scandals, litigious business environment, and regulatory initiatives. Forensic accounting education has not

received adequate coverage in the accounting curriculum as demanded by the marketplace. Forensic accounting courses have emerged in the same fashion as international accounting courses in the 1980s, and e-commerce courses in the 1990s, with individual faculty and accounting programs designing courses based on their interests, skills, philosophies, and demands. We suggest that accounting programs assess the structure, content, and delivery of forensic accounting education in the context of the results presented in this study, and to continue to explore innovative teaching methods and a more integral approach to the coverage of forensic accounting education. The coverage of forensic accounting in the accounting curriculum should assist graduating accounting students to successfully pursue their careers and ease the transition from the classroom to a professional career.

NOTES

1. The terms "forensic accounting" and "fraud examination" have been interchangeably used in the literature and by professional organizations, and there is a controversial issue of what is the appropriate title for a college course in this area of accounting. This study takes no position on this controversial issue and the purpose is to shed light on the coverage of this important area of accounting.

2. Much has changed in recent years in forensic accounting education and practice. For example, Rezaei et al. (1996) reported only a handful of universities offered forensic accounting related courses in the 1990s. We identify 21 universities that are currently providing forensic accounting courses. Furthermore, the Association of Certified Fraud Examiners (ACFE) has listed more than 100 colleges and universities that participate in its Higher Education Program by offering fraud examination courses. The list is available at <http://www.cfenet.com>. We were unable to obtain course syllabi for all of the ACFE Higher Education Program participating schools.

3. Rezaei (2002) provides a detailed discussion of several organizations that are currently promoting and sponsoring forensic accounting and fraud examination certifications. These organizations are: (1) the American College of Forensic Examiners International (ACFEI) which sponsors the Certified Forensic Accounting (Cr. FA) designation; (2) the Association of Certified Fraud Examiners (ACFE), which promotes the Certified Fraud Examiner (CFE) designation; (3) the Forensic Accountants Society of North America (FASNA), which is a member-driven and self-governed network of certified public accounting firms specializing in forensic accounting; and (4) the National Association of Certified Valuation Analysts (NACVA), which sponsors the Certified Forensic Financial Analyst (CFFA).

4. One may argue that accounting curricula should be driven by the academicians' ideas and visions of what is in the best interest of students, and not by practitioners' demands. However, it is important that accounting curricula be aligned with the needs of the market if the accounting programs are to survive and thrive. This also reduces employers' criticism about accounting programs being out of touch with reality.

5. A list of these universities currently offering forensic accounting related courses along with course titles and descriptions is available upon request from the authors.

6. We pilot tested the initial questionnaire by sending it to more than ten academicians for review and criticism. Suggestions and comments of these participants, primarily related

to wording, scaling, content, and organization were incorporated to the final version of the questionnaire.

7. We compiled the selected topics from an extensive review of the literature on forensic accounting (e.g. forensic accounting books, course syllabi, and journal articles).

8. Practitioners who chose to comment on this section state “It is a good field, accounting students should be proficient at it”; “I believe it should have been part of accounting education from a few decades ago”; “I feel that forensic accounting will be big area of the future for accountants”; “In today’s climate, all accountants – external, internal, forensic consultants, and corporate accountants – must develop forensic techniques”; and “A forensic accountant is more than a fraud auditor or security guard.” Academicians’ comments include: “Forensic accounting is just good auditing”; “It is ‘Fraud Examination’ as the preferred title, which is more inclusive of the broader topics covered than is implied in ‘Forensic Accounting’”; and “This is an increasingly important area for auditors and internal management as the accounting function in large organizations becomes more sophisticated.”

9. Several respondents made the following comments regarding obstacles in delivery of forensic accounting education: “Most faculty are not qualified to teach a fraud course”; “The accounting major has so many required courses”; “We are reluctant to add more required courses in the accounting curriculum”; and “There are many things we need to teach before we start on forensic accounting.”

10. We compiled the 49 reported forensic accounting topics from an extensive review of prior studies, textbooks, and course syllabi in forensic accounting and fraud examination. Furthermore, we asked respondents to add topics not covered in the list.

11. Since the survey, there is now one forensic textbook available for adoption (Crumbley et al., 2003), and one fraud examination textbook available (Albrecht, 2003).

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APPENDIX A

Four-Page Questionnaire Sent to Selected Academicians

FORENSIC ACCOUNTING QUESTIONNAIRE

This questionnaire is designed to determine the coverage of forensic accounting education in the accounting curriculum. *Forensic accounting is defined as the practice of rigorous data collection and analysis in the areas of litigation support consulting, expert witnessing, and fraud examination.* Following the completion of the questionnaire, please return it in the enclosed pre-addressed, postage-paid envelope. Thank you for your cooperation.

- (1) Do you expect future demand and interest in the following three areas of forensic accounting to:

	Litigation Support	Expert Witnessing	Fraud Examination
Increase?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remain the same?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decrease?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unsure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (2) How do you integrate forensic accounting education into your curriculum?
- ☐ Do not cover forensic accounting at all.
☐ Offer a separate forensic accounting course.
☐ Integrate through accounting and auditing courses.
- (3) If you do not currently offer any forensic accounting coverage, when are you planning to do so?
- ☐ Within a year ☐ Within five years
☐ Within two years ☐ Do not plan to offer such coverage
- (4) Please indicate the extent to which you would agree with the following statements by circling the appropriate responses where 1 = strongly disagree and 5 = strongly agree.

	Strongly Disagree				Strongly Agree
(a) The current accounting curriculum is not sufficiently responsive to society's demand for forensic accounting education and practice.	1	2	3	4	5
(b) The accounting curriculum should provide forensic accounting coverage.	1	2	3	4	5
(c) Colleges and universities should encourage and advise students on career opportunities in forensic accounting.	1	2	3	4	5
(d) Current high-profile financial statement fraud cases, including Enron and WorldCom, galvanize more interest in and demand for forensic accounting, including fraud examination.	1	2	3	4	5
(e) There are numerous employment opportunities in forensic accounting.	1	2	3	4	5
(f) Forensic fieldwork auditing should be integrated into auditing textbooks and audit engagements.	1	2	3	4	5

- (5) Please indicate the importance of the perceived benefits of forensic accounting education and practice by circling the appropriate number where 1 = least important and 5 = most important.

	Least Important				Most Important
(a) Satisfy society's demand for forensic accounting education and practice.	1	2	3	4	5
(b) Strengthen the credibility of financial reporting.	1	2	3	4	5
(c) Promote responsible corporate governance.	1	2	3	4	5
(d) Make students more desirable in the marketplace.	1	2	3	4	5
(e) Demand for individuals possessing forensic accounting education and skills is increasing.	1	2	3	4	5
(f) Prepare students to engage in fraud examination.	1	2	3	4	5
(g) Prepare students to engage in litigation support consulting.	1	2	3	4	5
(h) Prepare students to engage in expert witnessing.	1	2	3	4	5
(i) Others (please specify)_____	1	2	3	4	5

- (6) Please indicate the severity of the following perceived obstacles in integrating forensic accounting into the accounting curriculum by circling the appropriate number (1 = not severe; 5 = very severe).

	Not Severe				Very Severe
(a) Lack of faculty interest.	1	2	3	4	5
(b) Lack of administrative interest and support.	1	2	3	4	5
(c) Lack of student interest.	1	2	3	4	5

	Not Severe				Very Severe
(d) Lack of instructional materials including textbooks.	1	2	3	4	5
(e) Lack of financial resources.	1	2	3	4	5
(f) Lack of job opportunities.	1	2	3	4	5
(g) Others (please specify)_____	1	2	3	4	5

(7) Please indicate the importance of covering the following topics in a forensic accounting course or modules integrated into an auditing course by circling the appropriate number where 1 = least important and 5 = most important.

	Least Important				Most Important
(a) Fundamentals of fraud	1	2	3	4	5
(b) Theory and methodology of fraud examination	1	2	3	4	5
(c) Valuation expert in divorce	1	2	3	4	5
(d) Careers in forensic accounting	1	2	3	4	5
(e) Professional organizations sponsoring forensic accounting	1	2	3	4	5
(f) Anti-fraud criteria	1	2	3	4	5
(g) Anti-fraud education	1	2	3	4	5
(h) Anti-fraud controls	1	2	3	4	5
(i) Anti-fraud training	1	2	3	4	5
(j) Anti-fraud auditing standards	1	2	3	4	5
(k) Shareholder litigation	1	2	3	4	5
(l) Professional standards pertaining to forensic accounting	1	2	3	4	5
(m) Types of fraud (e.g. employees, management)	1	2	3	4	5

	Least Important				Most Important
(n) Financial statement fraud	1	2	3	4	5
(o) Modeling and discounting future damages	1	2	3	4	5
(p) Financial reporting standards and principles	1	2	3	4	5
(q) Interview skills and legal aspects of interviews	1	2	3	4	5
(r) Security and privacy	1	2	3	4	5
(s) Analytical review procedures	1	2	3	4	5
(t) Conflicts of interest investigating techniques	1	2	3	4	5
(u) Techniques in locating hidden assets	1	2	3	4	5
(v) Crime control techniques	1	2	3	4	5
(w) Litigation consulting techniques	1	2	3	4	5
(x) Effective report writing	1	2	3	4	5
(y) Knowledge of the legal system	1	2	3	4	5
(z) Legal elements of fraud	1	2	3	4	5
(aa) Trial and cross-examination	1	2	3	4	5
(ab) Rules of evidence	1	2	3	4	5
(ac) Expert testimony and expert witness techniques	1	2	3	4	5
(ad) Principles of ethics and corporate code of conduct	1	2	3	4	5
(ae) Fraud detection and deterrence programs	1	2	3	4	5
(af) Internal control evaluation	1	2	3	4	5

	Least Important				Most Important
(ag) Conducting internal investigations	1	2	3	4	5
(ah) Resolution of allegations of misconduct	1	2	3	4	5
(ai) Financial reporting process and analysis	1	2	3	4	5
(aj) Environmental and business red flags	1	2	3	4	5
(ak) Statistical sampling	1	2	3	4	5
(al) Corporate governance	1	2	3	4	5
(am) Bribery and corruption investigation	1	2	3	4	5
(an) Business valuations and cost estimates	1	2	3	4	5
(ao) Compliance with applicable laws and regulations	1	2	3	4	5
(ap) Cyber and computer fraud	1	2	3	4	5
(aq) Criminology and white-collar and economic crimes	1	2	3	4	5
(ar) Earnings management	1	2	3	4	5
(as) Elements of fraud: pressure, opportunity, and rationalization	1	2	3	4	5
(at) Intellectual property fraud	1	2	3	4	5
(au) Manipulation of related party transactions	1	2	3	4	5
(av) Occupational fraud	1	2	3	4	5
(aw) Cooking the books and problems in accounting	1	2	3	4	5

(14) How many students do you graduate per year in each of the following categories?

