Chapter I


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Abstract

Enterprise resource planning (ERP) systems are a growing area of research in business information systems. The primary purpose of this research is to review the literature on ERP implementation and to present results of a case study on ERP implementation. An exploratory case study was conducted to study these research issues. The case study consisted of a survey and interview of 25 employees at one organization. The results provide data analysis findings from the survey and qualitative findings from the interview. Using this case study, the chapter indicates the presence of four phases in ERP implementation through the support from qualitative interviews. Using t-tests, the results confirm the presence of a positive feeling of users toward the four ERP implementation phases.
Introduction

ERP software essentially organizes, codes, and standardizes an enterprise’s business processes and data. The software converts transactional data into useful information and collates the data so that it can be analyzed. In this way, all of the collected transactional data becomes information that companies can use to support business decisions.

The first major step to collect the information flow of the manufacturing process occurred during the 1960s when materials requirement planning (MRP) software was developed. Efforts continued in the 1980s to make MRP applications more useful by being able to generate information based on a more realistic set of assumptions. As a result, manufacturing resource planning (MRP II) software was developed. Finally, in the 1990s, ERP applications evolved into applications capable of linking all internal transactions (Hiquet & Kelly, 1998).

An ERP system is an integrated commercial off-the-shelf (COTS) software package that can perform all the major business functions of an organization. These functions generally include all elements of the value chain from raw material purchases, inventory management, production, goods shipments, invoicing, accounting, and human resource management. ERP systems had their roots in manufacturing, including material resource planning, but quickly grew to include all the other related business functions. They now serve as the basic business systems for most of the large and mid-size organizations in the world today. The key elements of an ERP system according to Miller (2003) are: one large real-time database which reduces data redundancy and improves accuracy; integrated business process that cut across business functions such as supply chain management; and seamless transitions between business transactions.

ERP software is not intrinsically strategic; rather, it is an enabling technology, an application of integrated software modules that coordinates all internal transaction processing. Implementing ERP requires large-scale changes to organizational, cultural, and business processes. Many of the ERP products developed have enabled companies to re-design their business processes and eliminate non-value-adding work. As a result, employees could focus on value-adding activities that have dramatically increased productive capacity. One focus of process re-design is to improve the company’s financial performance by improving operational performance. Long-term financial success occurs when a company delivers increasing customer value while simultaneously lowering the cost of delivering that value (Hiquet & Kelly, 1998).

The perspective that ERP software is simply a means of cutting cost is still prevalent. As a result, organizational resistance to ERP implementation has often been high, and not all ERP implementation programs delivered the promised enterprise improvements. The key to change is the willingness of individuals throughout the company to adopt new technology and new ways of working. It is estimated that ERP systems
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