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BEACON LUMBER: AN EXPERIENTIAL INTRODUCTION TO FINANCIAL ACCOUNTING

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ABSTRACT

This paper briefly discusses the principles of experiential learning and their application. Then an experiential exercise designed to *facilitate* the learning process in an Introductory Financial Accounting course - Beacon Lumber - is described. Then, the materials necessary to facilitate this activity are presented, and student response to the initial trial of Beacon is summarized.

INTRODUCTION

Experiential exercises allow students to learn by doing. The hope is that “by doing” the knowledge obtained will be easily transferred when they enter the workforce. Kolb (1984) presents a four stage model of how people learn from their experiences. The person must first have a “concrete experience” from which to learn. This is followed by “reflective observation” where the experience is viewed from a number of perspectives. “Abstract conceptualization” is the third stage, where the learner incorporates his observations into theories. The fourth stage is “active experimentation” where these theories are utilized in solving problems. Kolb views this cyclical process as the method by which people learn by doing.

Albertson (1995) summarizes the work of Boud, Cohen, and Walker (1993) by describing the following five propositions about experiential learning.

Proposition 1: Experience is the foundation of and the stimulus for, learning. This proposition holds that experience and learning cannot be separated

Proposition 2: Learners actively construct their experience, This proposition holds that each person attaches their own meaning to events.

Proposition 3 Learning is a holistic process. This proposition holds that perception of a given experience is influenced by all cognitive, affective, and cognitive aspects of prior learning experiences.

Proposition 4: Learning is socially and culturally constructed. This proposition holds that learners construct meaning in particular social and cultural settings.

Proposition 5: Learning is influenced by the socioemotional context in which it occurs. This proposition holds that emotions and feelings affect the learning process.”

These theoretical suppositions are the foundation for the Beacon Lumber exercise. In developing this exercise, the authors wanted to introduce students to a realistic experience from which they could learn. Assigning the students roles in the operation of a building supply company provides them with the “concrete experience” that Kolb proposes as the first step in the learning process. As students fulfill the responsibilities associated with their roles, they apply the concepts that have been introduced through mini-lectures and text readings. The non-threatening, (there is negligible impact on the course grade) environment in which the exercise is conducted allows students to take risks and learn from them. Their learning is not clouded by the fear of making mistakes and being penalized as a result of those mistakes. The role-playing becomes “fun” and the students not assigned parts are willing to interject their perceptions of the events at hand. Beacon Lumber is the authors’ attempt to incorporate the principles of experiential learning in an introductory accounting course.

BEACON LUMBER

Introduction

Many freshman accounting students have limited or nonexistent business experience and this makes it difficult for them to appreciate the relationship between business activity and recording treatments. Beacon Lumber is a scripted business simulation, which follows the creation and first three months’ operations of a building supply company. The exercise contains over 20 assigned roles, and these provide a natural springboard for discussion about the business significance of various transactions and events. By making these activities meaningful to the individual student (and his or her peers) the classroom activity illustrates the essential link between accounting and business in an enjoyable and informal manner.

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Beacon Lumber presents the accounting topics and study objectives typically associated with the fundamentals of the accounting cycle (or the first five chapters of most introductory financial accounting texts - in the authors' case *Financial Accounting* by Weygandt and Kieso). A minimum of essential background is introduced through formal lecture notes, but most of the 'earning is structured around the students' discussion, analysis and journalizing of events and transactions. The instructor's version of the transaction sets is extensively cross referenced to the text, facilitating comments and observations that link the classroom activity to assigned reading and homework.

Specific Pedagogical Goals

Beacon is premised on the observation that for many students the hardest part of a principles course occurs in the introduction to the essentials of the accounting model. The student has to absorb a great deal of new vocabulary, many abstract concepts and the mechanics of a detail-oriented recording procedure. Having for the most part little or nothing in the way of practical business experience, he will not always appreciate even the basic facts of a business transaction, such as the identity of the buyer or seller, or the tender or borrower. This creates many opportunities for the student to generate additional levels of confusion.

The following describes specific goals and strategies of the Beacon exercise, which promote mastery of the accounting fundamentals.

