An Experiential Approach to Accounting 101

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ABSTRACT

The   first course in accounting has always been to some extent an experiential learning experience but often one not enjoyable by all students. Besides lectures students have been required to work out solutions to problems that are very close to the type of work many real world accountants do. While solving problems was a good experience, feedback was often lacking or delayed by several weeks. Homework was required to be handed in but not always graded or reviewed for accuracy. For this reason and other reasons, I have developed a computer based experiential learning program that helps the student work through the accounting cycle steps but does not require the student to manually post journal entries nor require computing account balances. For students who are struggling to understand basic accounting fundamentals, this program can serve as a tutor.

INTRODUCTION

The first course in accounting has always been to some extent an experiential learning experience but often one not enjoyable by all students. Besides lectures students have been required to work out solutions to problems that are   close to the type of work performed by many real world accountants . In addition to numerous assigned accounting problems, students are required to complete a practice set that in one sense is equivalent to keeping a real set of books. The typical practice set required students to engage in all steps of the accounting cycle including preparation of financial statements. In the basic course in accounting, learning by doing was and still is a significant part of the course.

Form my experience as an accounting student, the assigned problems and the practice set were far more important to my learning accounting fundamentals than listening to lectures. Now the experiential learning approach in accounting 101 was a limited experience involving several shortcomings. While solving problems was a good experience, feedback was often lacking or delayed by several weeks. Homework was required to be handed in but not always graded or reviewed for accuracy. By the time homework was returned, the course had progressed to other material and the mental involvement in the returned work had faded. Even though the teacher had office hours and perhaps some tutoring help was available, it was unrealistic to expect the teacher to be a tutor to more than a hand full of students.

AN INNOVATIVE COMPUTER SOFTWARE TUTORIAL PROGRAM

After the rules of making journal entries were introduced, the remainder of Accounting 101 largely consisted of making journal entries for many different kinds of business transactions. The transactions first presented to students are revenue and expense transactions for a service type business. Following these transactions the business transactions for a merchandising business were introduced. In nearly all cases whether service or merchandising transactions, the students are asked to make journal entries and often asked to complete all steps of the accounting cycle. When as a student I was often assigned problems which required me to post to the general ledger, determine account balances, prepare a trial balance, make adjusting entries, and then prepare an adjusted trial balance from which the requirement was to prepare financial statements and make closing entries. The steps are technically described as the accounting cycle. Needless to say, many students found that assigned problems often required more than a few hours to complete. Now as painful as it might have seemed to some students, the requirement to work through all steps of the accounting cycle was a type of experiential learning.

I believe that the accounting cycle steps that I mentioned in the preceding paragraph are actually important to understand. For this reason and other reasons I have developed a computer based experiential learning program that helps the student work through the accounting cycle steps but does not require the student to manually post journal entries nor require computing account balances. Posting and determination of account balances is procedure that does not contribute to the analysis of business transactions. This computer program is designed to serve as a computer-based tutor that helps the student that is struggling to understand the basic accounting fundamentals and also helps the student that may want to progress faster than the typical accounting course allows. This computer program is not intended to replace lectures or the traditional way of teaching. It is intended for the student that needs tutoring help that is not otherwise available.

I have given the name, Accounting Tutorial 101 to this computer program. In addition to providing help with the accounting cycle, this program also is designed to involve the student in all phases of the first course in accounting. The program allows the student to spend as much time as desired in any lesson. Instant feedback is available for any journal entry made by the student. The student can toggle back and forth between work just completed and the various help options..

Today's real world accounting is computer based and has eliminated the need for tedious posting and manual computing of

account balances. After a journal entry is made, accounting software such as Quick Books is able to instantly determine new account balances and, if desired, upon request present financial statements based on transactions completed as of date. Now commercial computerized accounting packages while ideal for many businesses are not user friendly for teaching beginning students in an introductory accounting course. Accounting systems such as Quick Books require considerable knowledge of accounting which is obviously lacking on the part of students just starting Accounting 101. The accounting software package I have developed is designed for student learning and has many self help options that make it easier for the student to understand the theory underlying each transaction.

