

# INTEGRATING INFORMATION TECHNOLOGY IN UNDERGRADUATE TAX ACCOUNTING CURRICULUM

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## ABSTRACT

The use of information technology has become a key part of teaching accounting curricula. Individual and corporate tax courses are changing how the curriculum is delivered. Tax preparation software, tax research databases, spreadsheets, the Internet, and specialized software can be integrated into the tax curriculum to provide students hands-on experience with technology used in the field and to improve the learning process. This paper presents the experiences of integrating information technology in undergraduate tax accounting curriculum at a medium-size, AACSB-I accredited, regional state university.

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## INTRODUCTION

Albrecht and Sack's seminal 2000 study on improving accounting education called on accounting programs to produce accounting graduates that possess information technology skills (p. 57), and recommended that accounting programs include "technology assignments to teach technology" (p. 64). Despite this call from Albrecht and Sack and others -- see, e.g., AAA, 1986, 1987; IFAC, 1995 -- research indicates that coverage of information technology will be lower than faculty members' perceived level of the importance (Chang & Hwang, 2003). This paper presents our experiences integrating information technology in undergraduate tax accounting curriculum at a medium-size, AACSB-I accredited, regional state university.

## UNDERGRADUATE TAX ACCOUNTING CURRICULA

The undergraduate tax accounting curricula consists of two courses, Federal Tax Accounting and Advanced Federal Tax Accounting. Consistent with the traditional approach to teaching accounting, Federal Tax Accounting covers an introduction to taxation, individual taxation, and the Schedule C. Advanced Federal Taxation covers the taxation of corporations, partnerships and other flow-through entities, as well as estates and trusts. In addition, students have the ability to participate in the university's Volunteer Income Tax Assistance program, a program that prepares and electronically files approximately

### Federal Tax Accounting

After three years of trial and error, information technology is now integrated in the

Federal Tax Accounting in a number of different ways -- through tax preparation software, through spreadsheets, through tax research databases, through the Internet, through online course platforms, and through specialized software.

### Tax Preparation Software

Tax preparation software is integrated in Federal Tax Accounting in two ways. First, students prepare tax returns using TurboTax. TurboTax now comes bundled with the West taxation texts (see, e.g., Willis et. al., 2007). Because accounting students are likely to use such software for their own returns and because accounting students are likely to be asked by other *pro se* filers questions about such tax preparation software, it is important that students become familiar with such software, even if they are unlikely to use it for professional tax preparation work. Students are required to e-mail their tax returns to the instructor, so that the instructor can tell by the file type that TurboTax was used to prepare the returns.

Second, students prepare tax returns using ProSeries. ProSeries is now available with no charge from Intuit as part of Intuit's Educational Institute Software Program. See, [http://www.proseries.com/training/edu\\_program\\_overview.aspx](http://www.proseries.com/training/edu_program_overview.aspx). Again, students are required to e-mail their tax returns to the instructor, so that the instructor can tell by the file type that ProSeries was used to prepare the returns.

### Tax Research Software

In addition to preparing returns using tax preparation software, students perform research on tax law using CCH Tax Research Network, which is available on-line to accounting students. (RIA tax

research comes bundled with the West texts, for those without such access.) Students use the CCH Tax Research Network to prepare tax memoranda on various hypothetical fact situations for hypothetical clients. Students are required to research classical tax cases, such as *Commissioner v. Flowers* (1945) and *Corn Products* (1955). Topics include travel away from home, the classification of various property transactions as inventory or § 1231 property or as capital property, and the like. The department also arranged for professional trainers from Commerce Clearing House to train students on CCH Tax Research Network.

### **Internet**

In addition to preparing returns using tax preparation software and in addition to using tax research software, students are required to use the Internet to gather information related to taxation. Students are required to retrieve forms from the IRS, retrieve information from the principal Enrolled Agent web site, and retrieve information from various courts' websites.

### **Advanced Federal Tax Accounting**

Multiple technologies are currently integrated into the Advanced Tax curriculum including a course website, professional tax software, online tax research databases, spreadsheet, and word processing software. Additional software currently used in the field is demonstrated in class.

The course website includes announcements, course information, staff information, email, threaded discussion, automated class lectures, selected text solutions, grading and links. Students submit assignments through digital drop box and have real time access to their grades.

ProSeries professional tax software is used for multiple assignments. The software is licensed to the University through Intuit. Students have been required to prepare tax returns for C-corporations, S-corporations, and partnerships. Students have also completed a C-corporation tax return using TurboTax for Business. Similarities and differences in the software interfaces and functionality are highlighted through the assignments and resulting class discussion. In addition, students have been provided with in-class demonstrations of Ultra Tax, and Pro System Fx to provide a broad exposure to professional tax software.

