

# Integrating Microsoft Dynamics GP Enterprise Resource Planning Software into a School of Business Curriculum: Research in Progress

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## ABSTRACT

*This research in progress paper looks at the use of Dynamics GP Enterprise Resource Planning software in a classroom environment. The article provides a brief overview of some pertinent literature and an explanation of why Dynamics GP was used instead of other packages such as SAP or Oracle. Finally, some discussion of how the software was used in three different undergraduate classes is provided as well as a brief explanation of plans for the future.*

## INTRODUCTION

Enterprise Resource Planning (ERP) software has become prevalent in a variety of organizations. ERP systems are information systems that assist in the management of accounting, finance, human resources, manufacturing, customer relationship management, logistics and other business functions by integrating these functions into a single system. This integration of information provides a more holistic view of the organization and allows for the more comprehensive and timely view of the business processes thus leading to more informed and hopefully, improved, decision making (Bradford, Vijayaraman, & Chandra, 2003; Davenport, 1998; Fowler & Gilfillan, 2003; Shoemaker, 2003).

While the integration of business functions has been occurring in organizations, the education of business students has not been evolving as rapidly. Historically, business education is fragmented with different bodies of knowledge taught in separate departments. Although students become specialized in their area, they can sometimes miss the big picture where interdependencies and interconnectedness among business processes create efficient synergies in achieving business targets (Becerra-Fernandez, Murphy, & Simon, 2000; Bradford, Vijayaraman, & Chandra, 2003; Cannon, Klein, Koste, & Magal, 2004; Jones & Lancaster, 2001; Shoemaker, 2003; Wygal & Hartman, 2003).

The use of ERP software in the curriculum can provide students a number of advantages from the conceptual to the practical. The use of ERP software allows students to better understand the flow of information across the organization (Bradford, Vijayaraman, & Chandra, 2003; Jones & Lancaster, 2001; Shoemaker, 2003; Wygal & Hartman, 2003). The use of ERP software in the classroom also provides students with practical hands on skills that are highly desired in industry. Students knowledgeable about ERP systems and who graduate with the much sought after combination of business management and IT skills can help enhance the credibility of a business school in the eyes of industry. Schools with ERP systems in place can also use the software as a marketing tool to attract potential students, and individual departments can attract potential students interested in hands-on knowledge of a real-world application (Becerra-Fernandez, Murphy, & Simon, 2000; Bradford, Vijayaraman, & Chandra, 2003; David, Maccracken, & Reckers, 2003).

However, due to various challenges in deploying ERP software, very few schools are integrating the software across the curriculum. These challenges can include: developing course materials; overcoming the technical and administrative hurdles in installing and maintaining the software and hardware; faculty support for learning and incorporating the software into their curriculum, as well as the associated monetary costs (Becerra-Fernandez, Murphy, & Simon, 2000; Bradford,

Vijayaraman, & Chandra, 2003; David, Maccracken, & Reckers, 2003; Rosemann & Maurizio, 2005; Strong, Fedorowicz, Sager, Stewart, & Watson, 2005; Wygal & Hartman, 2003).

## MICROSOFT DYNAMICS GP

There are a variety of ERP systems available that may be integrated into the curriculum. This author has been interested in incorporating ERP systems in his classes for roughly seven years. At the time when the process was started, there were effectively three alternative ERP systems that could be selected – Oracle's "Financials" system, SAP, and Microsoft Dynamics.

The University of Indianapolis is a relatively small liberal arts university located in Indianapolis, Indiana. Until recently, this author was the only full-time information systems faculty member in the School of Business. When the author started at the university, he had the school join Oracle's academic initiative as one of the early members of this program. For an annual cost of five hundred dollars, the university had full use of Oracle's database software. This did not include Oracle's Financials (their ERP system). While the database software was provided, the author found difficulties in obtaining support for the software. Oracle did provide access to their support system but unfortunately for various reasons, this support was not always useful. As a matter of fact, the author started an email list of Oracle users in academic environments for faculty to use to provide support to each other.

Thus when the idea of integrating an ERP package into the curriculum was first investigated, Oracle's Financials package was the obvious first choice to evaluate. Discussion with individuals at Oracle's Academic Initiative indicated that there was an annual cost of eight thousand dollars to access the Financials software. More importantly, the technical hurdles of getting the software running would be much greater than getting the database software running. The university's computer services department was stretched thin, as is usually the case at most universities, and was not in a position to provide much technical, nor hardware support, so the author would have to shoulder the responsibility of installing and maintaining the software in addition to a full-time teaching load. Thus, it was extremely unlikely that the university would be able to install the software and maintain it.

