

Dynamics as a Teaching and Learning Tool: The First Step—Restructure the AIS Course!

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Abstract: The nature of the practice of accounting continues to evolve as technology evolves. From a historical prospective, the development of Enterprise Resource Planning, ERP, systems and the addition of analysis and documentation tools is similar to the process whereby spreadsheet software slowly transitioned from practice to the classroom. Spreadsheets had completely replaced the calculator in accounting practice by the late 1980's. However, it was not until after 2000 that accounting texts started including spreadsheet problems and even today, accounting programs encourage but do not require students to do their homework in Excel. The challenge facing accounting faculty, whose goal is to increase the technological skills of accounting graduates, is how to incorporate ERP systems across accounting courses. Given the history of Excel, a more practical approach would be to exploit the full potential of ERP software in accounting systems courses first as a model for other accounting courses. The objective of this paper is to initiate a dialog about leveraging Dynamics ERP software as a teaching and learning tool in accounting systems courses to serve as a model for other accounting courses, the obstacles that must be overcome to achieving full exploitation, and the methodology that might be used in overcoming these obstacles.

INTRODUCTION

The University community has criticized Business for teaching software because, in the view of faculty in the arts and sciences, software is something taught in trade schools. In fact, state legislative or administrative bodies, rather than University faculty, mandated the requirement that students take Internet, Word, PowerPoint, and Excel classes at the University level. Today, professors in all disciplines expect their students to use Word and PowerPoint to prepare papers and presentations. The extensive use of computers in grades K-12 is so prevalent that many universities only require students to take these basic computer classes or on-line courses if they cannot pass an exam on these individual programs when they enter the university.

In 1987, major corporations were using Lotus 1-2-3 and were hiring individuals to train their staffs in developing worksheets. Excel gradually replaced Lotus, and by the early 90's, accounting firms were using Excel and had entirely abandoned calculators. Accountants have become so accustomed to using Excel that the thought of students using calculators, pencils, and paper to work accounting problems is almost incomprehensible. With the advent of Peachtree and Quick books, the generating of financial statements, analyses of accounts, and even consolidation of business units have moved entirely to ERP, accounting modules, and away from Excel. By 2002, reporting tools such as Crystal Reports could extract data from Peachtree allowing the creation of custom reports for management and financial analysis purposes. The addition of SQL reporting tools will eventually negate the need for accounting graduates to learn a query language to create custom reports.

The position of this paper is that ERP software should become an even greater part of accounting curricula than Excel. This paper examines the research on developing AIS courses to formulate a paradigm that can later be applied to promoting ERP application in other accounting and business areas. The objective is to explore the topic with other AIS professors with the objective of using the AIS course to illustrate how Dynamics solutions can improve learning, the barriers that prevent AIS professors from using the software effectively, and to seek input about how this approach might overcome many of the existing barriers. Are there some possible actions that members of the Academic Alliance and Microsoft might undertake to overcome some major barriers? If you cannot convince those familiar with the tool to use it, how can you extend it to the rest of the curriculum?

An examination of recent research and a model AIS curriculum is developed to provide a foundation for the discussion of Dynamics software as a teaching and learning tool. Current and planned applications of Dynamics AX to

increase the learning level of students are presented. A discussion of barriers to incorporating Dynamics centered on the Systems course is undertaken, and some possible solutions presented.

CURRENT AND POTENTIAL COURSE TOPICS

The enactment of Sarbanes Oxley in 2004 and its immediate inclusion in AIS and other courses indicates that some external events can quickly reshape emphasis within the accounting curriculum. The interaction between accounting professors and textbook publishers provides an interesting dynamic. A professor's view of important topics determines a significant amount of a textbook's coverage because publishers recognize that this bias can greatly influence an adoption decision. The text authors also respond to this demand. The interaction between professionals and authors leads to inclusion of additional topics. However, other forces drive text content as demonstrated by SOX.

Curriculum Studies and Course Topics

A recent study of AIS syllabi (Badua, 2008) provides a glimpse into the current emphasis of AIS courses since 1971. The author conducted a Google Search for course syllabi on the premise that those listed would be a good representative sample given Google's reporting items based on frequency of access. Badua found that the number of topics listed in the syllabi has grown from eight in 2001 to thirty-nine in 2007. The study also indicated that the average number of topics each year per course ranged from five to seven. A frequency analysis indicated that cycles/processes, controls, Microsoft Access, REA, DBMS, flow charts, Great Plains, DFDs, and e-commerce, listed most to least frequently, were significantly different from other topics. However, this study indicates the topics that faculty viewed as important.