	Undergraduate	Masters	Doctoral
Business Accounting			

(15) Comments: Please feel free to comment on forensic accounting education and practice.

Thank you for your cooperation and assistance. If you wish to receive a copy of the results of this study, please check the following space and enclose your business card []. Please submit a copy of your course outlines for forensic accounting or any related materials.

APPENDIX B

Two-Page Questionnaire Sent to Practitioners

FORENSIC ACCOUNTING QUESTIONNAIRE

This questionnaire is designed to determine the coverage of forensic accounting education in the accounting curriculum. *Forensic accounting is defined as the practice of rigorous data collection and analysis in the areas of litigation support consulting, expert witnessing, and fraud examination.* Following the completion of the questionnaire, please return it in the enclosed pre-addressed, postage-paid envelope. Thank you for your cooperation.

(1) Do you expect future demand and interest in the following three areas of forensic accounting to:

	Litigation Support	Expert Witnessing	Fraud Examination
Increase?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remain the same?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decrease?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unsure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (2) Please indicate the importance of the perceived benefits of forensic accounting education and practice by circling the appropriate number where 1 = least important and 5 = most important.

	Least Important				Most Important
(a) Satisfy society's demand for forensic accounting education and practice.	1	2	3	4	5
(b) Strengthen the credibility of financial reporting.	1	2	3	4	5
(c) Promote responsible corporate governance.	1	2	3	4	5
(d) Make students more desirable in the marketplace.	1	2	3	4	5
(e) Demand for individuals possessing forensic accounting education and skills is increasing.	1	2	3	4	5
(f) Prepare students to engage in fraud examination.	1	2	3	4	5
(g) Prepare students to engage in litigation consulting.	1	2	3	4	5
(h) Prepare students to engage in expert witnessing.	1	2	3	4	5
(i) Others (please specify)_____	1	2	3	4	5

- (3) Please indicate the importance of covering the following topics in a forensic accounting course or modules integrated into an auditing course by circling the appropriate number where 1 = least important and 5 = most important.

	Least Important				Most Important
(a) Fundamentals of fraud	1	2	3	4	5
(b) Theory and methodology of fraud examination	1	2	3	4	5

	Least Important				Most Important
(c) Valuation expert in divorce	1	2	3	4	5
(d) Careers in forensic accounting	1	2	3	4	5
(e) Professional organizations sponsoring forensic accounting	1	2	3	4	5
(f) Anti-fraud criteria	1	2	3	4	5
(g) Anti-fraud education	1	2	3	4	5
(h) Anti-fraud controls	1	2	3	4	5
(i) Anti-fraud training	1	2	3	4	5
(j) Anti-fraud auditing standards	1	2	3	4	5
(k) Shareholder litigation	1	2	3	4	5
(l) Professional standards pertaining to forensic accounting	1	2	3	4	5
(m) Types of fraud (e.g. employees, management)	1	2	3	4	5
(n) Financial statement fraud	1	2	3	4	5
(o) Modeling and discounting future damages	1	2	3	4	5
(p) Financial reporting standards and principles	1	2	3	4	5
(q) Interview skills and legal aspects of interviews	1	2	3	4	5
(r) Security and privacy	1	2	3	4	5
(s) Analytical review procedures	1	2	3	4	5
(t) Conflicts of interest investigating techniques	1	2	3	4	5
(u) Techniques in locating hidden assets	1	2	3	4	5
(v) Crime control techniques	1	2	3	4	5

	Least Important				Most Important
(w) Litigation consulting techniques	1	2	3	4	5
(x) Effective report writing	1	2	3	4	5
(y) Knowledge of the legal system	1	2	3	4	5
(z) Legal elements of fraud	1	2	3	4	5
(aa) Trial and cross-examination	1	2	3	4	5
(ab) Rules of evidence	1	2	3	4	5
(ac) Expert testimony and expert witness techniques	1	2	3	4	5
(ad) Principles of ethics and corporate code of conduct	1	2	3	4	5
(ae) Fraud detection and deterrence programs	1	2	3	4	5
(af) Internal control evaluation	1	2	3	4	5
(ag) Conducting internal investigations	1	2	3	4	5
(ah) Resolution of allegations of misconduct	1	2	3	4	5
(ai) Financial reporting process and analysis	1	2	3	4	5
(aj) Environmental and business red flags	1	2	3	4	5
(ak) Statistical sampling	1	2	3	4	5
(al) Corporate governance	1	2	3	4	5
(am) Bribery and corruption investigation	1	2	3	4	5
(an) Business valuations and cost estimates	1	2	3	4	5
(ao) Compliance with applicable laws and regulations	1	2	3	4	5
(ap) Cyber and computer fraud	1	2	3	4	5
(aq) Criminology and white-collar and economic crimes	1	2	3	4	5

	Least Important				Most Important
(ar) Earnings management	1	2	3	4	5
(as) Elements of fraud: pressure, opportunity, and rationalization	1	2	3	4	5
(at) Intellectual property fraud	1	2	3	4	5
(au) Manipulation of related party transactions	1	2	3	4	5
(av) Occupational fraud	1	2	3	4	5
(aw) Cooking the books and problems in accounting	1	2	3	4	5
(4) Comments: Please feel free to comment on forensic accounting education and practice.					

Thank you for your cooperation and assistance. If you wish to receive a copy of the results of this study, please check the following space and enclose your business card [].

A STRATEGIC APPROACH TO ACADEMIC CAREER DEVELOPMENT

James L. Bierstaker

ABSTRACT

The purpose of this paper is to discuss how accounting professors can use a strategic approach to achieve their career development goals. This method includes the use of strategy maps and balanced scorecards as part of a structured approach academics can use to focus their efforts toward achieving success in their careers. The paper discusses the organization of the scorecard and suggests critical measures of success for research, teaching and service. Then, the paper describes examples of strategy maps for achieving selected outcomes. However, the individuals must choose the measures and activities that are best for them.

A wide variety of organizations, including accounting firms, use strategy maps and balanced scorecards to monitor their strategy and identify key measures they link to the long-term success of the organization (Haddad, 1999a, p. 94; Kaplan & Norton, 2001a, p. 89). Administrators at universities recognize the importance of strategic planning (Nelson et al., 1998, p. 302) and have adapted the Balanced Scorecard to academic organizations (Diamond, 2004; Moore & Diamond, 2000, pp. 58–67). The purpose of this paper is to discuss how faculty can use a strategic approach to monitor their academic career development. Often, faculty may lack

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structured guidance on where they stand in the tenure and promotion process. Strategy maps and balanced scorecards are tools faculty can use to help them develop an organized approach for achieving their career goals. This paper will begin with how academics can develop a balanced scorecard to help them focus on a critical set of outcome measures to achieve their career goals. The paper also illustrates how faculty members can create strategy maps to understand how they can achieve those outcomes. Ultimately, faculty members should be able to describe their strategy in their own words (Diamond, 2004).

ORGANIZATION OF THE BALANCED SCORECARD

The balanced scorecard is an integrated set of diagnostic and strategic performance measures linked to an organization's mission and strategy (Chang & Chow, 1999, pp. 396–397). Organizations use the balanced scorecard to evaluate their success at achieving strategic goals and to align their measurement systems with their long-term strategies (Haddad, 1999b, p. 168; Kaplan & Norton, 2001b, p. 180). Individuals also develop personal scorecards to set personal objectives and identify new ways to make contributions to their jobs (Haddad, 1999a, p. 93; Kaplan & Norton, 2001b, p. 151). The scorecard balances financial and non-financial measures, and short-term versus long-term objectives (Jones & Filip, 2000, p. 45; Moore & Diamond, 2000, p. 63). Typically, the balanced scorecard contains four perspectives: financial, customer, internal business processes, and learning and growth (Kaplan & Norton, 2001a, p. 90).

Recently, academic institutions have adapted the balanced scorecard by replacing the financial perspective with the academic management perspective (i.e. “how do we look to our university leadership?”), and replacing the customer perspective with the stakeholder perspective (Diamond, 2004). The balanced scorecard is an important means of linking the mission of a university with the performance expectations of its academic units and individual faculty (Moore & Diamond, 2000, p. 66). Chang and Chow (1999, p. 398) indicate that accounting department heads agree that they could use the balanced scorecard to enhance the strategic planning and continuous improvement efforts of accounting programs. Similarly, finance department chairs and business school deans see great potential benefits from implementing a balanced scorecard system in their departments (Haddad, 1999a, p. 96; Haddad, 1999b, p. 169). However, implementation of a balanced scorecard approach by accounting and finance department heads and business school deans at that time the surveys were conducted was relatively low.

Businesses often place the financial perspective at the top of balanced scorecards. However, a government or not-for-profit organization may take a different approach. For example, a women’s Services Clinical Business Unit at Duke University, placed the customer perspective on top and the financial perspective on the bottom (Jones & Filip, 2000, p. 46). Similarly, academic institutions place the stakeholder perspective at the top of their scorecards (the Academic Scorecard) (Diamond, 2004). The balanced scorecard for academics uses research, teaching and service perspectives since these three areas that are analyzed in the tenure and promotion process. The section of the paper on strategy maps also includes internal and learning and growth perspectives.

