
Investigation of ERP Implementation Benefits and Defections in Education

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ABSTRACT

With the computerisation of business activities in higher education institutions ERP vendors quickly perceived a new market opportunity. Enterprise resource planning (ERP) systems are highly complex information systems. The ERP project yields a software solution integrating information and business processes to enable sharing throughout an organization of information entered once in a database. The range of functionality of ERP systems has further expanded in recent years to include more applications, such as grants management, marketing automation, electronic commerce, student systems, and supply chain systems. Examples of ERP systems include those from Oracle, SCT (Banner), PeopleSoft, and SAP. Many ERP implementations have been classified as failures because they did not achieve predetermined corporate goals. This article identifies success factors, software selection steps, and implementation procedures critical to a successful implementation.

Keywords: Enterprise resource planning, Project management, Implementation procedures.

Introduction

First Steps to ERP:

*Well Begun Is Half Done

The planning and preparation process consumes a significant portion of time in an ERP project. Just as a woodcutter will often spend one third of his time sharpening the axe before he starts chopping wood, preparation for the ERP project makes the job go more smoothly and quickly. One of the first steps involves evaluating the needs and requirements that will drive the implementation of an

ERP system (Savarese., 2003). A needs assessment with a definition of requirements is essential not only to guide the start of the project, but also to gauge the success of the project after completion. You should ask yourself, "What do I want my business to become?" At this stage of the game the needs assessment should stay at a strategic level and not get so detailed that you attempt to impose existing modes of operation on a new ERP system (Khattaka et al., 2012). Figure 1

shows the sequence of events in an ERP project. It usually starts with a needs assessment and requirements analysis, and ends in the first cycle with training and a phased implementation. The continuous circle of development shown in Figure 1 suggests that soon after

completion of the first phase or cycle of an ERP project, we're back to planning the next phase. Each successive round of development arises from the need to add functionality and the rapidity of upgrades to ERP software.



Figure 1. ERP Project Overview

Contracting for an ERP System

Many institutions will embark on an ERP project with one main vendor because of the advantages of having one conduit for communication. This prime contractor often subcontracts out other work and services as needed. Finally, your ERP implementation plan must either follow a phased implementation or attempt the big bang approach (Vandaie, 2008). A phased implementation usually the wisest and most cautious course takes longer and can incur higher consulting costs. West Virginia University (WVU) chose the big bang approach primarily because of Y2K deadlines and the cost that would result from incorporating temporary stubs and drivers to bring modules up individually. George Washington University (GW)

undertook a more conservative, phased implementation approach.

Use of Consultants

Most large-scale ERP projects employ consultants, who can play many different roles. Consultants can help staff the project team, help back-fill positions, take responsibility for project management, audit the project, function as the prime contractor, and serve as the one source for everything from software to hardware and personnel for the ERP system.

Benefits of ERP Systems

Many reasons prompt people to start an ERP project. First let's consider the main benefits of an ERP system:

- ✓ Improves access to accurate and timely information
- ✓ Enhances workflow, increases efficiency, and reduces reliance on paper
- ✓ Tightens controls and automates e-mail alerts

- ✓ Provides user-friendly Web-based interfaces
- ✓ Streamlines processes and eases adoption of best business practices
- ✓ Establishes a foundation for new systems and integrates existing systems

A main advantage of ERP systems is improved access to accurate and timely information. As presidents, chief financial officers, or boards attempt to understand a university’s overall performance with existing legacy systems, they may find many different versions of the truth. An

ERP system creates a single version of the truth because everyone uses the same system. Furthermore, some legacy systems make developing reports or tapping into transaction data stored on the computer quite challenging (Kissinger *et al.*, 2001). Modern ERP systems often improve upon this process by offering a strong foundation for moving to a data warehouse that can provide even more capability to extract data from administrative information systems. Table 1 provides some documented benefits derived from a new ERP system.

Table 1. Some Documented Benefits of ERP Implementation

Description	Before	After
Reduction in paper forms	N.A.	15,200 fewer forms processed
Duration of monthly closing	10 days	4 days
Duration of semiannual closing	4.5 months	2 months
Availability of budget reports	Hardcopy monthly	Available online daily
Online access	315 users	1,645 users
Creation of account codes	Manual	Automatic
Alerts	0	16
Approval process	Manual	Electronic
Online requisitions	775	11,400
Paper requisitions	12,973	4,323
Autocreated purchase orders	0	11,565
Online receipts	0	6,054
Supply chain forms	N.A.	Eliminated 21 paper forms
Performance metrics	N.A.	Weekly
Policies and procedures	Inconsistent and undocumented	Desktop manuals and online
Days between letter-of-credit draw downs	30	7

Figure (2) shows some of the many function supported by an ERP package.