1. *Present basic accounting concepts and techniques in a unified and comprehensive setting.* Beacon presents all aspects of the accounting cycle in terms of the creation and progress of a single company.
2. *Introduce active learning techniques in an amusing and non-threatening manner.* Students will playact their way through many of the transactions (promoting involvement) and they will have answers and resources readily available (reducing the fear of producing a wrong answer).
3. *Motivate an intuitive understanding of business forms and transactions.* Assigning various commercial' roles to students creates a natural context for directed discussion of the events and circumstances in the transaction sets. The instructor's notes include sample questions and discussion ideas. For example, when discussing the incorporation and issue of stock for Beacon, the instructor can ask a student to imagine herself with a house and some other personal assets, and then discuss the pros and cons of creating a partnership or a corporation. Why would limited liability appeal' to you? How would your husband feel about the possibility of losing your house to satisfy partnership obligations? Would you like to have a hundred partners help you make decisions and manage the business? The business events in the transaction sets are simple and many of them provide an opportunity for the instructor to engage the student's interest by relating questions and issues to their own experience.
4. *Use technical mastery as the foundation for understanding.* The essence of Beacon is to involve the students in the process of accounting as quickly as possible, providing them with an experience, which they can refer to in order to understand concepts. The study objectives for each chapter are presented and many of them can be directly correlated with specific Beacon events or transactions.
5. *Provide an alternative perspective on the material.* Beacon allows the instructor to avoid the potentially boring lecture-from-the-book format that can encourage some students to skip class, while the extensive cross-referencing of i frustrations, explanations, study objectives and other text material maintains a close connection between the classroom exercises and the text. The first transaction set (November 1995) relates to the basic accounting model and debit/credit rules; the second transaction set (December 1995) introduces adjusting and closing entries while the last set (January 1996) develops the students' awareness of accounts required by a merchandising company.
6. *Provide an introduction to the practice set.* All students will complete three Beacon transaction sets in a classroom setting, with ample opportunity for discussions, questions and communal review. A required practice set in our introductory course, will introduce a few new concepts (special journals and subsidiary Ledgers) but in many ways will seem like a natural extension of very familiar activity.
7. *Introduce standard journal format at the beginning of the course.* The journal worksheet for the first set of entries has Debit and Credit columns, and a column for indicating whether the transaction increases or decreases a particular account. This allows a "stealth" introduction of debit and credit rule's. After discussing each transaction the instructor can confirm the correct journal entry and tell the students which account(s) should be debited or credited. All students will have their own reference source for analyzing debit and credit rules.
8. *Restrict the use of the horizontal model to generic accounts.* This allows for a much simpler horizontal model and stresses the identification of account types. We have come to think that the use of a horizontal model

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with many specific accounts creates unnecessary confusion right at the beginning of the course..

9. *Introduce uses of accounting information right at the beginning of the course.* Some of the Beacon events require students to compute ratios or calculate amounts in order to make a decision. These simple exercises should lead students to the idea that accounting information will be useful and important in their future careers.

Roles

Presentation and discussion of the events in Beacon Lumber benefit from the assignment of roles, encouraging students to imagine themselves in various business circumstances and to reflect on their "experience" The following chart summarizes the various roles created in Beacon:

**TABLE 1
Beacon Lumber Company Roles**

Role	Comment
Investor #1	purchases stock for cash
Investor #2	purchases stock for cash; later sells shares for a profit
Investor #3	purchases stock for cash
Investor #4	invests land
Lawyer	submits bill for incorporation
Director #1	
Director #2	appointment is a nonevent: directors will declare dividend
Director #3	
Secretary	keeps track of student roles
Big Wholesale Lumber Co	sells on credit; user of accounting info
Solid Construction Co	buys on credit
Strong Construction Co	buys on credit
Reliable Construction Co	buys on credit
Nocturnal Departures Co	poor credit risk
Cool Construction Co	buys on credit; special order, freight-in/freight-out
John Q. Homeowner	non-commercial account, pays sales tax
Score Construction Co	hired to build warehouse
Large Other Lumber Co	a competitor
Office Manager	enters into transactions
Yardworker #1	employee
Yardworker #2	employee
NYS Tax Commissioner	collects sales tax
Sister of INV#2	buys stock from investor
Sculptor	prepays a short-term rental

Materials

The Beacon material is designed to be used in an active setting. Some lecturing at certain points of the exercise will help to establish context and provide essential background. This material is kept to a minimum. A sample outline for presentation of the classroom activity is given below. The topics under the "lecture" heading would be explained and discussed before engaging the students in the activity. Those topics under 'transaction set' would arise naturally during the course of the activity.

Lecture 1

introduction - Beacon is fun but serves a purpose
Transactions - the essence of business Assets, Liabilities, Owner's Equity. Revenue & Expenses

Transaction Set I

Journal & Journal' entries
Accounting Equation
Ledger Accounts
Economic Entity Assumption
Monetary Unit Assumption
Trial Balance
Preparation of Statements

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TABLE 2
Sample Transaction Sets