Now before students are asked to make a multitude of journal entries, it is important for the student to have been introduced to the basic fundamentals of accounting either by lecture or by required accounting text reading. The software I have created does not have video material but does contain a built in accounting text book. The text is presented in seventeen lessons which the student can read on the monitor or if desired can be printed out. The seventeen lessons include a discussion of:

Fundamental of journal entries
Service business transactions
Merchandising business transactions
Closing procedures for the service business
Closing procedures for the, merchandising business
Manufacturing business transactions
Transactions involving stocks and bonds

The complete set of lessons is presented in the appendix to this paper.

Now a fundamental premise of the tutorial software is that asking the student to make basic journal entries is important. However, the need to manually post transactions is not necessary. When necessary the student may click a menu button that will automatically post the entry to the accounts specified by the student. The software has a feature that allows the student to make journal entries for various categories of business transaction. The categories are the following:

Service firm transactions
Merchandising firm transaction
Adjusting entries
Closing entries service
Closing entries merchandising
The manufacturing business
Stocks and bond transactions
Corporation stock transactions

Now no pencils or pens are required to make journal entries. For each set of business transactions, a list of accounts are visible. The student reads each transaction and indicates which account to be debited or credited by making a mark in a check box that exists next to each type of account. Then the student enters the dollar amount of the transaction in a blank text box that also corresponds to each account title. The student posts the journal entry by simply clicking on the Record Journal Entry button. The student may at any time view a general ledger to see if the debits and credits have actually been posted. If desired the student can see a trial balance or see how the entry appears on the financial statements. If the student is not sure his entry is correct, he or she can click the See Correct Entry button and his or her entry will be presented next to the correct entry. If the student's entry is incorrect, an explanation of the correct entry will be presented. The format of this computer page allows the student to make journal entries and also provides a number of viewing options. This computer page can be seen in Figure 3 in the Appendix.

The software also includes five tests that the student can take at any time. However, the student is best served to take the appropriate test only when he or she has learned the material which the test covers. The student has an option to get immediate feedback on the number of test questions correctly answered. The tests can be taken as many times as desired.

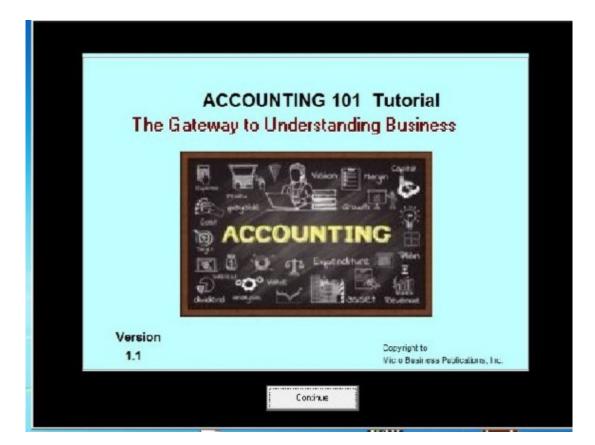A more detailed description of the software is presented in the appendix to this paper.

SUMMARY AND CONCLUSIONS

There is no suggestion that the accounting software described here is designed to replace the traditional method of teaching accounting which is based on lectures and assigned problems including a comprehensive practice set. It is designed to be a help to the student that could benefit from a tutor. The software described here is presented as being experiential because the student is learning by doing and getting immediate feedback. Part of experiential learning is getting feedback on performance and the opportunity to advance to a higher skill level. Accounting as traditionally taught is designed to develop skill by doing accounting. And the skill level believed to be necessary is developed by having the student work problems that replicate real world accounting. Learning by doing is a hallmark of traditional accounting instruction. The problem for many students is that the pace of accounting is a bit fast. The accounting software program described here is intended to provide tutoring help to these students that might not be otherwise available.

