

Using Great Plains Dynamics To Serve Two Diverse Student Populations

Terri L. Herron, (Email: terri.herron@business.umt.edu), The University of Montana*

Abstract

This paper illustrates how Great Plains Dynamics is used in two courses with different objectives and student populations. In the undergraduate AIS course, the software is used to reinforce accounting cycle concepts while providing opportunity for hands-on experience with commercial accounting software. In the graduate BIS course, the software is used to provide a context in which students learn about the accounting software selection process, software features, and controls implemented in accounting software.

1.0 Introduction

In 1995, the International Federation of Accountants (IFAC) issued International Education Guideline No. 11, "Information Technology in the Accounting Curriculum" (IFAC 1995). Shortly thereafter, the American Institute of Certified Public Accountants (AICPA) formulated a Technology Curriculum and Competency Model Task Force (herein Task Force) to address implementation of IFAC No. 11 (AICPA 1996). The Task Force encouraged a "new mind set" that no longer considers information technology (IT) "a discipline peripheral to accounting" (AICPA 1996, paragraph 8). In short, the accounting profession recognized that accounting education must include a broad and deep array of IT topics integrated with accounting concepts.

At the University of Montana the business school mission reads: "The faculty and staff are committed to excellence in innovative

Readers with comments or questions are encouraged to contact the authors via email.

experiential learning and professional growth through research and service" (University of Montana, 2000). In 1999 the emphasis on experiential learning was formalized by implementing a requirement that undergraduate students complete at least three experiential learning opportunities from a formal list of courses pre-approved as such. School policies define experiential learning as "when a personally responsible participant cognitively, affectively, and behaviorally processes knowledge, skills and/or attitudes in a learning environment characterized by a high level of active involvement" (University of Montana, 1999).

Within the framework of experiential learning, two diverse courses at the University of Montana use commercial accounting software. Recognizing that students may not eventually use this specific software in a work environment, mastery of the software mechanics is not emphasized in either course. Rather, the students use the software to experience and integrate accounting and IT concepts. One course focuses on us-

ing the software to complete the accounting cycle. The other course focuses on software selection, controls, and features, using the software to provide a context for these topics.

The purpose of this paper is to illustrate how these two diverse courses use commercial accounting software in experiential learning exercises. Section 2.0 will describe Great Plains Dynamics and its Educational Alliance Network. In Sections 3.0 and 4.0, the use of Great Plains Dynamics in an undergraduate accounting information systems course and a graduate business information systems course, respectively, will be detailed. The final section will summarize.

2.0 Great Plains Dynamics

Great Plains is a leading manufacturer of accounting information and enterprise software solutions for mid- to large-sized companies. Its most popular product, Dynamics, is a modular multi-user system. Companies can incorporate anywhere from a few to over a dozen separate but integrated modules (e.g., invoicing, inventory). To facilitate the use of Dynamics in accounting curricula, Great Plains created the Educational Alliance Network (EAN). Educational institutions can join the EAN, where they receive the full commercial Dynamics product and support in exchange for the promise of using Dynamics in one or more courses per academic year. The University of Montana joined the EAN in 1998.

The concept of partnerships between software vendors and educational institutions is not new. While such partnerships can provide synergies for both partners, they can also have drawbacks. The EAN is no exception. First, the software is complex and extensive. Installation and management of technical issues can be overwhelming to even fully dedicated network administrators. Second, the training offered to faculty is detailed and time consuming. The EAN generously allows faculty to attend any Great Plains training seminar free of registration

costs (often nearly \$2000). However, mastery of the software requires attendance at several weeks of such seminars. The faculty attend the same seminars as the commercial software adopters rather than attending special training sessions. Third, the EAN is relatively new. The idea of the EAN facilitating use of Great Plains in the classroom was in its infancy at the time we joined the EAN. Some instructional materials were available online, but downloading data files and getting detailed teaching notes was difficult. While the EAN provided access to a premier accounting package and training programs, a convenient, effective bridge to the classroom was yet to be built.

In 1999 Arens & Ward [1] combined their widely popular *Systems Understanding Aid* (Arens & Ward 1995) practice set with Great Plains Dynamics. The new product, *Computerized Accounting Using Great Plains Dynamics* (Arens & Ward 1999) comes bundled with a student version of the Dynamics software. Students are first familiarized with the Dynamics interface, followed by a thorough training chapter. In the training chapter students complete a myriad of accounting and information transactions ranging from sales on account, to paying employees, to adjusting inventory prices. This extensive training chapter is followed by a comprehensive practice set where students use the *same* company and the *same* transactions as the *Systems Understanding Aid*. Additional chapters expose students to large company capabilities of Dynamics as well as a simple company setup exercise.