Two studies of professionals conducted since 2004 provide some insight into the importance placed on topics by accounting firms and businesses. The first study (Dillon & Kruck, 2008) involves a sample of professionals with the objective of evaluating 56 topics taught in a specialized major, accounting information systems, at 13 AACSB accredited undergraduate programs. The study's value in establishing topics for AIS courses stems from the high percentage of respondents from consulting and public accounting firms. Of the eight topics found to be significantly more important than the other 48 topics, only one appears in the professors' list, cycles/processes. The other topics were financial statements, accounting cycles, auditing, documentation skills (work papers), GAAP, and spreadsheets.

The second study (Bradford, Richtermeyer, & Roberts, 2007) was conducted among members of the Institute of Management Accountants, IMA. The study focused on the use and view of six documentation techniques: Systems Flowcharts, Data Flow Diagrams, E-R Diagrams, REA Models, Process Maps, and UML. Only five percent of the individuals who responded to the survey were internal or external auditors. The vast majority, 45 percent, were controllers or their assistants. This study not only looked at the value placed upon the different diagrams but also compared the reason for usage with that found in a survey of AIS and auditing educators. Both groups ranked systems flowcharts highest. However, 79 percent of the practitioners indicated the primary use of flowcharts was to describe business processes, while 86 percent of the professors indicated that the primary use was to evaluate a system, and 47% of the texts indicated that the primary use of systems flowcharts was to evaluate internal controls. The underlying message of this study further illustrates the assertion that the practice of accounting and the topics emphasized in the classroom differ significantly in many areas.

These studies, when examined from the perspective of how Excel has evolved, suggest that factors outside the academic institution are important in motivating change within. In addition, the growing number of topics is not unique to systems classes. IFRS and International Auditing Standards are putting pressure on professors to expand the content of financial and auditing classes. The major difference between using Dynamics and these other software packages is the approach. Dynamics is not a basic knowledge topic but a skill exercise that enhances teaching and learning.

Outside Forces and Curriculum Change

Both the AICPA and the International Federation of Accountants have developed skills inventories in the AIS area. Andrews and Wynkoop, (2004), reviewed both of the inventories. They developed a three dimensional accounting model starting with the Information Systems 2002 Model Curriculum Guideline: Fundamentals of Information Systems

Model. The Association for Computing Machinery, the Association for Information Technology Professionals, and the Association for Information Systems jointly developed the curriculum and basic model.

The “How” dimension is the basic cognitive skills model that starts with the ability to identify principles, techniques, procedures, etc. and builds until the individual can revise, reshape, restructure knowledge and make judgments based on the logical accuracy of an item or course of action. The “What” dimension moves from basic operations to the more abstract actions of assessing impacts and interrelationships. After adding the AICPA Vision Project and the International Federation of Accountants skill sets, Andrews and Wynekoop combined several studies with an industry sample. The model as developed to this point contains the Systems Design component that neither the AICPA nor the IFAC models delineated.

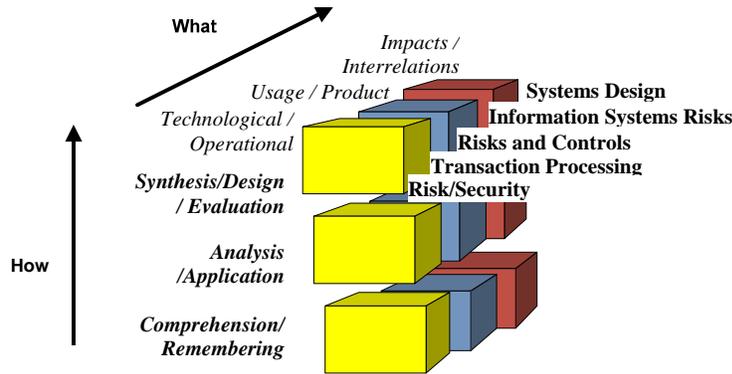


Figure 1: Skills for AIS Including Industry Prospective

The final step in the development of the curriculum model was a survey of firms as to what information systems concepts were important for new accounting hires. The end result is a modular component model based on Bloom’s taxonomy (Bloom, 1956) representing the components of accounting technology education.