When using a balanced scorecard for professional development, each individual faculty member must choose which perspective to place on top. Faculty members may wish to consult with other senior faculty members in their department and college, their accounting administrator, and their dean to determine which perspective belongs at the top for their school. This activity may vary by rank. Faculty members should also read the mission statement of the college and university to make this determination (Moore & Diamond, 2000, p. 66). Understanding the focus of your college and university is critical when developing a strategy for achieving promotion. Faculty members can place more than one perspective at the top of your scorecard, as is done in governmental and non-profit organizations (Kaplan & Norton, 2001a, p. 98). Teaching and research are equally weighted at my school. Therefore, in my balanced scorecard, I placed both teaching and research at the top (see Fig. 1).

Organizing the three perspectives in the balanced scorecard for academia also may help faculty members to think about how these three activities are related. For example, in business, companies focus on how their customers influence their financial results, internal business processes can improve customer

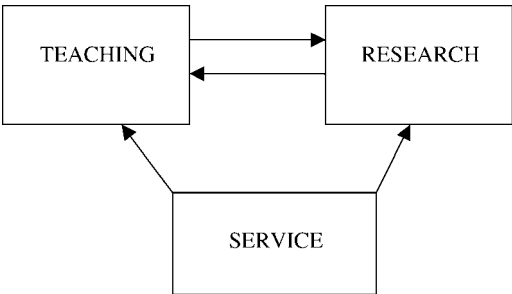


Fig. 1. The Balanced Scorecard for Academic Career Development.

satisfaction, employee training may lead to process improvements, and so on. In the balanced scorecard for academics, faculty members can consider how their research influences their teaching, or how their teaching and research are related. At the University of Massachusetts-Boston, describing the synergy between my research, teaching and service activities was an important component of my personal statement that I included in my promotion files. A helpful resource for academics considering how to find linkages between these three areas appears in the *Accounting Education* September 2001 *Forum*. In particular, Coppage and Baxendale (2001, pp. 240–244) discuss potential synergies between research and teaching, research and service, and service, research, and teaching, while others (Brown, 2001, pp. 255–256; Gallassi, 2001, p. 250; Siegel, 2001, p. 253; Smith, 2001, pp. 247–248) discuss the potential pitfalls of their approach. For example, teaching may represent an opportunity to collect data or recruit co-authors, but there may be ethical factors to consider as well.

In addition, Kaplan (1989) and Kinney (1989) discuss the linkages between research, teaching and practice. Kaplan (1989, p. 131) suggests that teaching new courses generally leads to new ideas for research. Kinney (1989, p. 124) argues that research has had a direct effect on practice. Dopuch (1989, p. 1) considers the relationship between teaching and research and states that research is the primary means by which instructors update the courses they are currently teaching and also can inspire them to develop new courses.

Once faculty members decide on the organization of the three perspectives, they can identify the critical measures of success for each perspective. The identification of performance measures is extremely important because just as they drive behavior of employees in organizations (Jones & Filip, 2000, p. 50), they also will drive the actions of the faculty member. The wrong measures will drive the wrong behavior, and the daily activities of the faculty member will not be related to a strategic plan. Also, the number of performance measures should be kept low (Haddad, 1999b, p. 172; Moore & Diamond, p. 62).

Again, it might be helpful to discuss these measures with other senior faculty members, your accounting administrator, and the dean at your school, because different schools may have different priorities for achieving promotion. Omundsen et al. (1991, p. 10) refer to this as the “different schools, different missions” hypothesis. The AACSB-International also comments on this: “Faculty contributions in the aggregate are expected to reflect the school’s mission. For example, faculty members at schools that award doctoral degrees should produce Discipline-based scholarship; faculty members at schools with a primary mission focus on teaching should impact Learning and pedagogical research . . . faculty members at schools with a mission focus on application should make Contributions to practice . . .” (AACSB, 2004, p. 27).

Faculty should be familiar with their school's tenure and promotion requirements. Annual evaluation material guidelines, such as faculty annual report instructions, also help identify measures of research, teaching, and service the university uses to evaluate performance. At the School of Business and Economics at Indiana University South Bend, for example, faculty members receive detailed guidance so they can assess where they fall among five levels of teaching, research and service performance. The initial balanced scorecard developed by a faculty member only represents hypotheses about their strategy (Kaplan & Norton, 2001b, p. 154). It must be continually tested and refined over time. Faculty members should take the opportunity to update their balanced scorecards each year, if not on a monthly or quarterly basis (Kaplan & Norton, 2001b, p. 154). If they must prepare an annual faculty report, it would be parsimonious for them to update their scorecards at the same time.

Teaching

Certainly, student evaluations are going to be an extremely important measure to include in this perspective at many schools. Other measures that may be important are the number of different undergraduate or graduate courses taught, the use of technology in the classroom, new courses developed, innovations to the curriculum, case studies developed, use of guest speakers, honors students supervised, availability to students, teaching awards, and so on. At the University of Massachusetts-Boston there is a Center for the Improvement of Teaching that offers courses for faculty and a series of workshops on instructional technology. Faculty members that take these types of classes are evaluated favorably in terms of making an effort to improve their teaching. The Idea Center at Kansas State (www.idea.ksu.edu), and other websites, (<http://www.dal.ca/~clt/ids.html>) offer teaching development seminars. They, too, would be excellent vehicles to improve teaching skills.

The list of measures discussed here is by no means exhaustive, but it is intended to be representative of the types of measures you may wish to include in the teaching section of your balanced scorecard. For each of these measures, faculty members should compare their actual performance with some target performance. For example, were teaching evaluations higher or lower than expected? Have you been able to teach as many courses as you expected? Did you develop any new courses? Have you won any teaching awards or honors, either locally (e.g. faculty appreciation dinner) or nationally (American Accounting Association Innovation in Education Award)? Faculty members may want to focus on certain measures during certain semesters and update their target performance over time. Senior

Table 1. The Balanced Scorecard for Academic Career Development: Critical Success Factors for Teaching.

Measures	Target	Actual
1. Student teaching evaluations	High	?
2. Number of undergraduate courses taught	3	?
3. Number of graduate courses taught	3	?
4. Number of new courses developed	1	?
5. Use of instructional technology	Internet	?
6. Case studies developed	2	?
7. Curriculum innovations	1	?
8. Guest speakers	4	?
9. Honors students supervised	1	?
10. Receipt of a teaching award or honor	1	?
11. Availability to students and colleagues	High	?
12. Number of textbooks published	1	?
13. Published instructional software	1	?

faculty members may have different goals than junior faculty members, such as publishing textbooks or instructional software. It also may be important to limit the number of measures you include in your scorecard, because if you include too many measures it may become overwhelming to keep track of them all. Table 1 contains a list of possible measures for teaching that could appear in a balanced scorecard for academics.

Research

Schools may emphasize the importance of publications (Moore & Diamond, 2000, p. 63), especially peer reviewed publications. In addition, some schools may have a ranking system or tier system for journals. Faculty members also may wish to consult relevant research on journal quality in their field (e.g. Brown & Huefner, 1994; Hasselback et al., 2000; Jolly et al., 1995). Another way of examining publications is whether they are Discipline-based scholarship, Contributions to practice, or Learning and pedagogical research (AACSB-International, 2004, p. 27). Some schools may emphasize Discipline-based research, while others may favor a more balanced approach. Other measures of research activity include conference presentations, research reports, case studies, number of articles under review at journals, number of working papers, externally funded grant proposals, etc. Senior faculty members at research institutions might choose to focus on publishing a theory development monograph. Some schools may favor

Table 2. The Balanced Scorecard for Academic Career Development: Critical Success Factors for Research.

Measures	Target	Actual
1. Number of publications	10	?
2. Number of peer reviewed publications	8	?
3. Number of discipline-based publications	5	?
4. Number of contributions to practice	3	?
5. Number of learning and pedagogical pub.	2	?
6. Number of tier 1 publications	2	?
7. Number of tier 2 publications	5	?
8. Number of tier 3 publications	3	?
9. Number of international presentations	2	?
10. Number of national presentations	4	?
11. Number of regional presentations	3	?
12. Number of articles under review	4	?
13. Number of working papers	4	?
14. Number of research reports	1	?
15. Number of published case studies	2	?
16. Research theory development monograph	1	?
17. Number of externally funded grants	1	?

international or national level conferences over regional conferences. The number of articles under review and the number of working papers may be particularly important at schools where there is an emphasis on research in “the pipeline” as a barometer of future research productivity. It is worthwhile for faculty to have a variety of different research projects at various stages of completion, particularly given the long review process (Schwartz, 2004, p. 14). See Table 2 for a summary of some of these measures.

Service

Faculty members can break down their service activities into professional, community, student, university, college, and departmental. Faculty members must identify the service activities that their school values. For example, some schools may emphasize leadership. Therefore, faculty members can identify the number of committees on which they served at various levels as a member, and the number of committees they have chaired. Schools that emphasize research may evaluate reviewer service and membership on editorial boards favorably. Reviewer service is also helpful for faculty looking to integrate their service and research activities. Faculty who participate on thesis or dissertation committees

Table 3. The Balanced Scorecard for Academic Career Development: Critical Success Factors for Service.

Measures	Target	Actual
1. Number of university committees/chaired	3/1	?
2. Number of college committees/chaired	2/1	?
3. Number of depart. committees/chaired	2/1	?
4. Number of community organizations	1	?
5. Reviewer service: number of journals	2	?
6. Reviewer service: number of conferences	2	?
7. Reviewer service: number of books	2	?
8. Number of editorial boards served on	1	?
9. Membership in professional organizations	1	?
10. Intangibles: visibility in the department	High	?
11. Member of a thesis/dissertation committee	1	?
12. Director of an honors project	1	?
13. Advisor to a student organization	1	?
14. High quality student advising	Yes	?
15. Director of a community organization	Yes	?
16. Proposals for community outreach	1	?
17. Conference organizer	Yes	?

also may receive positive evaluations for service from research institutions. On the other hand, teaching institutions may look favorably on faculty that direct honor projects and provide high quality student advising. Membership in professional organizations may be important for schools seeking accreditation. Community service may be important depending on the mission statement of the school. Faculty members also should consider intangibles such as visibility in the department, college, and university. A number of measures related to service appear in Table 3.