In colleges of business administration, generally all business administration students are required to take two courses in principles of accounting. Many students find   the first course in accounting 101 difficult and as the course progresses the course becomes more difficult if the student fails to understand the material presented in the first three or four chapters. The availability of a tutor may not be available or help from the instructor also may be minimal. The computer software program presented in this paper is designed to serve the same role as a personal accounting tutor. The program contains a number of innovative features that helps the student practice making journal entries typical of a service merchandising, and manufacturing businesses. Immediate feedback is available and the student can, if desired, see how each entry directly affects the income statement and balance sheet. Tests are available for the student to take. The tests allow the student to determine if an understanding of basics fundamentals has been achieved.

The software described here has been tested only by the author. It has not yet been tested with actual students. The software is easy to install. It is available free to any person interested in learning accounting. Any accounting professor or instructor or non accounting instructor that would like to receive a copy, just send a message to krgoosen@ cei.net and I will send a copy of the software as an attachment to my return message. The best way for any interested person to understand and evaluate the program is to try it out. A better understanding of the program can be attained by reading a description of the program in the appendix to this paper.

APPENDIX

Part I Accounting Tutor Program

This program has many options. It offers a unique and stimulating way to learn the fundamentals of accounting as typically taught in principles I courses in collegiate accounting. The main menu shows the following options (See Figure 1):

> Tutor Lesson Plans
> Transaction Analysis
> Tests and Quizzes
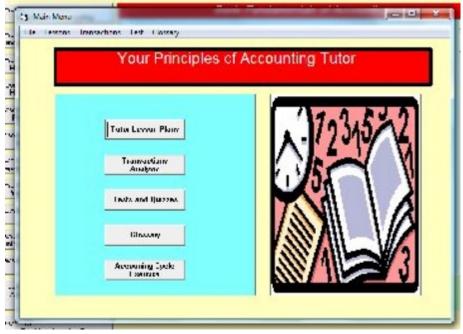> Glossary
> Accounting Cycle Exercise

Figure 1 Main Menu

For the student with no prior background in accounting, it is recommended that you start with the transactions analysis options: There are seven Transaction Analysis options.

> Service business
> Merchandising business
> Adjusting entries
> Closing entries service
> Closing entries merchandising
> The manufacturing business
> Corporation accounting

Figure 3 Transaction Analysis Page

The choice of one of the seven options will bring you to the above page. Each option provides you the ability to make from seven to ten journal entries. You have the option to immediately see if your journal entry is correct. Just click the See Correct Entry button. After you make a journal entry by selecting the appropriate accounts titles and entering debit and credit amounts corresponding to the text boxes opposite the selected accounts, be sure to click the Record Entry button. To see and record the next transaction, click on the Next Entry button.

       This form presents a number of choices.
       Show examples
       See correct entry
       See effect on financial statements
       General journal
       Trial balance
       View all transactions
       General ledger

Every transaction has a direct effect on financial statements. As a student of accounting who wants a deeper understanding of relationships, you might want to click the See Effect on F. S. button. By clicking this button you are able to see the effect of the transaction you have recorded on financial statements as if that transaction was the only transaction recorded.

In order to create a foundation of understanding before making journal entries, you will benefit from reading one or more of the lesson plans. These lesson plans represent a condensed textbook of accounting theory. The lesson plans available are:

Lesson 1: Introduction to Accounting
Lesson 2: Fundamental of Accounting Elements
Lesson 3: Making Journal Entries: Rules
Lesson 4: Making Journal Entries: Examples
Lesson 5: Preparing the Trial Balance
Lesson 6: Making Journal Entries
Lesson 7: Preparing the Adjusted Trial Balance
Lesson 8: Preparing Financial Statements
Lesson 9: Making Closing Entries
Lesson 10: Introduction to the Merchandising Business
Lesson 11: Merchandising Financial Statements
Lesson 12: Account Receivable/Note Receivables
Lesson 13: The Manufacturing Business
Lesson 14 Corporation Accounting

Figure 4 Tutor Lessons Menu

When you click on one of the fourteen, lessons , a text will appear on the screen allowing you to read the theory underlying the chosen topic.