Figure 2. The scope of an enterprise system

Critical factors for successful ERP implementation

Implementing an ERP system is not an inexpensive or risk-free venture. In fact, 65% of executives believe that ERP systems have at least a moderate chance of hurting their businesses because of the potential for implementation problems (Cliffe, 1999). It is therefore worthwhile to examine the factors that, to a great extent, determine whether the implementation will be successful (Elmeziane et al., 2011). Numerous authors have identified a variety of factors that can be considered to be critical to the success of an ERP implementation (Umble, 2003).

Project Management

Without question, one of the most important decisions on an ERP project concerns the selection of a project director. This person needs leadership skills and the respect of project members and university administration. Although it's better to find an insider with loyalty to the university, you need an experienced project manager a professional (Khattaka et al., 2012). If you're logical choice for project director has superior knowledge of the functional area, but no formal project training or experience, be very careful. We found the ability to efficiently and effectively run a large project to be the single most important attribute of this key individual, far outweighing any other factor. If experience isn't available, at a minimum make sure you send your designee to formal project management training.

ERP systems and higher education

Lately, many higher education institutions want to take advantages of ERP systems. They invest tens of millions of dollars in ERP projects that may go on for two, three or even more years (Swartz et al., 2001). The investment in ERP systems represents the biggest investment in ICT for higher

education institutions (Murphy, 2004). The basic idea behind the ERP systems lies in connecting the main functions of a typical enterprise in manufacturing. As late as in the nineties, the range of ERP systems broadened from those supporting manufacturing activity to processes like orders, finance, assets management and human resource management. Lately, these systems have been offered for grants management, marketing automatisation, ecommerce, student systems and supply chain systems (Swartz et al., 2001). And what about the academic community? Most certainly, the solutions are a step closer, but still not entirely adapted to support business activities in higher education institutions.

ERP systems for higher education develop in the direction of support for key administrative and academic services. The core of such a system usually supports minimal student administration (enrolment procedures and student enrolment, financial support for students, student data), human resource management (monitoring of employees) and finance (accounting, payments, investments, budget). It is possible to include some other program add-ons, e.g. assets management (contracts, subsidies, grants, etc.) or for monitoring student and developmental services of institutions.

Conclusion

The ERP space in higher education is moving rapidly. Vendors that hadn't spent much time trying to understand the needs of higher education are doing much better now though they can still improve! As a result of the growing competition, vendors are rolling out integrated suites of software that support the thin-client Web interface and object-oriented systems. Frequent new versions make it challenging to keep up with the ERP project that never seems to end. As soon as you finish the implementation, you jump into the next major upgrade. ERP systems producers have

rapidly begun to embrace the demands for e-commerce applications such as online billing and payment, e-procurement, and so forth. Maturing data warehouse and data retrieval tools will play a more important role in the future as well.

References

Cliffe. S. (1999). ERP implementation, *Harvard Business Review* 77 (1) 16–17.

Elmeziane K, Chuanmin S., and Elmeziane M., (2011). The importance of critical success factors of enterprise resources planning implementation in China, *Bus. Manage. Dynamics*, 1, 1-10.

Fowler A, Gilfillan M. (2003) A Framework for Stakeholder Integration in Higher Education Information Systems Projects. *Technology Analysis & Strategic Management*; 15(4): 467 – 489.

Swartz D., Orgill K. (2001). Higher Education ERP: Lessons Learned. *Educase Quarterly*; 24: 20 – 27.

Khattaka M.A.O., Yuanguana S., Irfana M., Khattakb R.A., and Khattakb M.S.M. (2012) Examining critical success factors affecting erp implementations in enterprises of Pakistan, *Interdisciplinary J. Contemp. Res. Bus.*, 3, 606-632.

King P. (2002). The promise and Performance of Enterprise Systems in Higher Education,

Respondent Summary. ECAR Respondent Summary.

Kissinger B., Foster S. (2001) Expect the unexpected, *Quality Progress* (October) 49–55.

Madsen M. and Ehie I. (2005) Identifying critical issues in enterprise resource planning (ERP) implementation, *Comput. Ind.*, 56, 545-557.

Murphy C. (2004) ERP: The Once and Future King of Campus Computing. Campus technology. Syllabus Media Group.

Nah F., Lau J., and Kuang J. (2001) Critical factors for successful implementation of enterprise systems, *Bus. Process Manage. J.*, 7, 285-296.

New Analysis Reveals Best ERP Systems for Higher Ed. (2002) *Nonprofit Business Advisor*; 5 (154): 11 – 13.

Savarese, J. (2003). Is ERP your panacea? *University Business*, 6(3), 42-44.

Vandaie R. (2008). The role of organizational knowledge management in successful ERP implementation projects, *Knowle. Based Syst.*, 21, 920-926.

Umble E.J. (2003) Enterprise resource planning: Implementation procedures and critical success factors. *European Journal of Operational research*; 146 (2): 241 –257.

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