STRATEGY MAPS

A number of potentially important outcome measures appear in Tables 1–3. Taking a strategic approach is more than just a focus on outcome measures. Faculty also must carefully consider the process of achieving these outcomes. A strategy map describes the series of activities that drive the achievement of the outcomes in the balanced scorecard. According to Kaplan and Norton (2000, p. 170), the best way to build a strategy map is to start with the ultimate destination, and work from the top down. For businesses, the ultimate goal might be to become the industry leader

(Kaplan & Norton, 2000, p. 170). For academics, the ultimate goal is often tenure or promotion. The faculty members' next step is to develop a strategy that will lead them to that goal. So, their first step is to develop the set of outcome measures that they will use in their balanced scorecards to represent where they want to go. The next step is to think about how to get there.

From a Research Perspective, achieving tenure or promotion typically involves getting publications. Taking a strategic approach might help add structure to this process by breaking it down into a series of steps. Just as companies must develop innovative new products and services, academics strive to develop innovative research. Based on a strategic approach, one would begin from the Learning and Growth Perspective (Kaplan & Norton, 2000, p. 175). Faculty learning and growth might involve attending conferences or workshops, or taking courses (Willenborg, 2003, p. 14), to develop new research ideas. Learning and Growth also might involve acquiring the databases or tools needed to conduct your research. Then, turning to the Internal Process Perspective (Kaplan & Norton, 2000, p. 173), the next step would be to develop working papers, make presentations at workshops and conferences, and submit papers to journals. The final step would be to revise the paper based on review comments and ultimately get the paper accepted by a journal.

From the Teaching Perspective, the ultimate goal might be to achieve high student evaluations. Again, beginning with the Learning and Growth Perspective, improvement of teaching may involve observing or working with a master teacher, taking seminars on teaching effectiveness, or getting feedback from peer evaluations. From an Internal Process Perspective, the next step would be to develop new methods of delivering the course material, using technology in the classroom, or developing new courses. The final step would be to refine your teaching delivery methods and course content based on feedback from students and other faculty.

From a service perspective, an ultimate goal might be to become editor of a journal. To achieve this goal, a faculty member might begin by volunteering as an ad hoc reviewer and getting some practice writing reviews (Learning & Growth), becoming a member of the editorial board, an associate editor, and finally editor. This is just one example, but the idea is to identify a set of outcomes that will be critical to achieving a goal, and then thinking about the series of steps that will be necessary to get there. In addition, deciding what not to do and setting limits may be as important as deciding what to do (Porter, 1996, p. 62). In other words, it is important to stay focused on those activities that are critical to achieving the outcomes on the scorecard and not getting sidetracked with too many other things (Fig. 2).

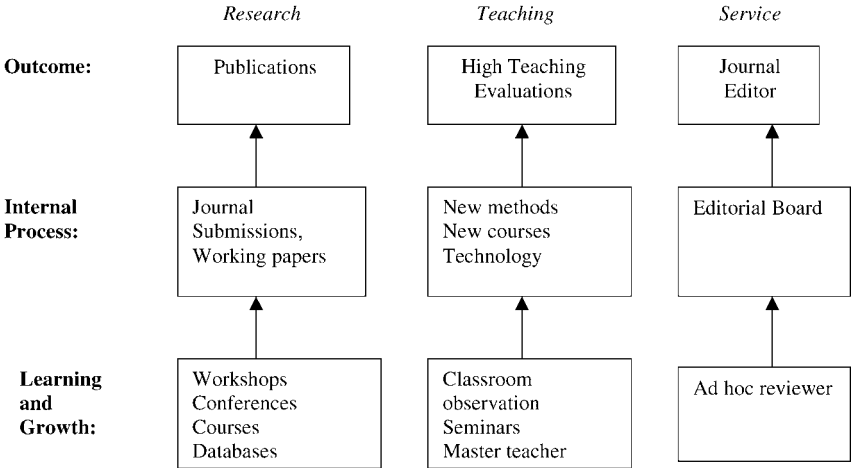


Fig. 2. Strategy Maps for Academic Career Development.

CASE STUDY: DEVELOPMENT OF A BALANCED SCORECARD FOR LLOYD EDWARD

The following case study illustrates how an individual developed a balanced scorecard to achieve his goal of tenure and promotion to associate professor. We base the case study on an actual individual. However, the name of this individual is fictitious.

Lloyd Edward is a new faculty member who is pursuing his goal of tenure and promotion to associate professor. Lloyd has decided to adopt a balanced scorecard approach to help him achieve his goal over a five year time period. Since his college emphasizes research, and considers itself a research institution, Lloyd has decided to place research at the top of his scorecard, followed by teaching, and then service.

Lloyd consulted with senior faculty in his department, his chair, and his dean in deciding which performance measures to include under the Research perspective. Although many measures were possible, Lloyd wanted to focus on two or three critical measures. One issue Lloyd heard faculty members discuss over and over again was the number of peer-reviewed publications he would need. Although no one could give Lloyd a specific number of publications, the desired total appeared to range between 5 and 10, so he placed this range as the first measure on his scorecard (see Panel A of Table 4). In addition, it appeared as though

Table 4. The Balanced Scorecard for Lloyd Edward.

Measures	Target	Actual
Panel A: Research		
1. Number of peer reviewed publications	5–10	10
2. Number of discipline-based publications	3	3
3. Number of articles under review	4	4
Panel B: Teaching		
1. Student teaching evaluations	90% above average	≤90%
2. Variety of courses taught (undergrad./grad.)	2/2	2/2
3. Number of new courses developed	1	0
Panel C: Service		
1. Number of university committees/chaired	2/1	2/0
2. Number of college committees/chaired	2/1	2/0
3. Number of depart. committees/chaired	2/1	4/1
4. Reviewer service: number of journals	2	2

although the school “counted” any peer-reviewed publications, some discipline-based research was important. So Lloyd set a target of three peer-reviewed, discipline-based publications over a five-year period as his second performance measure for research. Finally, Lloyd learned that when he came up for promotion, the evaluation would be based on his potential to produce research in the future. So Lloyd set a target of four articles under review when he came up for promotion.

Next, Lloyd considered the Teaching perspective. He knew student teaching evaluations would be critical here. He set a target of at least 90% of his evaluations above the midpoint (average) of the evaluation scale (see Panel B of Table 2). Second, his chair indicated it was good to show some versatility in his teaching, so he targeted two undergraduate and two graduate courses he would like to teach over a five-year period. Third, he felt that developing a new course would show some initiative on his part in terms of curriculum development, so he set a goal to develop one new course over the next five years.

Finally, Lloyd found selecting measures for the Service perspective to be the most difficult, because so many were possible. He decided that it would be important to make contributions to the department, college and university, as well as the profession. He knew that demonstrating leadership was also important. Therefore, he set goals to serve on at least two university, college, and departmental committees, and chair at least one committee at each level. He decided to volunteer as a reviewer for two journals in his field in order to make a contribution to the profession (see Panel C of Table 4).

Results

After setting targets for each of his performance measures for Research, Teaching and Service, Lloyd monitored his progress on each of these dimensions. Initially, although he had many submissions to peer-reviewed outlets, Lloyd had little success. Lloyd realized that he had been aiming mainly at high-ranking journals and diversifying his research portfolio to reduce his risk of rejection might be wise. He continued to “crank out the research” and in addition decided to recruit senior faculty members who had strong research records as co-authors to improve his chance of success and learn from their experience and guidance. Over time he began to see results. At the end of five years Lloyd had achieved his goals under the research perspective.

With regard to teaching, Lloyd also was disappointed initially. Although he had experience teaching while he was in graduate school, his initial teaching evaluations were not as high as he had hoped. He realized that the student population he was currently teaching was very different from the one he had taught in graduate school. He decided to take a university-sponsored seminar to improve his teaching effectiveness. At the end of five years, his evaluations were where he wanted them to be, and he was satisfied with the variety of courses he had taught. However, although he developed a new course, it was canceled because of low enrollment. Overall, he had ultimately been able to achieve most of his teaching objectives.

In regard to service, Lloyd tried to find committees where he felt he could make a contribution and also interested him. Although he was successful at serving on a variety of committees at the university, college and departmental level, he only chaired one departmental level committee because he was a relatively inexperienced faculty member. He decided to try to improve on this performance over the next five years. In addition, he decided to demonstrate leadership by volunteering to coordinate reviews for a local conference. He also served as a reviewer for two of his favorite journals. Overall, he felt he was fairly successful with his service activities.

Outcome

Ultimately, Lloyd was successful in getting promoted to associate professor. He learned many valuable lessons along the way. In particular, he realized that it was necessary to adapt his initial strategies for research, teaching and service over the five-year period. However, the measures he chose for his scorecard helped him to “keep his eyes on the prize” and stay focused on what he felt would be critical to

his success. The balanced scorecard also provided a structured way to review his performance each year.

CONCLUSION

Faculty members may be confused about how to achieve tenure and promotion, and overwhelmed by the amount of their research, teaching and service responsibilities. This paper discusses a strategic approach to organize a faculty member's activities for achieving career development. The faculty member should begin by thinking about the organization of the scorecard. Which perspective belongs on top? Does the faculty member's school consider itself a research institution, or a teaching university? Then, key measures teaching, research and service outcomes, and the activities needed to achieve these outcomes, should be identified. This paper describes a variety of measures that faculty members could use for teaching, research and service to assist them in identifying some key performance measures. Many other measures and activities are possible.