Part II Recommended Course of Study

From the Main Menu (Figure 1), click on the Tutor Lesson Plans menu button. This will take you to the lessonsmenu. This menu (see Figure 4) contains 14 lesson plans. When the Lesson 1 menu button is clicked, Lesson 1 will appear which is very short and basically introductory to accounting. lessons 2 through 14. Lesson 1 through 14 are a type of onscreen accounting text. Lessons 1 through 14 will introduce you to the rules of making journal entries and the steps involved in the accounting cycle. Additionally, you will be able to proceed step by step from the service business to the corporation business.

After you have read lessons 1 through 3, then return to the main menu (Figure 1) and click on the Transactions Analysis menu button. This will take you the following menu:

Figure 5 Transactions Analysis Menu

Now click on the Service Firm Transactions button. The Transaction Analysis page (Figure 3) will appear.

This page provides you a number of options. The first option is to choose the correct accounts to debit and credit. The next step is to enter the dollar amount corresponding to the accounts you have indicated. Finally, in order to make a journal entry, click on the Record Entry Button. Immediately, at the bottom of the page, will appear your journal entry in standard form.

You can immediately move to the next transaction by clicking on the Next Entry button.
However, before moving to the next transactions you may want to check the entry you have made by seeing if your entry agrees with the correct entry. To do this, click on the Correct Entry menu item. You will be taken to the following page (Figure 6):

Figure 6 Comparison of Correct Journal Entry to Entry Made

The page will tell you whether your entry is correct. A side by side comparison of your entry and the correct entry is presented. If your entry is not correct, an explanation of why your entry is wrong is also presented below the side by side comparison.. This page provides an additional option. If you click on the See Effect on F. S. button ,you will be taken to the following page:
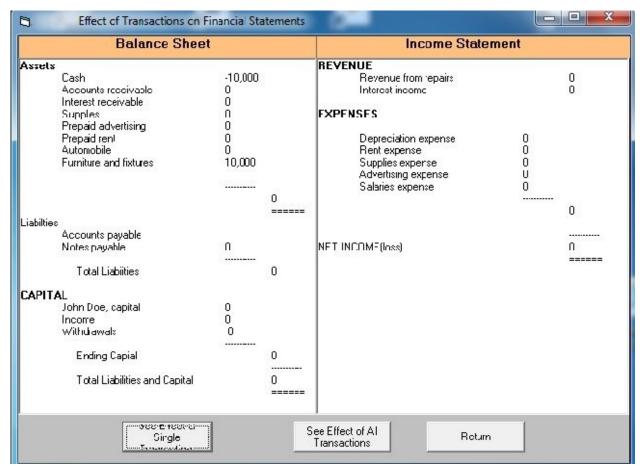
Figure 7 Effect of Journal Entry on Financial Statements

This page will show where on the income statement and balance sheet your journal entry will appear. It is important to your understanding of the journal entry you made that you relate a specific journal entry to the immediate effect on these two financial statements. After you decide that you understand the direct effect on the financial statements, then click Return and this will take you back to page shown in Figure 3. Upon on return to this page, you should move to the next transaction by clicking on the Next Entry button.