The author next looked at SAP. At the time, to use the software in the academic curriculum, SAP would have to be installed and configured on university equipment. The hurdle to accomplish this would be as great, if not greater, than installing Oracle Financials. Thus this was not feasible. As a note, since that time, SAP has initiated a program where a select few universities host the SAP installation and other universities access SAP through a graphical interface. This greatly reduces the effort for a university to incorporate SAP into the curriculum. However, at this point, this author chose not to take that alternative for two reasons. The first was all the effort already put into incorporating Microsoft Dynamics into the curriculum. The second, and more important reason, was that teaching certain aspects of ERP systems such as installation, configuration, and maintenance would not be easily feasible if the software installation was not local.

The third package reviewed was Microsoft Dynamics<sup>1</sup>. This package was not aimed towards large scale organizations but was geared more towards mid-sized organizations. However, in terms of functionality, the software had similar functionality

and capabilities as SAP and Oracle Financials. More importantly, the software and hardware requirements to install the software were much lower and made it feasible to install the software on lab machines running the Dynamics GP software and have the underlying SQL Server database run on the same machine. While running the software in stand alone mode is not optimal, it is certainly better than not having the software at all. Additionally, using the software, it was possible to have students install a stand alone ERP system on their home machines to work on. Finally, the support from Microsoft has been excellent from both a technical aspect and an administrative aspect (i.e., academic alliance support in providing the software, licenses, etc.) In terms of industry use of the software, approximately forty thousand companies are running Dynamics GP according to Microsoft. Thus students with GP experience have a number of opportunities to translate their knowledge of the software into internship and post-graduation jobs.

**PROGRESS TO DATE**

The first large scale use of Dynamics GP at the University of Indianapolis was done in the first semester of the fall semester 2006 with approximately one hundred students using the software in three different undergraduate courses. Unfortunately, access to a server-based system running Dynamics GP was still not available. Thus all student work was either performed on lab machines running Dynamics GP in stand alone mode or on the students' own machines.

The first class was an introduction to information systems class required by all School of Business students. Thus the students' majors included accounting, marketing, management, and business administration. Students received an exposure to Dynamics GP through some hands-on familiarization to the software as well as using the online electronic training material that Microsoft provides for free to members of the Dynamics Academic Alliance. Students also had to generate a report for various modules detailing the capabilities and benefits of incorporating an ERP system into an organization.

Figure 1. Using Dynamics GP to overcome the limitations of a non-integrated system

Potential Problem	Why is it a problem	Implications of Problem	How ERP corrects problem	GP Documentation
<ul style="list-style-type: none"> <li>Accounts are only posted on the day payment is received if time permits.</li> </ul>	<ul style="list-style-type: none"> <li>There can be some delay between the time FS receives a check from the customer and when the customer's accounts receivable balance is actually reduced.</li> </ul>	<ul style="list-style-type: none"> <li>This leads to accounts not accurately portraying the correct balances.</li> <li>Also, some of the payments may not get posted because they are not being accounted for in the same method.</li> </ul>	<ul style="list-style-type: none"> <li>Accounts are automatically adjusted when the payment is received whether there is time or not.</li> <li>Accounts are always up-to-date.</li> </ul>	<ul style="list-style-type: none"> <li>Sales Order Processing module; Ch. 18 pg. 115</li> <li>A deposit amount on an order will be posted immediately when the Sales Payment Entry window is closed.</li> </ul>

  

The second class was a System Analysis class. Each group of students was assigned a specific module in Dynamics GP to analyze. This includes developing use cases, activity diagrams, class diagrams, etc. for a specific aspect of their module.

The third class was a senior level special topics class. The class was composed of both information systems majors and minors. The textbook the students used (Monk & Wagner, 2006) looked at the limitations of a small organization that used a number of non-integrated information systems. As a class project, students were required to document the limitations and their potential impact. Additionally, the students were required to document how Dynamics GP could be used to resolve the limitations as shown in figure 1. Figure 1 shows just a single entry in the document generated by the students.

Overall, students had a positive reaction to the use of Dynamics GP in the classes. They understand the value of knowing the software to better understand the integration of information between different functional areas as well as the potential value knowledge the software had when the students were looking for internships and post graduation jobs.

For the next semester, a server has been set up allowing a more realistic use of the software in a class setting. A major effort will be using Dynamics GP to create the company examined this past semester in the Monk and Wagner (Monk & Wagner, 2006) book. This effort should be aided by Microsoft's recent action of making the training materials for the software available for free.

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**ENDNOTE**

<sup>1</sup> Actually, at the time of initial review, the package was owned by a company called Great Plains. This company was purchased by Microsoft. Over the past few years, the specific software has undergone some name changes from Dynamics to Great Plains and now to Dynamics GP.

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