Faculty members should develop their own scorecard based on their own distinctive capabilities, and the priorities of their school. This paper uses strategy maps to illustrate how they could achieve selected measures in a scorecard. Faculty members must develop their own strategy maps based on the measures in their scorecards. Ultimately, in order to succeed, organizations must excel in areas of strategic significance (Diamond, 2004, p. 33). Similarly, faculty must target their contributions strategically to succeed in their careers. The initial balanced scorecard developed by faculty members represents their best estimate of the actions that will lead to their long-term success (Kaplan & Norton, 2001b, p. 154). It is important for faculty to continually test and refine their scorecard over time.

This paper uses examples to illustrate the effectiveness of this approach. Future research should explore the use a strategic approach for academic career development by gathering data from a large sample. For example, data could be gathered on whether faculty who use balanced scorecards and strategy maps, or a similar strategic approach, are more successful at achieving tenure and promotion than faculty who do not use these tools. The effectiveness of the strategic approach for career development also may interact with the type of school. For example, at a tier one research institution faculty may be unlikely to achieve tenure without several high level publications. Faculty at this type of school could still use strategy maps to attempt to successfully publish in top journals. However, the avenues available for them to achieve tenure and promotion may be relatively constrained compared to other types of institutions.

Previous research suggests that accounting department heads are receptive to using the balanced scorecard to continuously improve accounting education (Chang & Chow, 1999, p. 398). Academic organizations, such as the Rossier School of Education, have adapted the balanced scorecard to evaluate the performance of academic units (Diamond, 2004; Moore & Diamond, 2000, p. 66;). Accounting administrators and deans also may wish to consider the use of the balanced scorecard as a planning and evaluation tool in the tenure and promotion process. Although it is unlikely that they would accept the balanced scorecard as a contract for tenure and promotion, it could provide a framework for administrators to use when giving faculty guidance on tenure and promotion. Future research could investigate whether administrators are currently using such an approach, or would be interested in doing so.

On the other hand, some research suggests there may be dangers to applying a balanced scorecard approach to a university setting. Lawrence and Sharma (2002, p. 674) conducted field research on this issue and found that identifying performance indicators at a university can be “problematic” because the “output of higher education is complex and difficult to measure.” Further, they conclude that the balanced scorecard approach and total quality management leads to the “commodification” of education and academic labor (i.e. they are treated commodities or private goods). Similarly, Elder (2004, p. 93) warns that corporate quality improvement measures force the process of teaching and learning to conform to the corporate model, and educational values of the university become corporate values. Future research on the advantages and disadvantages of using a balanced scorecard approach in a university setting is important and needed.

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A DESCRIPTIVE ACCOUNT OF THE DEVELOPMENT AND IMPLEMENTATION OF AN INNOVATIVE GRADUATE ACCOUNTING PROGRAM: AN EXAMPLE OF STAKEHOLDER-BASED DECISION-MAKING

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ABSTRACT

Albrecht and Sack (2000), the AICPA (1999), and others have challenged accounting programs to create innovative courses and course curricula and to use a stakeholder-based approach to new-program design (e.g. AACSB, 2004; Nelson et al., 1999). Further, there are calls (e.g. Rebele & Stout, 1996; Watson et al., 2003) for a sharing of descriptive accounts regarding the process of new-program development and implementation. This paper responds by providing details regarding the development and successful implementation of an innovative graduate accounting program. As such, the paper adds to the literature base begun by Nikolai

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(1994). *Program development is stakeholder-based and tied to institutional planning documents, the Albrecht and Sack (2000) report, and the AICPA Core Competency Framework (1999). Collectively, these considerations determined the educational objectives associated with our program, the specific courses constituting the program, and the particular educational objectives associated with each course. We discuss implementation issues (program delivery format, faculty compensation, etc.), which we also addressed from a stakeholder perspective. Our program, though still in its nascent stage, has been commercially successful – a fact we attribute in large part to the stakeholder-based decision process we used. In short, the paper provides a framework that other institutions can use to guide the development and implementation of a stakeholder-driven, innovative accounting program.*

INTRODUCTION

Nelson et al. (1999) and the AACSB (2004), among others, are challenging accounting programs to deliver value-added courses and curricula, within the broad context of the accounting unit's mission and strategic objectives and based on a set of explicitly stated educational objectives (e.g. Herring & Williams, 2000). Further, Albrecht and Sack (2000), in their comprehensive assessment of accounting education, entreat accounting educators to develop and deliver innovative programs, at both the graduate and undergraduate levels, that are cross-disciplinary in nature and that respond to stakeholder needs. The AICPA, through its *Core Competency Framework* (1999), provides one specification of (external) stakeholder needs: a set of skills, attitudes, and abilities needed for entry-level success in accounting. Collectively, these expectations and imperatives provide a relevant milieu for the discussion of accounting program development.

Several individuals have called recently for a sharing of information regarding the *process* of new program development. For example, in their proposed "research agenda" for accounting education, Rebele and Stout (1996) call for the publication of descriptive accounts regarding new-program development/implementation efforts. Separately, Apostolou et al. (2001, p. 24), in the "curriculum and instruction" section of their review of accounting education literature, provide the following comment:

The articles we reviewed (related to curriculum and instruction) indicate that many accounting programs are responding to the calls for change in accounting education. With the issuance of the Albrecht and Sack (2000) report warning of the need to change accounting curricula, we foresee a continued need to share ideas for effective curricula change.

Rebele (2002, p. 20) notes: "The curriculum is fundamental to the relevance and effectiveness of accounting education, yet very little has ever been published on curriculum or course development. Relatively more attention has been given to issues of pedagogy, or how the existing curriculum is delivered." Finally, Watson et al. (2003, p. 288), in the most recently published summary of accounting education, provide an accreditation-based motivation for a sharing of information regarding the process of new program development when they note that:

Curriculum reform . . . studies should become more important to accounting educators because of impending accreditation standard changes. New . . . AACSB . . . standards require that accredited programs be mission-driven, that the mission be reflected in the form of specific goals, and that meeting the goals should be measured. These AACSB requirements should spark curriculum design changes in schools seeking to keep or achieve accreditation, creating fertile ground for education research.

The lack of published accounts of new program development and implementation efforts is confirmed by our own search of the accounting education literature, which revealed only two relevant papers. Nikolai (1994) provides a descriptive account of the development and implementation of a five-year "integrated" masters program at the University of Missouri. More specifically, the author provides information regarding admission, retention, and graduation requirements for students in the program, information regarding the course curriculum (viz., general education requirements, business course requirements, and accounting requirements), sequencing of courses, a three-component assessment plan for the new program, and a discussion of some administrative and implementation issues (e.g. budget-related information).

More recently, Herring and Williams (2000) provide a *theoretical* discussion of the development of an "objectives-driven curriculum," where "objectives" are meant to include an expanded set of competencies needed for success in accounting. Their discussion centers on an *hypothetical* (30-credit hour) masters of accountancy program that has three components: business core (9 hours), accounting core (6 hours), and accounting concentration (15 hours).

This paper provides a descriptive account of the development and successful implementation of an innovative masters program in accounting. We illustrate a stakeholder-driven approach wherein we tie new program design, internally, to institutional mission statements and a college-level strategic plan and, externally, to the Albrecht and Sack (2000) monograph and the AICPA's *Core Competency Framework* (1999). As such, our experience can serve as a model for new-program development and implementation by other institutions.

We have organized the rest of this paper as follows. The first section provides background information regarding new program development. Second, we provide a discussion of the stakeholder-based perspective we embraced for

new-program design. The discussion includes both internal and external stakeholder perspectives. Third, we provide a discussion of the following implementation issues we faced: program delivery format; the Uniform CPA Exam; administrative support; faculty compensation; program coordinators; and, program assessment. We used a stakeholder-based approach to address these implementation issues. The paper concludes with a brief summary.

BACKGROUND

Approximately five years ago the dean of our business school encouraged the department to develop a new masters program in accounting. (More detailed information regarding our program appears at: www.mac.villanova.edu.) We were to operate under one principal guideline: new-program development and implementation should be stakeholder-based. Operationally, this guideline meant that our program had to be linked (internally) to our business school's *Strategic Plan* and that it had to respond, in a meaningful manner, to (external) calls for change in accounting education. The following two sections discuss new-program development within the context of these stakeholder imperatives.

INTERNAL STAKEHOLDER ANALYSIS: LINKAGE TO COLLEGE'S STRATEGIC PLAN

The business school at our university developed a comprehensive *Strategic Plan* that envisions the creation of a "learning environment" designed to produce "adaptive problem-solvers" (Fig. 1). Our faculty and administrative team developed this broad educational goal after conducting a number of in-depth discussions with our internal and external stakeholder groups. Strategically, this goal provides an overall focus for course- and curriculum-development efforts and, as explained below, guided the development and implementation of our new masters program in accounting. As indicated by Fig. 1, the learning environment embodied in the strategic plan of our business school specifies a set of stakeholders and a set of six key educational objectives.