The new Arens & Ward (1999) product allows for Dynamics to be incorporated into the accounting classroom while avoiding the implementation and training challenges encountered when using the full commercial Dynamics product. It also allows students to install the software on home computers, as well as having stand-alone installations on lab machines (instead of the network server installation required with the full version).

is completed, students are given an in-class quiz over basic concepts encountered in the completion of the practice set.

Computerized Practice Set

While the knowledge of the detailed components and processes of the accounting cycle are the focus of the manual practice set, such systems are practically extinct even in the smallest businesses. However, this detailed knowledge is invaluable in understanding hidden processes in computerized accounting systems. One student emphatically stated that her company used single-entry accounting because she never made both a debit and a credit in her accounting job! The computerized practice set bridges this gap between the accounting cycle and the computer processes. The Waren Distributing transactions used in the manual practice set are used to repeat the entire accounting cycle using software. As with the manual practice set, the Waren Distributing accounts and balances are already set up within the student version of the software, and the students complete transactions for the last two weeks in the fiscal year (see Appendix A for a listing of transactions and tasks included in the computerized practice set).

The primary objectives of the computerized practice set (*Computerized Accounting Using Great Plains Dynamics*) in this undergraduate course include:

- 1) exposing students to accounting software used by many businesses;
- 2) completing the accounting cycle using a computerized accounting package; and
- 3) recognizing the efficiencies inherent in computerized systems.

The overriding objective of using the computerized practice set is to give the students experience in working with accounting software. Students repeatedly request “hands-on” experience with computers in general and accounting software in particular.

Grading and Learning Opportunities

Because the primary objective in completing the computerized practice set is to provide students hands-on experience with software, the majority of the points for the project are earned by merely attending lab work sessions and completing the assignments. This approach provides the instructor the opportunity to observe students completing the project tasks while providing students access to the instructor in the event they encounter difficulties. Students are encouraged to work side-by-side in pairs; this reduces student error and facilitates student troubleshooting. The students complete the Waren Distributing practice set (through chapter 4) and do not complete the additional chapters on large company applications and company setup due to course time constraints. Completing the computerized Waren Distributing practice set requires 10-15 hours, with considerable variability across students.

Approximately 25% of the project points are awarded based on accuracy. While the chapter on Waren Distributing calls for printing over 15 reports, the students are graded on four specific reports: pre-adjusting trial balance, post-adjusting trial balance, stock status report, and general journal. While students can eventually get the correct answers on their trial balances through solutions provided in the text, the general journal reveals any additional journal entries students make beyond the required adjusting entries (and points are deducted for these additional entries). The transactions are inventory-intensive, so if students make correcting general journal entries that affect inventory or related accounts the stock status report (inventory subsidiary ledger) will not be correct. Finally, if a student desires to have a report graded during a lab session, the report can be printed to screen and visually inspected by the instructor.

Observations

Students very much enjoy the opportunity to have hands-on exposure to a real accounting software package. For most students in this AIS course, this is the first such exposure. In course evaluations, students repeatedly comment on the value of completing both the manual and computer practice sets. At the same time, having students complete all the accounting tasks using a complex accounting package can be overwhelming. Because the practice set includes a wide variety of transactions and tasks, students seldom complete the same type of transaction twice. Each type of transaction calls for a different screen and progression of field entries, so students are never quite comfortable with what they are doing. The text does provide step-by-step instructions for each transaction type. Students need to know that companies using Dynamics are large enough so that one person is not solely responsible for all accounting entries. Thus, the lack of intuition they feel in completing the screens is an artifact of the breadth of the project.

Summary

Completing a practice set using Great Plains Dynamics in the undergraduate AIS course serves to meet the objective of thoroughly understanding the accounting cycle while obtaining meaningful hands-on experience with accounting software. *Computerized Accounting Using Great Plains Dynamics* provides continuity with the manual practice set students complete early in the course, while allowing a frame of reference for comparison between manual and computerized accounting processes.

4.0 Graduate Business Information Systems

Student Profile

Students taking the graduate Business Information Systems (BIS) course are a combination of three populations: Masters of Account-

tancy (MACCT) students, Masters of Business Administration (MBA) students completing coursework during on-campus, daytime classes, and MBA students completing coursework during off-campus, evening classes. The inaugural offerings of the course included nine MACCT students, 13 daytime MBA students, and 12 evening MBA students.