After all journal entries in the Service Business option have been made, click Return and then you will be back to the Tutor Lessons page shown in Figure 5. While you can choose to navigate from tutor page to tutor page as you choose, a structured approach to using this accounting tutorial is recommended. A suggested approach is presented in in Part II of this manual

This software program contains five tests that you may take to determine your understanding of the text material that you have read. The tests contain a feature whereby you can see an immediate feedback of right answers and wrong answers. To access these tests click on Test and Quizzes from the Main Menu (Figure 1) and a choice of five tests and quizzes will appear as seen in the following (Figure 8)

Figure 8 Main Menu

The software program contains a special option-- a complete accounting cycle program. This feature takes the student all the way from journal entries to closing entries. Although the number of journal entries is very small, they are still sufficient to allow the student to see every step of the accounting cycle. The practice set format can be seen in Figure 9. This practice set feature can be accessed from the .Main Menu (See Figure 1)

Figure 9 Accounting Cycle Practice Set

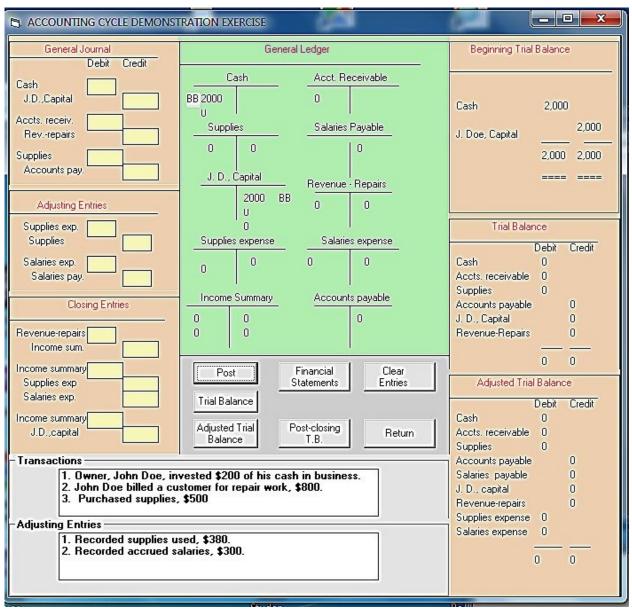At the bottom of this page can be seen three business transactions and two adjusting entries. After the transactions are made and the Post button is clicked, the journal entries' debits and credits will be posted to the general ledger and the posted numbers highlighted by different colors. When the financial statements button is clicked, an updated income statement and balance sheet will appear.

Part III Suggested Course of Study

In order to learn the rules and procedures of accounting, it is necessary to devote considerable time to study. The software package which comes with this set of instructions and user guide is designed to reduce this study time and also provide a better understanding of the computer accounting tutorial. As outlined below, a complete course of study is designed to take seventeen days. Some lessons for a given day may be more difficult or less difficult than other lessons. The Day 1 lesson, for example, is not meant necessarily to mean a period of 24 hours. The student should feel comfortable in taking more or less than one day if more time or less time is felt necessary.

There are a number of options built into the software package that is designed to increase your understanding of accounting fundamentals. For example, after making a journal entry you can elect to see the correct journal entry. Also, an explanation may be seen as to why a journal entry is incorrect if that is the case..

Day 1   Read Lesson **1 (Introduction to Accounting)**
           Read Lesson 2 (Fundamentals of Accounting Elements)
           Read Lesson 3 (Making Journal Entries: Rules)
           Read Lesson 4 (Making Journal Entries: Examples)

These lessons are short and contain the basic fundamentals for future lessons.

Day 2   Transactions Analysis- Service Business

After completing Day 1 study, return to the Main Menu (Figure 1) and select Transactions Analysis. From the next visible menu select Service Business Transactions (Figure 4). You will then see the page shown in Figure 3. At the top of this page you will see transaction 1. You are required to make a journal entry for transaction 1. After you make this journal entry, a number of options are available to you. You can:

1. See the correct journal entry which may or may not be the same as your journal entry.This option will give you an explanation of the correct journal entry.

2. Also, there is an option to go to a new page by clicking See Effect on. F. S. This new page shows how your journal entry will appear on the income statement and balance sheet.

3. There are regarding the service business only ten transactions and ten journal entries to make. If you desire, you can see all your journal entries in the form of a general journal by clicking on the General Journal menu button.