The learning environment envisioned in our College's *Strategic Plan* relies on a number of mutual expectations in the form of stakeholder relationships. Students and faculty are the key constituents in the learning environment with students the primary focus; thus, we depict students at the core of our "strategic wheel" diagram. Other stakeholder relationships include those related to the business community (including accounting firms and professional groups, such as the AICPA), advisory

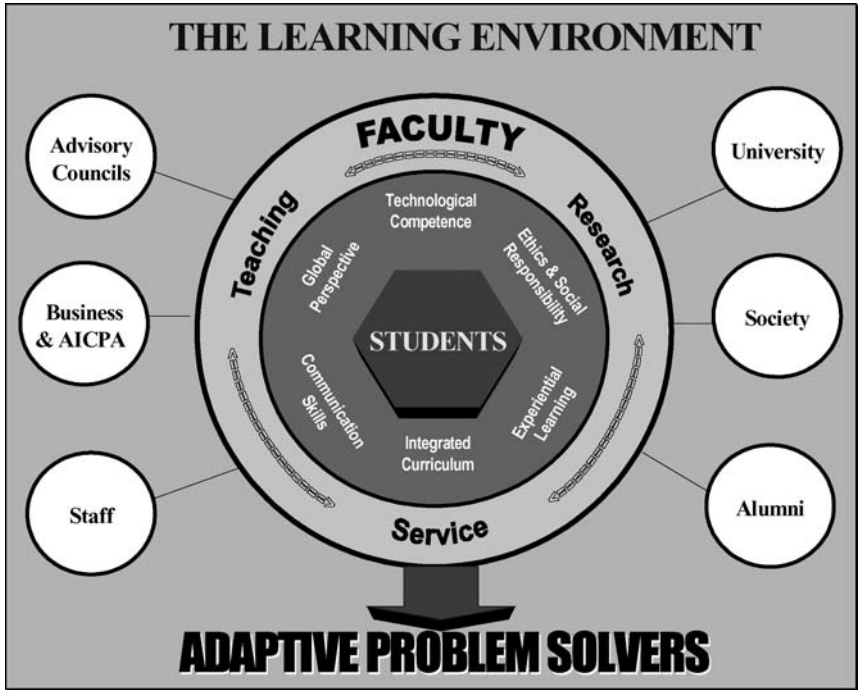


Fig. 1. Depiction of Learning Environment Embodied in the Business School's (Villanova University) Strategic Plan.

councils for the business school, alumni, other elements of the University, staff, and society at large.

Discussions with a subset of our stakeholder groups (viz., faculty, accounting firms, and alumni) isolated our major objective as developing "adaptive problem-solvers." We further defined our objective in terms of six educational goals critical to creating adaptive problem-solvers: technological competence; communication skills; an understanding of, and appreciation for, global issues; an understanding of cross-silo decision-making (i.e. curriculum integration); strong ethical values; and, experience in applying principles to real-world settings. All stakeholders agreed that focusing on a manageable number of educational goals (six in this case) would help faculty focus their curriculum-design efforts and produce business programs that would help the college achieve educational distinctiveness. Thus, every business program offered by our college – graduate and undergraduate alike – would have to embrace these six educational goals.

To be sure, these goals (or a similar set of broad educational imperatives) may not be unique to our new program. However, the fact that they affected the *design* of our program enabled us to differentiate our program from others. In other words, selection of courses in the program as well as the content in the courses themselves was driven by our need to focus on these six broad educational goals. Thus, our Masters of Accountancy (MAC) faculty had a unique opportunity to make technological proficiency, communication skills, globalization, curriculum integration, ethics/social responsibility, and experiential learning the cornerstones of courses in the program. By embracing this expanded set of educational goals we were able to develop courses that focus far less on memorization and far more on developing adaptive problem-solving skills.

EXTERNAL STAKEHOLDER ANALYSIS: LINKAGE TO THE PROFESSION

In addition to our internal stakeholder analysis, an “external” stakeholder analysis informed our course and curriculum design decisions. Specifically, the Albrecht and Sack (2000) monograph and the AICPA *Core Competency Framework* (1999) influenced these decisions. The former was important in terms of guiding the configuration of courses constituting the program while the latter was important in terms of providing course-level guidance (specific educational *objectives* within each course chosen for the new program).

Influence of Albrecht and Sack (2000)

Two themes of Albrecht and Sack (2000) were influential in the design of our new program: obsolete assumptions about accounting (and accounting education), and the potential importance of cross-disciplinary (i.e. “combination”) accounting programs. As to the former, the authors (60) provide three primary examples:

- Information is expensive to produce.
- Narrow but deep education is better than a broad-based education.
- It is more important to teach content than skills.

In terms of the latter, the authors (62) provide the following recommendations:

- (one such program) might include some accounting, but would also include coverage of information systems, economics, and business strategy;

- (another) strategy would be to develop an accounting/finance degree . . . (with) a financial-market perspective;

While the primary advocate of cross-disciplinary programs is likely Albrecht and Sack (2000), we note that they are not alone in their advocacy of “combination” type programs. For example, Bolt-Lee and Foster (2003, p. 24) state:

Professional organizations indicate that today’s accountant differs dramatically from the accountant of the past. The new professional needs a value-added focus from the time of entry into the profession until retirement. No longer will a technical knowledge of accounting be sufficient; new professionals need to provide input in finance, marketing, management, global strategy, and information technology.

Each of the preceding statements affected the form and content of our new program. For example, we assume that undergraduate accounting majors entering our program have sufficient technical knowledge and skills in accounting. For those students who were non-accounting majors and/or who had less than 15 credit hours in accounting, they must take additional accounting courses at the beginning of our MAC program. Therefore, as we show later in this paper, the program has relatively little “traditional” accounting/tax coursework. Rather, we designed the program to add value to (complement) the student’s undergraduate experience in accounting by emphasizing coursework in complementary areas such as systems, finance, tax-planning, and business law. As such, the program focuses on a broad set of educational objectives, in addition to technical knowledge.

Influence of the AICPA Core Competency Framework (1999)

As part of its *Vision Project*, the AICPA in 1999 issued a comprehensive statement regarding the knowledge, skills, and attitudes needed by entry-level accountants. The specification set forth in the *AICPA Framework*, however, seems to be consistent with prior calls for educational change in accounting. Bolt-Lee and Foster (2003, p. 38) correlate the requirements and expectations set forth in the *AICPA Framework* with prior calls for change in the U.S. (the White Paper, the Bedford Committee Report, etc.) and conclude that “beyond implementation and evaluation tools, this latest AICPA project is not radically new . . . (and in fact) finds parallels in the emphases of earlier works.” Thus, one advantage of using the *AICPA Framework* to guide program design is the fact that the *Framework* may encapsulate the substance of prior calls for educational change in accounting.

The AICPA statement came in the form of a framework consisting of educational objectives relating to: functional competencies; personal competencies; and, broad business-perspective competencies. A summary of the “elements” in each of

Table 1. Summary of AICPA Core Competencies.

Functional competencies
(1) Decision modeling
(2) Risk analysis
(3) Measurement
(4) Reporting
(5) Research
(6) Leveraging technology
Personal competencies
(1) Professional demeanor
(2) Problem-solving and decision-making
(3) Interaction
(4) Leadership
(5) Communication
(6) Project management
(7) Leveraging technology
Broad business-perspective competencies
(1) Strategic/critical thinking
(2) Industry/sector perspective
(3) International/global perspective
(4) Resource management
(5) Legal/regulatory perspective
(6) Marketing/client focus
(7) Leveraging technology

the three areas appears in Table 1. *Functional Competencies* represent technical competencies most closely aligned with the value contributed by accounting professionals. As indicated by the elements listed in Table 1, these competencies extend far beyond the “traditional” definition of the accounting function. *Personal Competencies* represent attitudes and behaviors – they relate to enhancing the way professional relationships are handled and they facilitate individual learning and improvement. *Broad Business-Perspective Competencies* deal with the context in which accounting professionals perform their services – both the internal and external business environments and how their interactions determine success or failure. As noted below, the AICPA *Framework* directly affected both the form and content of our new accounting program.¹

THE MAC PROGRAM COURSE CURRICULUM

The aforementioned stakeholder analysis provided direct guidance for new-program design. Our resulting product consists of a single track (“Assurance

Services”) and ten courses (30 credits). Students in the program take four courses during the first of two summer sessions. They then go on to take one course, on a 100% distance-learning basis, in the Fall and Spring semesters, during which time they work full-time. They complete the program by returning for a second summer session to take four courses. Upon completing the program, students receive the “Master of Accountancy and Consultancy” degree.² Students proceed through the program in “lock-step” fashion. Obviously, traditional accounting courses could not possibly cover all of the AICPA core competencies discussed above. With that in mind, and based on our discussions and focus-group meetings with key external stakeholder groups, we constructed a program that includes the following four functional areas:

- 40% = advanced accounting/tax topics:
 - Taxes and Business Strategy (First Summer).
 - Risk-Management and Assurance Services (Second Summer).
 - Performance Assessment/Strategic Cost Management (First Summer).
 - Advanced Topics in Disclosure and Financial Reporting (Second Summer).
- 20% = finance topics:
 - Financial Risk Management (First Summer).
 - Global Financial Markets (Fall Distance Learning (DL) Course).
- 20% = general management:
 - Legal Environment of e-Business (Spring DL Course).
 - Negotiation and Relationship Management³ (Second Summer).
- 20% = MIS/technology topics:
 - E-Business (First Summer).
 - Auditing and Accounting Information Systems⁴ (Second Summer).

Course descriptions for the above are available at: www.mac.villanova.edu/courses.htm.

MAPPING AICPA CORE COMPETENCIES TO COURSE OFFERINGS

Table 2 presents a mapping between courses in our masters program and a self-selected subset of 30 core competencies from the AICPA’s *Core Competency Framework*. As Rebele (2002, p. 21) points out, each accounting program must prioritize these competencies based on the importance to career success and current student abilities since it would be impossible to develop more than a subset of these competencies. We selected our subset of AICPA core competencies based on discussions with our key stakeholders to determine those competencies that

Table 2. Mapping of Selected AICPA Core Competencies to MAC Program Courses.