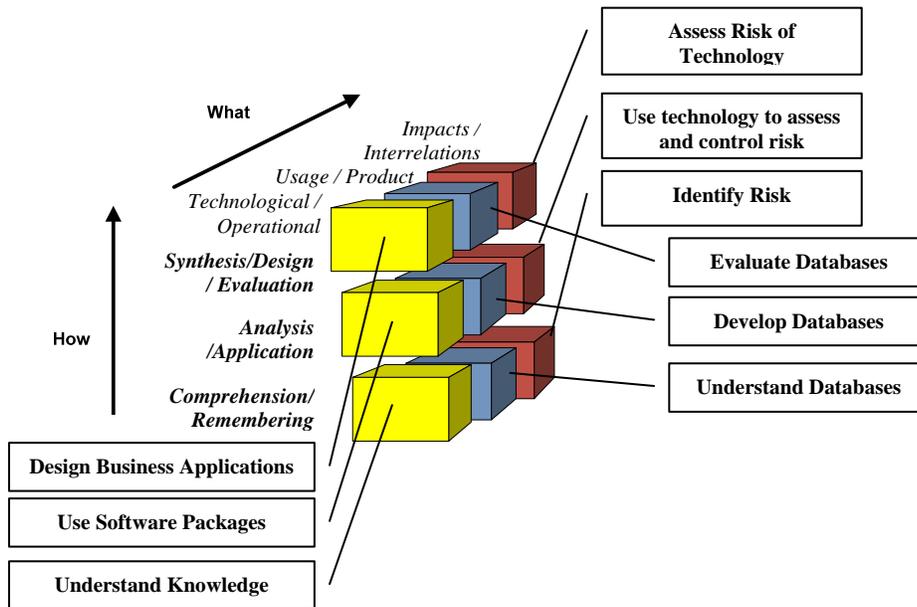


Figure 2: Modular AIS Curriculum Approach

This model suggests that teaching topics in AIS should extend beyond the basic understanding level to the analysis/application and especially in a graduate course to the synthesis and evaluation level. Learning theory recognizes kinetic learning as a valuable approach to teaching. Hands-on experiences and exercises using ERP software to examine a process by applying knowledge theoretically move learning to a higher level. The objective then is to create activities involving Dynamics products that facilitate higher levels of achievement.

LEVERAGING DYNAMICS

Tennessee State University currently uses Dynamics AX in two courses. For those of you who may be new to the Academic Alliance, it predates the acquisition of Great Plains by Microsoft. I initially received Version 6 of Great Plains but could not get access to equipment to install the software and had no technical support. At the time, I was using a Mac based product, Omnis, and, along with another AIS professor, had 100 customers who used our extended accounting program. We decided to become Great Plains VAR's and learned about Axapta, Dynamics AX, at our partner orientation. When I obtained the equipment and limited support from the University to implement Dynamics GP, several features available only in Dynamics AX motivated me to change to that product. Some of the major features included AX's own portal, a project management module, and product builder. One of the major benefits over GP was the ability to create 50 companies and import security settings including limited rights for different groups in less than two hours without employing a SQL script. Note: Because Dynamics AX included a warehouse module and other supply chain features, management chose to save resources by not subscribing to SAP.

First Application

The introduction of business processes is a natural starting point. Since I also teach Intermediate, I decided to incorporate Trade versus Sales Discounts into the first exercise. I had worked in industry and felt that the exposure to as well as the students' ability to distinguish the difference is important to their education. Trade Discounts are a natural in AX as the Purchases and Sales forms both included a button to view any Trade Discounts. Consequently, having students check the configuration of AX as part of the purchases and sales processes and make sure the vendor/buyer relationship provided a Trade discount was a simple addition. To determine if a customer/vendor is a member of the discount group, the students must examine the different forms in the customer/vendor files. In either cycle, students have to select the calculation button after entering items for the discount to appear on their form. When paying or receiving payment, students observed the sales discount's impact. When questioned about the impact of trade versus sales discounts after working the exercises, it was clear that the students were able to achieve a higher level of understanding.