The MACCT and the daytime MBA students are typically in their early 20s and from the northwest region of the United States. They usually have not had a significant exposure to computerized accounting systems. The MACCT students largely enter public accounting upon graduation. The daytime MBA students will work in a variety of business settings throughout the region upon graduation. The evening MBA students are typically older students working full time, with considerable work experience. Some have had limited exposure to computerized accounting systems, though this exposure is rarely in a broad accounting capacity. Evening MBA students often do not change jobs upon completing their degree but rather use the degree to advance within their current company. However, there is a healthy number who obtain the MBA degree to change careers.

It is important to note that any student who has previously completed the abovementioned AIS course is discouraged from taking this BIS course because of the overlap in material. However, because both courses are relatively new in the curriculum, few students have been in this situation.

Course Profile

Both the MBA and MAACT degrees include a requirement that students complete two credits of "technology perspective" courses. These courses are electives in the sense that students may choose which courses to take so long as the credits are designated as "technology perspective" courses. Approximately six credits of such

courses are offered during a calendar year in courses ranging from one to three credits each.

BIS is a one-credit technology perspective course offered in two formats: a five-week day-time course and a single weekend course. Generally, the MACCT and daytime MBA students take the five-week course, while the evening MBA students take the weekend course. The courses are administered in exactly the same way, with the exception of the scheduling of the 15 hours of class time.

Because of the brevity of the course, its objectives are very focused. The stated objectives of the course are to:

- 1) provide students with “hands-on” experience with a mid-range accounting software package;
- 2) expose students to the process applied in selecting accounting software applications; and
- 3) equip students to critically evaluate basic features and controls of accounting software applications.

Using Great Plains Dynamics in this course serves to provide a context for understanding the desirable characteristics one should seek in an accounting information system.

Computerized Practice Set

The same computerized practice set used in AIS is used in this course (*Computerized Accounting Using Great Plains Dynamics*). Graduate students are assumed to have a basic working knowledge of the accounting cycle. Thus, the focus is not on the accounting cycle but rather is on the accounting software. A majority of the in-class hours are devoted to working the entire computerized Waren Distributing project, in addition to completing additional chapters on large company applications and company setup. The graduate students work at a quicker pace than the undergraduate students, typically taking 8-10

hours to complete Waren Distributing practice set, plus an additional 2-4 to complete the additional chapters.

To supplement the hands-on computer time, the students also complete a controls exercise and view videos related to the software. In the controls exercise, students first match control terms with definitions. Then the students focus on input controls, finding specific instances of where they are evident in the Dynamics input screens. Great Plains furnishes a series of short videos of interviews with company leaders and clients. One video shows Bill Gates demonstrating the power of Visual Basic integration within Dynamics, a particularly effective video to show at the conclusion of the project.

Grading and Learning Opportunities

Though this one-credit graduate course uses virtually the same software and assignments as the undergraduate course, the software serves a very different purpose in this course. Rather than the software reinforcing accounting cycle concepts, it provides a backdrop for a more in-depth analysis. The graduate students bring a richer educational and career background to the course. Thus, they are expected to view the software and its impacts from a more encompassing perspective. This broader perspective is reflected in a course paper. Completing the computerized projects accounts for 50% of the students' course grade. The remaining 50% of the grade is earned by completing the course paper.

In this paper, the students are to integrate outside readings with their personal experience with the software to (1) describe a process a company should employ in selecting accounting software, (2) describe features and controls one would desire in accounting software, and (3) evaluate Dynamics features and controls based on their limited experience with the software. The exercise of *using* the software provides a

context for understanding how one would select and evaluate accounting software.

Observations

Course evaluations revealed that the graduate students appreciated the hands-on nature of the course. While the MBA students were initially somewhat apprehensive about working with an “accounting” system, they found the projects to be suitable for non-accountants. The students in the weekend course (largely evening MBA students) were able to relate the projects and paper to their own work experiences. The videos were a well-received addition that tied the accounting nature of the class to a larger business perspective. The controls exercise brought an appreciation for internal controls that could be built in to software (since the exercises largely involved input of data and transactions, the focus was on input controls). The students were surprised at the extensiveness of such controls in Dynamics

As in the undergraduate AIS course, the students complete the computerized assignments largely during the in-class lab sessions. This proves particularly beneficial for the MBA stu-

dents who may not have taken their basic accounting courses in quite a while, so that they require additional guidance on the basic accounting issues. It is interesting to note that the lab sessions were much more successful in the weekend course than in the five-week daytime course. The students attending the weekend course were able to work for extended periods of time without their concentration or workflow being interrupted, and then the interruption was only brief. The daytime class met twice a week so that the time between class meetings was as long as five days apart, making it more difficult for students to pick up where they left off the previous class session.