AICPA Competencies	MAC8210 Foundations of e-Business	MAC8220 Taxes & Business Strategy	MAC8230 Financial Risk Management	MAC8240 Performance Assessment/ Strategic Cost Management	MAC8280 Advanced Topics in Disclosure/ Financial Reporting	MAC8282 Risk Management & Assurance Services	MAC 8285 Negotiation & Relationship Management	MAC 8287 Auditing & AIS	MAC8310 Global Financial Markets	MAC8320 Legal Environment
Technology										
Access appropriate electronic databases to obtain decision-supporting information.	×					×		×	×	×
Build appropriate decision models and simulations using electronic spreadsheets and other software.	×	×	×	×	×	×		×	×	
Employ appropriate media (e.g. electronic spreadsheets, presentation software) in report preparation and presentation.	×	×	×	×	×	×		×		
Explore new technologies and their application to business and accounting scenarios.	×		×					×		×
Use technology to develop and present strategic Information.	×	×	×	×	×	×		×		
Communication skills										
Prepare business reports with objectivity, conciseness and clarity.	×	×	×	×	×	×		×		

Organize and effectively display information so that it is meaningful to the receiving party (e.g. professor, fellow student, supervisor).	x	x	x	x	x	x	x	x	x	x
Communicate the impact of identified risks and recommend corrective action.	x	x	x			x		x		x
Present measurement results objectively using applicable standards of disclosure and reporting.					x	x				
Express information and concepts with conciseness and clarity when writing and speaking.	x	x	x	x	x	x	x	x	x	x
Communicate the financial and non-financial performance of an organization's operational processes.				x	x	x		x		
Global										
Analyze the cultural and financial impacts of moving into new markets and expanding existing markets.	x		x			x			x	x
Integrated curriculum										
Recognize business opportunities and risks associated with electronic commerce.	x					x		x		x
Consider unconventional approaches and solutions to problems.	x	x	x		x	x	x	x		

Table 2. (Continued)

AICPA Competencies	MAC8210 Foundations of e-Business	MAC8220 Taxes & Business Strategy	MAC8230 Financial Risk Management	MAC8240 Performance Assessment/ Strategic Cost Management	MAC8280 Advanced Topics in Disclosure/ Financial Reporting	MAC8282 Risk Management & Assurance Services	MAC 8285 Negotiation & Relationship Management	MAC 8287 Auditing & AIS	MAC8310 Global Financial Markets	MAC8320 Legal Environment
Analyze and prepare strategic information (e.g. market share, customer satisfaction, competitor, actions, product innovation).	×		×	×		×	×			
Identify both traditional and non-traditional performance criteria and measurement methods by selecting appropriate success factors and measures of achievement (e.g. the Balanced Scorecard).	×			×	×		×	×		
Recognize market forces that make a given organization a candidate for a merger, acquisition, and/or strategic alliance.		×			×					
Analyze the implications of an organization's lack of access to supply resources, financial markets, and intellectual capital (barriers to entry, expansion or survival).							×		×	

Identify factors that motivate internal and external customers to enter into relationships or continue doing business with an organization.	x		x			x			
Ethics/social responsibility									
Address privacy, intellectual property rights and security-related issues regarding e-communication.	x						x		x
Recognize situations where professional ethical standards apply.	x		x	x	x	x	x		x
Evaluate information in a manner free of distortions, personal bias or conflicts of interest.		x	x		x		x	x	x
Analyze potential threats and opportunities for the organization from changing legal requirements.		x		x	x		x		x
Identify and explain the political and environmental forces affecting both the accounting standard-setting process and the regulation of the profession.				x	x		x		x

Table 2. (Continued)

AICPA Competencies	MAC8210 Foundations of e-Business	MAC8220 Taxes & Business Strategy	MAC8230 Financial Risk Management	MAC8240 Performance Assessment/ Strategic Cost Management	MAC8280 Advanced Topics in Disclosure/ Financial Reporting	MAC8282 Risk Management & Assurance Services	MAC 8285 Negotiation & Relationship Management	MAC 8287 Auditing & AIS	MAC8310 Global Financial Markets	MAC8320 Legal Environment
Experiential										
Objectively identify strengths, weaknesses, opportunities and threats associated with a specific scenario, case, or business activity.	×	×	×			×	×	×		×
Recognize and accommodate the dynamics and expectations of teams.	×	×	×	×	×		×			
Identify and gather data from a wide variety of sources to provide insightful interpretation for decision-making.	×		×		×	×	×	×	×	×
Propose and evaluate alternative solutions (to business problems).	×	×	×		×		×	×		×
Identify relevant information such as industry trends, internal performance history, benchmarks, and best practices.	×			×	×		×	×	×	
Realistically estimate times and resources necessary (to handle projects).			×	×			×			

were most consistent with the college's mission and strategic plan. The mapping presented in Table 2 provides, in the form of a grid, a summary of the linkage between the *Framework* and our course curriculum.

This grid displays those AICPA core competencies that we have chosen as priorities for our program, cross-classified with the six broad educational goals from our College *Strategic Plan*. Thus, the grid combines an internal stakeholder perspective (the College *Strategic Plan*), which by its very nature provides a broad perspective on the educational goals of the program, with an accounting stakeholder focus (the *AICPA Core Competency Framework*), which offers the specificity needed for operational purposes (i.e. for new-course design). The grid is helpful in noting at a glance how the various objectives of the strategic plan and the *AICPA Framework* are being achieved (i.e. in which course(s) the competencies are covered), while at the same time identifying potential areas where the program needed (or needs) more coverage. As an extension to the analysis presented in Table 2, Stout and West (2004) provide an example of developing course-specific educational objectives and pedagogy for one of the courses in our program, MAC 8240.

IMPLEMENTATION ISSUES – A STAKEHOLDER PERSPECTIVE

As noted above, the stakeholder-based approach to curriculum development enabled us to create a very different program than a traditional Masters of Accountancy. What follows are highlights of additional innovations, at the implementation level, that resulted directly from “listening to our stakeholders,” principally our alumni and members of the business community (e.g. firms hiring our graduates). We break the discussion down into the following parts: program delivery format, the *Uniform CPA Exam*, program administrative support, faculty compensation, program coordinators, and assessment plan.

Program Delivery Format

In early discussions with our external stakeholders, we determined that scheduling of our program was critical to gaining support of the firms hiring our students. Our meetings with representatives from the major accounting firms indicated that, from their perspective, our program would better meet their staffing needs if it were primarily a full-time, *summer* program. After lengthy discussion, we rejected a traditional Fall/Spring program in favor of what we call a “4–1–1–4” delivery

format. Thus, students in our program take four courses (12 credits) in the summer term immediately following graduation from their undergraduate program, and four courses (12 credits) the following summer. Each summer session is nine weeks long (two $2\frac{1}{2}$ hour meetings per week for each three-credit course). In between the two summer terms, students work full-time and take one course in the Fall and one in the Spring on a 100% distance-learning (DL) basis. Such a delivery format requires a close relationship with employers. Of the 72 students graduated from (or currently enrolled in) our program only one was employed by a non-public accounting firm prior to beginning our program. Generally speaking, this format is popular among both students and the firms that hire them.

The “4–1–1–4” delivery format introduced challenges in motivating full-time faculty to teach in the summer. We were resolute that we should view the issue of “delivery format” from a stakeholder (students and the firms that hire them) perspective. Students benefit because they complete 40% of their degree requirements during a period (Summer I) when they might otherwise be idle. (In our region, the starting date for new hires for most accounting firms is late Summer/early Fall.) Further, if the students had completed an internship as part of the undergraduate program, they would have almost a full-year of supervised work experience by the time they completed the masters program. Employers benefit under this delivery format because their opportunity costs are largely confined to the Summer II session (when students are completing their graduate degree). This cost minimization is true especially for employees in the assurance services business line – our targeted customer group. Finally, the choice of this particular delivery format (integrating as it does periods of work and academic study) was influenced as well by the “experiential” dimension of our college’s *Strategic Plan*.

Notwithstanding advantages of delivering the bulk of our program during the summer months, there are significant costs associated with this format. As discussed in a later section, we gave faculty teaching in the summer the option of counting their teaching on an “in-load” or “out-of-load” basis. It is more costly to have faculty teaching in-load during the summer; further, the department offers a premium to attract faculty to teach in the summer when the faculty member chooses not to teach the course in-load. In addition, not having all the faculty teaching in-load during the same semesters could hurt collegiality. The argument we used to defend this allocation of resources was that the college was attempting to become a true center of learning over the full calendar year and hoped this innovative scheduling approach would increase the vibrancy of the academic atmosphere in our college during the summer months. After three years of working with this schedule the general consensus is that although the faculty are missed during the one semester they do not teach during the normal academic year, the

summer has become a key part of our academic year and the added expense is warranted.

The Uniform CPA Exam

From the beginning, faculty involved in developing our program felt strongly that the program would intentionally not focus on preparing students for the *Uniform CPA Exam*, insofar as this *Exam* has been traditionally constituted. Thus, we wanted to develop a program that would *complement* the accounting knowledge and skills students obtained during their undergraduate studies. Further, our public accounting constituency (a key stakeholder group) wanted a program that would provide our graduates with problem-solving skills that could help them serve clients and add value to the financial audits they would be conducting.

At the same time, we recognize that certification is ultimately a requirement for public practice. From a content perspective, it would appear that the content and emphasis of our masters program is consistent with the new direction taken by the AICPA in formulating the *Uniform CPA Exam*; on the surface at least, the revised *Exam* emphasizes the skill set focused on in our MAC program.

One operational issue is how the timing of the *Exam* relates to the “4–1–1–4” delivery format for our program. The revised *Exam* provides individuals with greater scheduling flexibility. For example, for the coming year individuals can schedule to take the exam (at various Prometric locations and state-board authorized test centers throughout the country) in any of the following four periods (“testing windows”): April-May, 2004; July-August, 2004; October-November, 2004; and January-February, 2005.

Students in our program essentially take classes or work full-time from the time they complete their undergraduate studies to the end of the second summer session. This schedule leaves little time for prepping for the *Exam*. In our first three entering classes (Summers 2001, 2002, and 2003), some of our students took the exam in the November following the first summer session, prepping themselves during the time between the end of the summer session and the beginning of their start date. Given our program-delivery format and the four-period scheduling option that now exists, we will encourage students to sit for the *Exam* in the October-November testing window following completion of their program.

Administrative Support

As noted above, our masters program is essentially cross-disciplinary in nature. To achieve this result required internal stakeholder support in three areas: at the

University level, the Vice-President of Academic Affairs (VPAA); at the College level, the dean of business school; again at the College level, the chairs of the departments outside of accounting.