The importance of controls in applications is also a natural extension of the learning experience in the process exercises. Enabling built in controls is part of setting up the student's company. This is one of the prerequisites to starting the process chapters. The student opens the "Options" form and selects the "Confirmation" tab. The company data does not have the confirmation option marked. This option prevents the user from navigating away from a line or a form without confirming any change to that line or form. Immediately after a student selects the confirmation options, the requirement to confirm the changes dialog box appears. This immediate response and its regularity serve to reinforce the importance of a preventative control.

Existing and Planned Extensions

During the chapters on internal controls, the students review the printed copies of the different steps in each cycle and discuss potential weaknesses. This approach has improved student performance in completing narrative problems that require the students to determine the nature of a control. In the graduate systems course, the students prepare a control matrix for the four sub-cycles.

During the class discussion of the chapter, which includes the chart of accounts, students open Dynamics AX and examine the chart of accounts in the data set compared to a basic sample chart of accounts. Normally, confusion is rampant until I ask someone to explain the VAT Tax. After explaining that NAV and AX are EU products, I then instruct them to prepare a list of the accounts required by the tax for the next class meeting. Students who make an effort to delineate the accounts used to calculate the VAT Tax demonstrate a better understanding of how the individual lines in the chart of accounts are related.

To the surprise of the faculty, the alumni of James Madison University's AIS degree indicated that they benefited from taking a programming course (Fordham, 2005). The alumni recognized that literature courses were included in

many degrees to help foster critical thinking skills, but taking the programming course later in their education when they were more focused on learning proved more beneficial in their development of abstract skills. Having students learn a programming language, however, is beyond the scope of an AIS course.

One reason for switching to Dynamics AX is the “product builder” module. I experimented with it last Spring in the graduate course. Product builder creates a mini-program that guides an employee or customer through a series of options required to produce a custom product. Once the customer or employee has completed the process, product builder produces a special Bill of Materials. Setting up the process requires the creation of a decision tree based on the different variables associated with a particular product. Student groups use the sample data’s custom lamp features to set up the decision tree for the product using “Enumerated Text.” The group must determine the order of presenting different product variables and create the dialog needed to describe and limit each choice. Product Builder compiles the text in the decision tree to create the product configurator. Students then demonstrate their process to the class. In addition to fostering critical thinking skills, the exercise also illustrates the role a bill of materials plays in the manufacturing cycle. Finally, the examination of a process for control weaknesses is undertaken. The group is required to examine the forms used in the product builder for built-in control features. A brief written report listing the existing controls as well as highlighting the importance of each and suggestions for additional controls is due prior to group presentations.

In the graduate class, teams create a new product group in AX. This exercise demonstrates the relationship between transactions, the chart of accounts, and journal entries. This process requires students to examine the configuration of an existing product group and the posting form for a particular group. The form contains references to the accounts used for the Sales order, Purchase order, Inventory, and Production. After studying a product group, the students must then develop a list of additional accounts to insert in the chart of accounts, including a recommended account number for each. The next step is to create a product, the product group, and assign the product to the group. The students repeat the purchases and sales exercises using the new item. This approach should move students to a higher level of knowledge.

Several academic units at Tennessee State University recognize the potential of SharePoint services. Because of the high interest level and the ease of use, the university computer support group has delayed implementation pending an approach that will assure that faculty access will not grant students unlimited access creating a level of demand for storage that will quickly exceed the available resources. The MBA program demonstrated that the project module in Dynamics AX could control access to SharePoint. Because Dynamic AX restricts user access, records the time spent by users working on documents, and time stamps changes, TSU’s CIT has agreed to allow the College to begin using SharePoint in MBA classes when AX 2009 is installed. When students work on projects and store documents using Dynamics AX as a gateway, they are able to collaborate off campus and faculty can track the contribution of group members and monitor progress. Besides allowing students to work remotely on a class project, the exercise simulates the process used in business.