4. If you want see all your journal entries in the form of a trial balance, that option is also available.

Day 3   Read lesson 5 (Preparing the Trial Balance)

The first five lessons are concerned about learning how to make journal entries. Preparation of the trial balance in Lesson 3 is presented as the third step of the accounting cycle. After reading lessons 4 and 5, you will be ready to take test number 1.

Day 4   Take test number 1 (Part A Service Business)
           Take test number 2 (Part B Service Business)

After reading and studying lessons 1 through 5, you should be ready to take tests number 1.and 2.
From the main page (Figure 1), select Tests and Decisions. A choice of four tests will appear.
Click on test number 1 and test number 1 will appear.

Day 5   Read lesson 6 (Making Adjusting Entries)
           Read lesson 7 (Preparing the Adjusted Trial Balance)

These lessons take you to steps 4 and 5 of the accounting cycle, making adjusting entries and preparing the adjusted trial balance. These lessons will make clear why adjusting entries at the end of an accounting period are important. The ability to make adjusting entries in the form of journal entries is not as important as understanding why they are made.

Day 6   Transactions Analysis: (Making Adjusting Entries)

From the main menu (See Figure 1) click on Transactions Analysis. From the page that appears select, Adjusting Entries. You will be asked to make five adjusting entries for a service business.

Day 7   Read Lesson 9: Making Closing Entries

Day 8   Transactions Analysis: Closing Entries: Service Business

From the Main Menu (See Figure 1) click on Transactions Analysis. From the page that appears, select Closing Entries: You will be asked to make four closing entries for a service business.

Day 9 Read Lesson 8 (Preparing Financial Statements)

Preparation of financial statements is step 6 of the accounting cycle. While the ability to understand financial statements does not first require the ability to prepare them; however, the ability to prepare financial statements does contribute to understanding. In the case of students studying to be accountants, the ability to prepare financial statements is essential.

Technically speaking, closing entries can be made before or after financial statements are prepared. Making closing entries is the second to last step of the accounting cycle. Closing entries in this accounting tutorial is step 7 of the accounting cycle.

Day 10   Read Lesson 10: Introduction to the Merchandising Business

Day 11   Transactions Analysis: Merchandising Transactions

From the Main Menu (Figure 1), click on the menu item Transactions Analysis.
Form the page that appears, select Merchandising Transactions. You will be able to make ten journal entries.

Day 12   Take Test Number 3 (Merchandising Business)

Day 13   Read Lesson 11: Merchandising Financial Statements

Day 14   Transaction Analysis (5): Closing Entries: Merchandising:

From the Main Menu (see Figure 1) click on Transactions Analysis. From the page that appears select Closing Entries: Merchandising. You will be asked to make the closing entries required when the business is a merchandising business. There are six closing entries.

Day 15   Read Lesson 12: Accounts Receivable/Notes Receivable

Day 16   Transaction Analysis: Read Lesson 13: The Manufacturing Business

After you complete reading lesson 13 and have carefully studied each example, you should be ready to practice making journal entries for a manufacturing business. From the Main Menu (see Figure 1), click on Transactions Analysis. From the page that appears select The Manufacturing Business. You will be asked to make several regular journal entries and then asked to make closing entries for a manufacturing business. There are twelve transaction and closing entries.

Day 17   Take Test number 4 Manufacturing Business

Day 18   Read Lesson 14 Corporation Accounting

Summary of Recommended Study Guide

In colleges of business administration, generally all business administration students are required to take two courses in principles of accounting. Many students such as yourself may find that the first course in accounting 101 difficult and as the course progresses the course becomes more difficult if the student fails to understand the material presented in the first three or four chapters. The availability of a tutor may not be available or help from the instructor also may be minimal to you. The computer software program presented in this paper is designed to serve as your personal accounting tutor. The program contains a number of innovative features that helps you practice making journal entries typical of a service, merchandising, and manufacturing business. Immediate feedback is available. You can see how each entry directly affects the income statement and balance sheet. Tests are available for you to take. The tests allow you to determine if an understanding of basic accounting fundamentals has been achieved.