We garnered the support of the upper-administration of the University and the dean of the business school principally by tying program development to institutional planning documents and stakeholder imperatives, as discussed earlier. This level of support and commitment is particularly noteworthy given the challenging environment in which we developed our new program. The strategic approach we took in terms of developing our program also was instrumental in securing the financial support of the University for the new program. This support took the following forms:

- provision of laptop computers for all students entering the program⁵
- a revenue-sharing agreement whereby the upper administration considered the new masters program an “entrepreneurial initiative,” which meant that excess revenues (after a flat university “charge” and coverage of direct operating expenses) would revert to the business school
- treatment of summer teaching as “in-load” for accounting faculty
- the provision to pay a premium for non-accounting faculty teaching in the summer portion of the program
- the hiring of an administrative coordinator assigned specifically to the program

We are convinced we would not have secured these agreements with the upper administration in the absence of the stakeholder-based approach we took to program design and implementation.

Equally important to the development and implementation of our program was the need to gain support from the chairs of the finance, management, and MIS departments at our college, that is, from departments whose faculty would be involved in developing and teaching courses in the program. Securing such “buy-in” from individuals outside of accounting can be difficult. The approach we took was two-fold: one, as noted above and discussed more fully below, we provided a compensation premium for faculty from affected departments who were teaching in the summer portion of the program; and two, we involved faculty from these departments early on in program-development activities, including the development of our comprehensive assessment plan for the program. Thus, faculty from finance and MIS participated in the focus-group meetings, alumni-group meetings, and presentations before our advisory councils. In short, we secured “buy-in” from these faculty by involving them substantively in all major phases of program development and implementation.

Faculty Compensation

To help ensure success of our new endeavor we committed to having some of our very best instructors teaching in the program. This resource-deployment decision caused a dilemma because we deliver 80% of our program during the summer. After much deliberation, the College decided to provide to each accounting faculty member teaching in the Summer portion of the program the option of teaching such courses “in-load” or on an “out-of-load” basis. Thus, accounting faculty now can choose themselves whether or not teaching in the summer portion of the program will count for meeting their contractual teaching requirements. Faculty members teaching in the program during the summer on an “out-of-load” basis are paid a premium (total per-course compensation of \$10,000), to reduce the need for them to teach more than one course during this time period.⁶ (These payments are made directly from funds generated by the MAC program.) Some faculty choose to make the summer one of their full-time semesters, and therefore, teach MAC courses in-load. Thus, individuals who have a 3/2 teaching load (15 semester hours per year) can fulfill the two-course portion of their annual load by teaching in the summer (e.g. one MAC course plus one MBA course).

Program Coordinators

Given the pressure on students associated with a condensed meeting time for each summer session ($9\frac{1}{2}$ weeks), the amount of work (including group work) in each session, and our goal to achieve cross-disciplinary perspectives to the business topics addressed in the program, we decided to use MAC program coordinators as support personnel – one for administration, the other for handling academic issues.

The administrative coordinator is responsible for recruiting students into the program, interfacing with the CPA firms that hire our graduates, counseling students in professional-related matters, and insuring that the non-academic experience of our students (securing dorm space, scheduling social activities during the semester, etc.) is positive. Having a full-time administrative coordinator focused on recruiting for this program has led to a significant increase in in-coming class enrollment, from 19 students in year 1 to 35 students in our current class. The academic coordinator has responsibility for coordinating assignments across the four courses students take each summer (*a scheduling issue*) and for achieving linkages of material across sections (*an educational issue*). One example of the latter is the use of case assignments, across courses, that have multiple perspectives and that involve unstructured problem-solving. In addition, the academic coordinator is responsible for monitoring relationships with various stakeholders to

insure that our curriculum continues to meet their needs. The academic coordinator receives a one-course reduction (normal load six courses per year) to compensate this individual for this additional responsibility.

Assessment Plan

The assessment plan associated with our new program calls for stakeholder inputs obtained from multiple measurement tools at both the individual course and the program level. (All measurement instruments referred to in this paper that are not italicized are available, on request, from the authors.) Table 3 contains a summary of our assessment plan. Stout et al. (2004) contains a more complete discussion of this plan.

Course-Level Assessments

At the conclusion of each course, students complete the University's end-of-term course/instructor evaluation form. College administrators have used the results from these evaluations to effect faculty teaching reassignments and to guide curriculum changes. In addition, the instructor of one course in the program has developed and administered a pre- and post-course student self-assessment as a "proxy" for actual knowledge gained.⁷ A summary of course-level assessments appears in Panel A of Table 3.

Program-Level Assessments

Our "MAC Curriculum and Assessment Committee" was responsible for developing and executing a program-level assessment plan within our Business School. A summary of this plan appears in Panel B of Table 3.

The Assessment Committee has developed a special pre- and post-program survey that obtains information from our students regarding *general program-related issues* (e.g. operational issues), *AICPA Core Competency self-assessments*, and *course-related self-assessments*. We supplement these survey results with results from an end-of-program focus-group meeting with our students conducted by a representative from our University's Office of Planning, Training, and Institutional Research (OPTIR).

As noted in Panel B of Table 3, we are collecting program-level assessment results from two additional sources: faculty/course evaluation summary reports (i.e. evaluations pooled across MAC courses and instructors), and a specially prepared external stakeholder program-evaluation survey. We are using the information from these sources to inform course and curriculum changes.

Table 3. Assessment Plan Summary.

Measurement Activity (When Conducted)	Responsibility
Panel A: Course-level assessment	
End-of-semester university course/instructor evaluation form (at the conclusion of each course, summer, Fall, and Spring)	Individual instructor/OPTIR
Pre- and post-course student self-assessments (beginning and end of term)	Piloted by an individual instructor
Course-specific external stakeholder survey (periodically, at the discretion of the instructor)	Piloted by an individual instructor
Panel B: Program-level assessment	
Pre- and post-program student survey (beginning and end of each summer, for students entering the MAC program and those completing the MAC program, respectively)	MAC curriculum and assessment committee
End-of-program focus-group meetings (end of each summer, for students completing the program)	OPTIR
Course evaluation summary reports – program level: MAC versus MBA offerings (end of each summer)	OPTIR/accounting department head
External Stakeholder Program Evaluation Survey (Fall 2002 and every three years thereafter)	Accounting department head
<i>Direct measures of learning assurance</i> (each summer, starting 2005)	<i>MAC curriculum and assessment committee</i>
<i>AICPA educational competency assessment</i> (every other year, starting 2005)	<i>MAC curriculum and assessment committee</i>

Notes: Italicized items are planned, as of this writing (February 2004). *OPTIR* = University Office of Planning, Training, and Institutional Research. *MAC* = Master of Accountancy. The “MAC Curriculum and Assessment Committee” consists of the MAC Academic Coordinator (a member of the accounting department), the Senior Associate Dean for Graduate Programs from the school of business, the chair of the Department of Accountancy, a graduate student, and one faculty member each from finance and MIS. All instruments referred to in Table 3 are available, on request, from the authors.

For the future, as noted in Panel B of Table 3, we will implement two additional elements of our assessment plan that will replace the pre- and post-program surveys. Beginning in 2005, we will collect a limited set of “direct measures” of academic outcomes. Examples could include changes in test scores (e.g. accounting knowledge) from beginning to end of the program, evaluation of presentation skills and organization ability when working in groups, and an assessment of written communication skills. Finally, the AICPA has initiated something referred to as the Education Competency Assessment (ECA) program

that has two components: Assess Student Performance (ASP), and Evaluating Competency Coverage (ECC). ASP is designed to guide users through the process of gathering, analyzing, and using assessment evidence about how well students in a program or course perform the AICPA Core Competencies. ECC allows the user to document and compare actual and desired levels of competencies coverage in a course or program. We will begin using this program in 2005.

SUMMARY

This paper provides a description of a stakeholder-based approach to the development and implementation of a masters program in accounting. We link program development to institutional strategic planning, to the AICPA's *Core Competency Framework* (1999), and to the Albrecht and Sack (2000) monograph. Specifically, the *Strategic Plan* of the business school provided a set of stakeholder relationships and six broad educational goals, which affected the design of our program. External stakeholder analysis then provided specificity regarding the composition of courses in the program and educational objectives associated with each of these courses. We embraced a stakeholder-based approach to implementation issues as well. From this perspective we addressed issues such as scheduling, faculty compensation, the Uniform CPA exam, and the development of a comprehensive assessment program. The paper responds to the call for more descriptive accounts in our literature regarding the process of new program development/implementation and, in this sense, adds to the knowledge base begun by Nikolai (1994).

NOTES

1. An alternative approach to developing an expanded set of educational objectives, embraced in the conceptual discussion found in Herring and Williams (2000), is to rely on the framework provided by Deppe et al. (1991).

2. In addition to this degree, our university offers an MBA, Executive MBA, and a Master of Taxation in conjunction with our law school.

3. Effective for students entering the program in Summer 2002, this course replaced our *Corporate Restructuring* course, which was previously required. We made this change based on stakeholder feedback we received as part of our comprehensive assessment program, an overview of which is given later in this paper.

4. Effective for students entering the program in Summer 2002, this course replaced our *Technological Enablers of e-Business* course. We made this change based on stakeholder feedback we received as part of our comprehensive assessment program.

5. The college has provided laptop computers to undergraduate students since 1997. We currently participate in a lease program with Dell, which has expanded to include our MAC students through completion of their degree requirements. Part of the leasing cost of the laptops used by MAC students is subsidized by the University. The remainder of the cost is built into the comprehensive tuition charge for the MAC program. At the conclusion of the program, the business school absorbs the costs and provides to our graduates the laptop computers they used during the program. The determination of software for the MAC students was made by a committee consisting of the Senior Associate Dean of the business school and faculty teaching in the program.

6. When the MAC program was instituted (Summer of 2001), the \$10,000 per-course summer compensation rate was considered a “premium.” As faculty salaries in accounting continue to rise, this issue may need to be revisited. One possibility the administration is currently considering is the payment of a “premium” (above the \$10,000 amount) when course enrollment exceeds some threshold level (e.g. 35 or 40).

7. Hill et al. (1998) discuss at length the construction and use of such instruments in accounting. They conclude (68) that student self-reports can “proxy” as a measure of actual knowledge gain and can be valid indicators of educational growth.

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