Many professors are looking for effective tools to help students understand how XBRL works and to provide hand-on experiences. Dynamics AX professors already have the software. The user imports GAAP or IFRS XBRL taxonomy into the reporting module and then selects an appropriate section of the taxonomy. When the proper taxonomy definition is located for a row in the financials, the user can link the two. The process is completely within the system, and students can gain experience in tagging data. More importantly, they can then generate a financial statement from the system in both formats. Students can use one of the free web viewers to display the financial report and can compare it to the paper form. If the professor does not want to devote a large block of class time to such an exercise, the tagged financials could be included in the sample data and the student could review some of the pairings. Students would then run the financials, view the XBRL set and compare it to the traditional printed forms. The exercises not only demonstrate how XBRL works, but students benefit from both preparing and comparing information provided directly from a reporting module.

BARRIERS TO EXPANDING USAGE

The cliché, “divide and conquer,” describes an analysis and problem-solving paradigm that can be used to address the barriers to expanding faculty use of Dynamics’ products in the classroom. One approach to examining the barriers is dividing these into two subsets: Internal and External. Careful consideration of each subset’s topics resulted in four major barrier types within the two groups. Figure 3 portrays the Internal and External Barriers and the four groupings

under each. Internal Barriers are those that faculty members face individually. Faculty can eliminate many of these barriers through conscious choices and individual action. External Barriers are those surrounding the faculty member within the university environment and in many cases are impossible to overcome without outside assistance. When faculty begin to breach an internal constraint, often that constraint has an outside component that also must be breached in order to accomplish the desired outcome.

Internal Barriers

Many of the DYNAA faculty members of the Academic Alliance have witnessed presentations over the last several years of different applications of Dynamics solutions ranging from an engineering course using the manufacturing module to the use of the MRP systems as an ongoing exercise in a management program. The presenter of the MRP application talked about the plans of a fellow faculty member to use the data from the MRP exercise to create a project for his auditing class. The presenter expressed confidence that next year his colleague would present the results.

What factors could have prevented immediate implementation in the auditing class? In listening to the presentation and the demonstration of the simulation exercise and the role that a graduate student played in keeping the simulation going, it was obvious to me that the operation of the simulation failed to complete the three financial cycles. The simulation was not generating the financial data needed to construct an auditing exercise. If the professor wanted to make the data useful, he would have to go back to each period and finish the processes along with other entries. The other option would be to begin running the simulation with the additional entries. Assigning students to make the additional entries and developing the required entries would be more time consuming than using an existing data set that accompanies most auditing books.

The most significant internal constraint is time, a trade-off between academic and personal usage. Even the professor whose avocation is teaching must allocate part of the available amount of time to activities not related to teaching and research. The internal time barrier is strongly influenced by “Desire” (Figure 3).

The Aptitude barrier reflects the individual’s familiarity with computers, how easily the individual can understand the interface, and the overall comfort level with computers. Returning to the Excel example, the desktop computer was not available to most accounting faculty in the late nineteen eighties. Until Windows became common, research professors did not have the time to learn DOS. Faculty conducted their research on mainframes using Fortran and COBOL. Interaction between faculty members and professionals when coupled with an understanding of the potential application of macros within Lotus/Excel created a group of faculty who were early innovators in using Lotus as a teaching enhancement tool. These individuals were comfortable with the computer and willing to experiment and learn. Tax textbooks began using Lotus to demonstrate the impact of different items on taxable income. Many professors, who used the tax spreadsheet in class, had no idea how to modify the macros when the tax rates changed. Most were unaware that they were not seeing the full spreadsheet and could easily modify the macros to accommodate changes in tax laws.

Aptitude sets the beginning point for “Skills” (Figure 3). Training provides the foundation for skills development, but practice and aptitude determine the skill level. Practice, of course, is a function of time unless the user envisions a long-term benefit whose worth is greater than the required current costs. A marketing colleague acknowledged that, while he/she knew how to use Excel, he/she had not worked with it enough to feel comfortable using it in a classroom. This lack of comfort reflects both aptitude and time.

The individual who recognizes that a temporary allocation of time will result in a long-term net benefit has developed a motivation for investing time. The absence or presence of Desire influences time allocations and slows or accelerates skill development. Desire is either the most significant barrier or the greatest motivator enabling an individual to overcome internal barriers.

