Concepts Underlying an Academic ERP Curriculum

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ABSTRACT

The introduction of Enterprise Resource Planning (ERP) systems in the “real world” has been studied in information system literature. Critical success factors like management commitment and process reengineering have been identified with the eventual success of the ERP’s implementation. As the implementation and use of ERPs has grown in the business world, so has the desire to include ERPs and the concepts surrounding them into business curricula. This paper takes a key critical success factor and decomposes it into a set of underlying concepts necessary to create a workable ERP curriculum. Ideas for including the concepts into a program are included. The factors and concepts operate as a starting point for those looking to start an ERP program.

Keywords: Critical Success Factors, Education versus Training, Enterprise Resource Planning (ERP), ERP Curriculum, Student Learning Environments

INTRODUCTION

At the forefront of university education is a fundamental paradigm shift from teacher based or instruction-based to student or learning-based environments. There have been a number of articles such as those by Chickering and Gamson (1987), Bare and Taff (1995), and Murray et al. (1996) that advocate for this paradigm shift. For Colleges of Business the paradigm shift has even reached the standards for accreditation set by the AACSB (American Association for Colleges and Schools of Business). Traditionally, the standards of this accrediting body were input driven and included such items as the student faculty ratio, the square footage of lab space, library resources, etc. The current standards focus on program integration, continuing improvement and output measures, such as what happens to the students who go through the programs, i.e., do they learn what we set out to teach them?

The design of the ERP curriculum itself has been the focus of some recent studies. The technical content of an ERP curriculum has been studied separately and guidelines have been proposed (Boyle, 2007). The advocates of a technology-focused curriculum agree on the need to give students an understanding of the underlying business processes at least at a
fundamental level. Others have emphasized how an ERP curriculum is NOT just an implementation of another technology but how it can be used to refine the students’ understanding of all business areas (Joseph & George, 2002). There is at least one recent study that reports on the integration of ERP into the general curriculum and discusses the evaluation of the curriculum design and instructional strategies employed and the perceived knowledge gain (Seethamraju, 2007).

There are three different approaches to integrating ERP education with a traditional ERP curriculum. The first one is a breadth approach, the second is a depth approach, and the third is a fundamental-skills approach. The breadth approach would require that all functional areas within a college of business adopt a particular brand of ERP to illustrate how core processes within that function would appear in an ERP platform. This means that different departments within the college subscribe to the same pedagogical philosophies and the administration of the college is willing to support and provide resources and sometime even require the use of ERP illustrations across the curriculum. The second approach is a depth approach where the current business demands would drive extensive offerings in a chosen area within ERP. The third approach is the fundamental skills approach which the current study espouses. This approach entails that a core list of a few courses would be offered as a track or a set of electives within an existing curriculum. Table 1 summarizes the distinctions among these contrasting approaches to ERP offerings.

The current study is a report of such an ERP curriculum design but focuses on how various success factors for ERP implementations can be used to design specific courses in an ERP curriculum that follows the fundamental skills approach.

### Background: The Drivers of the ERP Curriculum

There are two main drivers for the development of an ERP curriculum, as shown in Figure 1: the educational learning environment and the business needs of what the curriculum produces.

First, the educational environment is ever evolving. When examining the articles that talk about the need for a shift in how we educate in American colleges and universities, one dominate theme is that of student centered learning (Murray et al., 1996). In popular words we are moving from the “sage on the stage” to the “guide on the side” model of learning. The forces for change and underlying stakeholders in this process appear to fall into 3 broad categories: 1) the university itself (including administrative, non-faculty resources and governance forces); 2) businesses that hire the product or students; and 3) the faculty as the primary agent for change. Naturally, the students are stakeholders as well but they are not directly in control of the

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<thead>
<tr>
<th>ERP curriculum approach</th>
<th>Assumptions</th>
<th>Exemplar Studies</th>
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<tbody>
<tr>
<td>Breadth approach</td>
<td>Similar pedagogical philosophies across departments, top-management support, high resource requirements</td>
<td>Joseph and George (2002); Seethamraju (2007)</td>
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<td>Depth approach</td>
<td>Relies on current needs of the market that are usually changing very fast, Agile curriculum development, usually technology-oriented curriculum</td>
<td>Boyle (2007)</td>
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<td>Fundamental-skills approach</td>
<td>Focuses on the underlying skills and assumes that these fundamental skills are valuable to businesses that are willing to invest in further training.</td>
<td>Becerra-Fernandez (2000); Boykin and Martz (2004)</td>
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