Summary

Completing a practice set using Great Plains Dynamics in the graduate BIS course serves to both provide hands-on experience with accounting software while also providing a context to better understand the software selection and evaluation process. This more in-depth use of Great Plains Dynamics also provided the opportunity for students to experience controls and features that they may have only read about outside of class. A comparison of the computerized

Figure 2: Comparison of Computerized Accounting Using Great Plains Dynamics in Undergraduate AIS and Graduate BIS Courses

	Undergraduate AIS	Graduate AIS
Number of Course Credit Hours	3 credit hours	1 credit hours
Course Schedule	15 weeks (MWF)	5 weeks (MW) or one weekend
Systems Understanding Aid Used?	Yes	No
Percentage Course Points Allocated to Computerized Accounting	13%	50%
Approximate Number (% of total) of In-Class Lab Hours	10 (22%)	12 (80%)
Chapters Covered from Computerized Accounting	Training (1-3) Waren Distributing (4)	Training (1-3) Waren Distributing (4) Large Company Use (5) Company Setup (6)
Additional Course Activities Related to Computerized Accounting	None	Course Paper Controls Exercise Videos

assignments in the AIS and BIS courses is summarized in Figure 2.

5.0 Summary

This paper illustrates how Great Plains Dynamics is used in two courses with different objectives and student populations. In the undergraduate AIS course, the software is used to reinforce accounting cycle concepts while providing opportunity for hands-on experience with commercial accounting software. In the graduate BIS course, the software is used to provide a context in which students learn about the accounting software selection process, software features, and controls implemented in accounting software.

Consistent with IFAC and AICPA recommendations, the accounting and IT concepts are integrated in both courses; consistent with the school's mission, the computerized assignments provide opportunities for experiential learning. These goals are accomplished by using a student version of commercial accounting software that is otherwise time consuming to integrate into the curriculum. ☐

Endnotes

1. The author has no formal or informal ties to Arens & Ward or Armond Dalton Publishing, Inc.

References

1. American Institute of Certified Public Accountants (AICPA). 1996. *AICPA Implementation Strategies for IFAC International Education Guideline No. 11: Implications for Education and Practice*. New York: AICPA.
2. Arens, A. and D. Ward. 1999. *Computerized Accounting Using Great Plains Dynamics*. Okemos, MI: Armond Dalton Publishers, Inc.
3. Arens, A. and D. Ward. 1995. *Systems Understanding Aid (4th ed.)*. Okemos, MI: Armond Dalton Publishers, Inc.
4. International Federation of Accountants (IFAC). 1995. *International Education Guideline No. 11: Information Technology in the Accounting Curriculum*. New York: IFAC.

5. University of Montana. 2000. School of Business Administration web page. www.business.umt.edu Accessed May 23, 2000.
6. University of Montana. 1999. SOBA Experiential Requirement. School of Business Administration Internal Document.

Appendix A: Transactions and Tasks Included in *Computerized Accounting Using Great Plains Dynamics* (Arens & Ward 1999)

Revenue Cycle

- Make a Credit Sale
- Write-off Account Receivable
- Collect Outstanding Receivable
- Receive Returned Goods
- Age Receivables
- Print Customer Monthly Statements

Expenditure and Inventory Cycles

- Inventory Maintenance (change costs and prices)
- Prepare Purchase Order
- Receive Goods From Purchase Order
- Purchase Goods/Services Without Purchase Order
- Pay a Vendor Invoice
- Adjust Perpetual Inventory Records (counts)
- Record Depreciation Expense
- Accrue Interest Payable
- Record Bad Debt Expense
- Close Accounts to Cost of Goods Sold
- Record Federal Income Taxes

Payroll Cycle

- Employee Maintenance (change pay rates)
- Pay Employees
- Record Monthly Unemployment Taxes

Financial and Reporting Cycle

- Make Bank Deposit
- Reconcile Bank Balance
- Post Transactions
- Print Trial Balance
- Print Financial Statements
- Print Various Internal Reports
- Close the General Ledger

Miscellaneous Tasks

- Lookup Account Balances
- Lookup Customer Account Numbers
- Lookup Inventory Item Numbers
- Lookup Vendor Account Numbers
- Alter Default Settings
- Data File Backup
- Data File Restoration