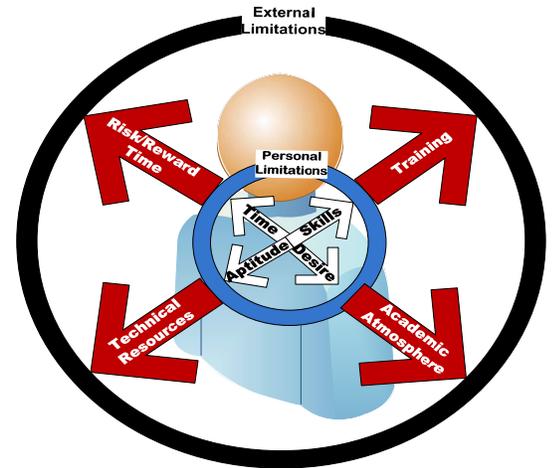


Figure 3: Internal and External Barriers

External Barriers

As Desire overcomes some of the internal barriers, the Academic Atmosphere counterbalances it. The Academic Atmosphere stems from the interpretation or misinterpretation of the AACSB accreditation requirements. The accreditation teams, Deans and other administrators, have consistently focused on publications as a determinant of quality. This obsession with publication forced the AACSB to issue a white paper clarifying the standard defining academically qualified faculty. The clarification made it clear that publications are not the definitive standard for determining academic qualification. None-the-less, developing new skills at the expense of publications is a risk, and the challenge is providing faculty with sufficient reward to compensate for the issues created by focusing on teaching-related projects in an AACSB institution.

The amount of time a faculty member allocates to his role of professor/teacher is the overall constraint. Within this constraint, the faculty member must allocate classroom, preparation, meetings, research, and professional development. Faculty development as used here would include the time for training and the additional time to develop a Dynamics learning activity. Current budget problems in many states are resulting in larger classes, and in some schools, higher standards for granting faculty reduced teaching loads. The external time barrier reduces the amount of time faculty can devote to training materials on-line.

Microsoft initially made printed and electronic copies of training manuals available to faculty. Customer Source provides faculty access to on-line training. The courses are downloadable allowing faculty to work off-line. In the past, faculty could use the manuals to focus on a specific process and quickly develop an understanding of the process's configuration. The availability or lack of time and the inability to quickly access specific Dynamics' instruction source is a growing barrier. Additionally the ability to get the training manuals in word format, denies faculty a timesaving tool for creating teaching and learning exercises.

Another significant barrier to expanding alternative uses is obtaining the technical resources and support necessary to implement a Dynamics solution. Texts providing a Virtual PC image are one option. The student can install the software on a home computer, and, in some cases, on a lab computer. The Virtual PC image requires systems with greater the 2 GB of ram to work effectively. However, a solution installed on a home computer cannot be accessed during class, therefore, creating a teaching barrier. Another solution is to install the systems on computers in certain labs, which limits student access. Terminal services allowed students on and off campus access to the software. Network security issues in many schools have eliminated this option. The complexity of installing the software is also a limiting factor.

POSSIBLE SOLUTIONS

Since its inception, Microsoft DYNAA has been a primary source for support and tools to overcome many internal and external barriers. The initial decision by Great Plains, maintained and enhanced by Microsoft, has provided: the ERP software licenses, training materials, access to customer support for technical issues, Virtual PC images, and VAR's who could provide technical support. Three years ago, in response to some users, Microsoft contracted with a company to create annual data sets for several sample companies. With all this support, the barriers presented still exist. As an advocate of using Dynamics as a teaching tool, how can members of the Academic Alliance help develop solutions to eradicate these barriers? One would assume that the individuals present at this conference have the desire to use Dynamics more effectively; therefore, the discussion will focus on the external barriers.

Academic Atmosphere

The Microsoft DYNAA's decision to have blind review and publish proceedings of this conference is an effort to address the academic atmosphere barrier. The access to training materials and courses on the web is a substantial benefit. The effort to develop Virtual PC images is a second. Many schools expect that research abstracts and papers presented at conferences are an intermediate step in the publication of journal articles. However, teaching-oriented academic journals require control group studies analyzing the effectiveness of teaching approaches. Deans and Department Heads want to support activities that enhance the reputation of the institution. Some suggestions as a starting point for a discussion are:

1. Explore a more effective approach to facilitate joint research projects between faculty

2. Work with the user groups, VAR's, and end users to support survey research studies :
 - a. Knowledge and preparation research directed at the benefits of more classroom exposure to ERP systems.
 - b. Problems firms are facing in the areas of compliance, controls, and monitoring.
 - c. Delineation of relevant ERP related accounting topics outside the systems area.
3. Given the limited value placed on publishing materials to the faculty resource DYNAA, DYNAA could sponsor the development of a journal, perhaps in conjunction with user groups and/or the Microsoft MSDN Academic Alliance that provides an outlet for publishing research with a focus on Dynamics products. Opening the journal to technical and user groups could create a wider readership and develop support for more interaction between faculty and user groups.