Electronic spreadsheets are used extensively by tax professionals in the field. Many tax return supporting schedules and advanced calculations are performed using spreadsheets. Students have been required to submit Excel assignments on the course website. Students are required to create a spreadsheet for Form 1120 Schedule M-1 and additional supporting statements.

Students complete basis calculations in Excel for multiple years for an S-Corporation with three shareholders. The S-corporation has losses in the early years which reduce stock basis to zero. This results in shareholder loans to the corporation to create additional basis in debt. Losses completely eliminate both stock and debt basis. In the out years the entity passes through enough income to restore debt basis, restore stock basis and provide for cash distributions to the shareholders.

Students have also been required to submit an Excel spreadsheet for allocation of partnership income and losses. This assignment involves a limited partnership with losses in excess of capital contributions, allocations to general and limited partners, and personal guarantees of debt by selected limited partners. Students provide calculations to limit pass-through losses to the limited partners with the excess losses passed through only to the general partners who have basis in partnership debt. In addition, the general partner is another partnership providing students with exposure to tiered partnership arrangements. Students also create an Excel spreadsheet for Form 1041 Trust calculations including distributable net income (DNI) and trust taxable income.

Students in Advanced Taxation are required to use the CCH online research databases for federal tax research. Tax research papers are submitted in word processing software formatted as facts, issues, discussion, conclusions/recommendations.

Additional technologies demonstrated in class include FAS depreciation software, PPC tax research databases, specialized software such as Steve Leimburg's number cruncher, present value and amortization software. There is additional discussion of the paperless office, the extensive use of notebook computers in the field, personal data assistants, wireless communications, and integration of tax software with other software such as CCH Trial Balance and Audit Vision.

## Volunteer Income Tax Assistance Program

Although not an official part of the accounting curriculum, students are encouraged to participate in the university's Volunteer Income Tax Assistance Program. To help students gain an understanding of information technology, the program began filing tax returns electronically as part of its Volunteer Income Tax Assistance (VITA). The program uses the TaxWise software provided by the IRS. Last year, students prepared and electronically filed approximately 180 state and federal tax returns.

### RESULTS

Informal discussions with students indicate positive experiences with this integration of information technology in the undergraduate tax accounting curriculum. In addition, experiences are formally evaluated in Federal Tax Accounting with an anonymous supplemental questionnaire that is administered at the same time as the formal class evaluations. This questionnaire has two questions that are generally related to integration of information technology in the undergraduate tax accounting curriculum, namely:

For each area listed below, please select the response that best describes your personal level of knowledge or understanding gained from this course:

- |   |                            |
|---|----------------------------|
| 5 | Strongly Agree             |
| 4 | Agree                      |
| 3 | Neither Agree Nor Disagree |
| 2 | Disagree                   |
| 1 | Strongly Disagree          |
- 
- |    |  |   |   |   |
|----|--|---|---|---|
| 1. | I have an ability to prepare individual tax returns by hand & by computer. |   |   |   |
| 5  | 4  | 3 | 2 | 1 |
- 
- |    |  |   |   |   |
|----|--|---|---|---|
| 2. | I have the ability to use the Internet as a tool for tax research and to obtain various tax documents. |   |   |   |
| 5  | 4  | 3 | 2 | 1 |

Table 1 shows the results of this survey for the past six semesters. A regression analysis of the data (not shown) indicate a positive, but not significant correlation between the introduction of using TurboTax and ProSeries in Federal Tax Accounting and TaxWise in the VITA program in the Fall of 2005.

**Table 1  
Summary Data**

Q1						
<b>Mean</b>	4.21	4.63	3.68	4.47	4.45	4.29
	Fall 2003	Spring 2004	Fall 2004	Spring 2005	Fall 2005	Spring 2006
Q 2						
<b>Mean</b>	4.68	4.84	4.32	4.84	4.70	4.74
	Fall 2003	Spring 2004	Fall 2004	Spring 2005	Fall 2005	Spring 2006

### DISCUSSION

Clearly, more statistical analysis needs to be done with the limited survey data available. For example, where possible such control variables as class grade point average, and student grade point average need to be included. Further, the surveys, which were inherited by the authors, need to be refined. For example, both questions are double-barreled questions; a student may have increased ability to prepare tax returns by computer and less ability to prepare it by hand, and this would stilt responses to question 1 in regards to information technology. The authors will develop a revised survey instrument to collect data related to course objectives, technology needs, and a proposed notebook computer requirement.

### CONCLUSION

Contrary to commonly held expectations, incoming accounting students have limited information technology skills (Stoner, 1999). This paper details what we have done to integrate information technology in the tax accounting curriculum. While the results are positive, clearly more can be done. Future plans under consideration include making the VITA a separate course, which would expose students to additional use of information technology. The authors will collect additional data from both federal taxation and advanced federal taxation. This will provide approximately 100 observations for the refined survey instrument for use during fall 2006 and spring 2007.

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