<p>BEACON TRANSACTION SET #1 MONTH OF NOVEMBER, 1995 To begin this exercise, make sure you have the following materials close at hand: Journal Sheet Chart of Accounts & Statement Worksheet T Account Worksheet Accounting Equation Worksheet</p>	<p>INSTRUCTOR'S COPY Weygandt & Kieso Chapters 1&2</p> <p>NOTHING THAT REQUIRES ADJUSTING ENTRIES</p>
<p>11/14 On this day an investor created the Beacon Lumber 101 Corporation and purchased 2,000 shares of its common stock for \$20,000. The corporation will operate a lumber yard and building materials business in a medium sized city in New York State. The business will maintain its books on a calendar year basis.</p>	<p>REM: Issue stock certificates. Corporation is most common form of business. Chief advantage is the ability to raise capital with limited liability to investors Discuss liability exposure in sole prop & partnerships Economic Entity Assumption - pp. 7-10 Corp: pg. 9; CH 12 & 13 INV 1 101/301</p>
<p>11/14 Later that afternoon a lawyer who performed the 103 incorporation submits a bill for \$500 fee and \$37.18 in expenses</p>	<p>Q: What accounts are affected by this? REM: Does lawyer consider the receivable an asset? Liability for one entity is usually an asset for another The expense will reduce value of the owners' equity That will happen at the end of the accounting period Lawyer 736/201</p>
<p>BEACON TRANSACTION SET #2 MONTH OF DECEMBER 1996</p> <p>To begin this exercise, make sure you have the following materials close at hand: The comprehensive chart of accounts Journal sheets Blank, 4 column worksheet pad</p>	<p>INSTRUCTOR'S COPY Weygandt & Kieso Chapter 3</p> <p>TRANSACTIONS & EVENTS THAT REQUIRE ADJUSTING & CLOSING ENTRIES Additional types of accounts: Losses & gains Contra accounts</p>
<p>12/1 Beacon purchases a general liability insurance 201 policy for \$1,200, paying cash. The term of policy is one year, from 12/1/95 thru 11/30/96. Insurance</p>	<p>REM: Discuss service over time PREPAYMENT ref. JE 219 REF: Illus. 2-23, pg. 57 127 / 101</p>
<p>12/1 Beacon purchases a forklift for \$10,000, paying 202 half in cash and half with a 5 year non-interest bearing note. The forklift is a well made American Machine & Foundry product, and is expected to last for 10 years.</p>	<p>Introduce the idea that no asset lasts forever; fixed assets will be "used up" thru depreciation expense Every day that you use the forklift you are using it up. PREPAYMENT REF. Je 221 145/205 & 101</p>
<p>12/31 Compute and record the insurance expense for 220 the month of December. Assume that coverage expires evenly throughout the year.</p>	<p>Computation: $1200/12 = \\$100$ 735 / 127 PREPAYMENT REF. Je 201</p>

Beacon contains a comprehensive inventory of teaching materials, which facilitate class participation. The instructor's version of the transaction sets provides convenient notes and other material, supporting a casual and discussion-oriented presentation of the material. These notes include sample questions and remarks: supporting computations: references to the text, the code numbers of all accounts affected by the transaction, and the generic names

of all student role players. Notes are laid out side-by-side with the transaction text to facilitate their use. Examples of the transaction sets are illustrated in Table 2. Students are supplied with transaction sets (minus the instructor's comments) and all the necessary forms to complete the transactions. Upon completion of each transaction set, a solution set is provided. The student materials that comprise Beacon Lumber are summarized in Table 3.

TABLE 3
Sample Student Materials

<p>Topics: Basic Accounting Equation Debit/Credit Rules</p> <p>Materials: Transaction set #1 Chart of accounts Journal sheets Generic horizontal model T accounts Financial Statement worksheets</p> <p>Props: stock certificates and loan agreement</p>	<p>Topic: Adjusting Entries</p> <p>Materials: Transaction set #2 Journal sheets Worksheet</p> <p>Topic: Merchandising Concern</p> <p>Materials: Transaction set #3 Journal sheets Expanded set of accounts Financial Statement worksheets</p>
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Typically, students enrolled in an Introductory Financial Accounting course are freshmen. Beacon Lumber was developed with extensive teaching aids and student materials to ensure that the exercise could be completed easily.

STUDENT RESPONSE

Student response to the beacon Lumber experiential exercise has been positive. Although the authors have utilized this approach to teaching introductory Financial Accounting for the first time this year, the responses to a student opinion survey indicate that it has enhanced the learning process. Eighty seven percent of the students “strongly agreed” or “mostly agreed” with the statement “Beacon helped me to understand the connection between accounting and the business world.” Over 70% felt that the business activities in which Beacon engaged made sense to them and they could see themselves doing similar activities in real life. Only 20% of the students thought that the instructor should spend more time “lecturing.” Approximately, 83% of the students felt that the textbook and the classroom activities were interrelated. After having participated in Beacon, the percentage of students that had a favorable opinion of accounting increased from 50% to 56%. The response to questions concerning the clarity of the exercise materials was also positive, with 83% of the students feeling that the event descriptions were clear, and 62% felt that the accounting forms were easy to use. Only 9% of the students found the text information more useful for understanding accounting concepts than Beacon material. While there is clear satisfaction with Beacon as a learning tool on the part of students, the authors have not yet attempted to measure any difference in learning. Improved quiz and test grades this year compared to last year provide some anecdotal indication that Beacon may also enhance the learning process.

CONCLUSION

Beacon Lumber is a an experiential exercise aimed at teaching Introductory Financial Accounting in a realistic, yet non-threatening manner. The students are assigned roles related to the initiation and operation of a building supply company. The basic principles of the accounting cycle are learned through the events in which students participate. This early exposure to the business world provides students with a link between the concepts presented by text and the application of these principles. Initial student response indicates a high level of satisfaction with the exercise. Although we do not yet have formal measurements of learning, anecdotal evidence suggests that the learning process is enhanced through the use of Beacon.

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