The more resources that support faculty in their efforts to persuade other faculty and administrators of the value of incorporating Dynamics in classes, the better the academic atmosphere will become.

Training

The on-line training materials are helpful but may require a substantial time investment in order to extend the faculty member's skills. For example, a faculty member needing to learn more about a specific financial process may need to go through Financials One and Two before covering the required topics. Another issue is developing the student materials necessary to teach a topic. The documentation tool included in the latest Dynamics releases is an existing aide that, once a faculty member understands a process, facilitates the creation of a word document providing commands and sample screen-shots needed. Some suggestions as a starting point for discussion are:

1. Provide faculty access to the CDs containing training manuals. If necessary, Microsoft should create an agreement providing minimal restrictions on usage.
2. Open the training program and provide support for faculty to become Certified Trainers.

Technical Support

The grant of licenses to use the Dynamics software and SQL has been a tremendous help. Now, with reliance on SharePoint, moving to the next Dynamics release is an issue. One solution is to use the MSDN SharePoint to install the ERP software. Some members of the DYNAA may not be familiar with the MSDN academic license. Students have access to software in labs and can receive officially licensed copies of the software for academic study to install the software on their own computers. For example, I use Visio for diagramming problems and provide my students through MSDN the software for their own computers.

In this time of State and Federal funding reductions, the barrier created by insufficient funds needed to obtain hardware and technical support to provide a platform for delivering the software is expanding. Given a source of funding for hardware is found, finding VAR's who would provide direct support to the University remains a significant challenge. Some suggestions as a starting point for discussion are:

1. Work with Microsoft, its user groups, VAR's, and customers to develop a grant program to provide servers to smaller schools with limited funds.
2. Have Microsoft technical support develop an installation paradigm covering hardware requirements, server connection, and software configuration, including user rights configurations, for academic programs based on user levels.
3. Create an Academic Alliance mentoring program that links Alliance members who are implementing software at their institution.

Risk/Reward Time Barrier

Changing the academic environment is a great part of surmounting this barrier. Facilitating faculty learning and materials development further overcomes this barrier. Building on the technical solution, a faculty member who received a grant

from a group that provides hardware and onsite support to install and configure Dynamics software would see his/her risk and time allocation barriers reduced and could justify devoting more time to working with Dynamics as a teaching tool. Some additional suggestions as a starting point are:

1. Using the DYNAA's newsletter to:
 - a. Highlight innovative use of Dynamics products
 - b. Promote the benefits of the software by sending the newsletter to Department Heads and other faculty.
 - c. Facilitate research by adding a Partner Needed section listing topics and the faculty member's contact information
2. Attending user group functions and conferences are an excellent platform to gain insight into issues facing users and generating additional support for the usage of the software in the classroom. Microsoft's help in persuading user groups to eliminate the \$400 yearly membership fee for faculty participation in User Groups would be very advantageous.
3. Change the selection process for DYNAA faculty advisory group to make it more responsive and representative to various institutions and groups constituting the Alliance.

CONCLUSION

Students who have used Dynamics in their courses frequently request, on their student evaluations, more exposure and hands-on exercises. While there is no demonstrated evidence that hands-on exercises increase student understanding, the study of learning styles would support the possibility. The learning potential aside, students are graduating and entering a business environment where manual bookkeeping and accounting systems no longer exists. Just as Excel is the major problem solving method, ERP systems are the major methodology for entering, recording, and reporting information.

The academic community needs support and encouragement in order to overcome the barriers that prevent the use of Dynamics in the classroom. The DYNAA is the core group and the best forum for the discussion, development, and dissemination of solutions to the barriers that hinder the application of ERP systems as teaching solutions.

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